

ERASMUS UNIVERSITY ROTTERDAM
ERASMUS SCHOOL OF ECONOMICS
Bachelor Thesis Economics & Business
Specialization: Marketing



**From Traits to Tendencies: Examining How Personality Shapes
Compulsive Buying Behavior in Dutch Adolescents**

An Application of the Five-Factor Model

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Finish date: 27th of June, 2024

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EXECUTIVE SUMMARY

Compulsive purchasing behavior has received increasing attention in recent years, especially among adolescents. Its relevance is partly caused by the increased influence of social media and marketing strategies that target young people. Compulsive buying can result in significant financial strain, psychological distress, and strained relationships. The prevalence of compulsive buying tendencies continues to rise with consumer culture and easy access to credit playing influential roles. Consequently, studying the drivers and correlates of compulsive buying is essential. Personality has been found to influence consumer behavior. The question is which personality traits these are exactly. This leads to the central research question of this thesis:

How do the Big Five personality traits affect compulsive buying behavior among Dutch adolescents?

To answer this central research question, the following theoretical and empirical sub-questions have been formulated:

The theoretical sub-questions are:

1. How does the consumer decision-making process work?
2. What is compulsive buying behavior?
3. What entails personality traits?
4. What entails Dutch adolescents?

The empirical sub-questions are:

1. What is the consumer decision-making process like for Dutch adolescents?
2. What are the distinguishing characteristics of a Dutch compulsive buyer?
3. How do personality traits influence compulsive buying behavior among Dutch adolescents?

The literature study shows that those with high compulsive buying tendencies display increased spontaneous and impulsive purchases during the consumer decision-making process. This behavior leads to a higher frequency of unplanned purchases. Secondly, compulsive buying is more present among people who show higher signs of openness to experience as they are more likely to buy compulsively as a means of satisfying their desire for new products, driven by their curiosity for new experiences. Highly extroverted people may be more likely to buy compulsively as they are more likely to express themselves or identify with a particular group by purchasing products. Neurotic individuals are also more likely to buy compulsively to compensate for negative feelings. Highly conscientious people are less likely to buy compulsively as they are likely to possess better financial literacy skills and are more inclined to engage in responsible financial behaviors. While highly agreeable people might be more likely to buy compulsively to fulfill perceived social expectations, most researchers seem to agree that those high in agreeableness are less likely to buy compulsively as compulsive buying is socially disapproved and highly agreeable people are likely to be inclined to maintain positive social relationships. Lastly, Dutch

adolescents aged 18 to 26 are highly connected and frequently exposed to targeted marketing through extensive social media engagement, making them particularly susceptible to compulsive purchasing decisions. The following hypotheses are formed from these literature findings:

H1: Compulsive buying behavior increases the amount of unplanned purchases.

H2a: Openness to Experience positively influences compulsive buying behavior.

H2b: Extraversion positively influences compulsive buying behavior.

H2c: Neuroticism positively influences compulsive buying behavior.

H3a: Conscientiousness negatively influences compulsive buying behavior.

H3b: Agreeableness negatively influences compulsive buying behavior.

H4: Dutch adolescents are more likely to exhibit compulsive buying behavior compared to other age groups.

The research was conducted by gathering responses with an online survey through convenience sampling and with the use of social media platforms between the 4th of June and the 10th of June 2024. The survey questions were based on the literature. The data was analyzed with the software SPSS. After preparing and transforming the data, the first three hypotheses were tested using linear regressions by taking the standardized variables. Ordered logistic regressions were also executed to check whether the signs and significance matched. The last hypothesis was tested using a one-way ANOVA. The results show that people who tend to buy compulsively are more likely to make unplanned purchases. Furthermore, out of the Big-5 personality traits, neuroticism seems to be the only trait to have a significant and positive impact on compulsive buying behavior. Dutch adolescents are also more likely to buy compulsively compared to older age groups. Materialism, impulsivity, gender, income, and social media usage all significantly and positively influence compulsive buying, while age seems to negatively influence the behavior. Therefore, the first, last, and the third sub hypothesis of the second hypothesis are accepted.

The research outcomes suggest a positive relationship between personality traits and compulsive buying behavior among Dutch adolescents particularly in those individuals high in neuroticism. Furthermore, the higher prevalence of CBB among Dutch adolescents compared to older age groups further stresses the vulnerability of younger consumers to compulsive purchasing behaviors facilitated by digital marketing and online influences.

A recommendation for retailers would be to acknowledge the susceptibility of younger consumers to compulsive buying influenced by advertising. These behaviors can be effectively reduced by implementing ethical marketing practices that avoid exploiting vulnerabilities and promote responsible consumption through transparent messaging, especially among neurotic Dutch adolescents. Future research on this topic should explore alternative personality measures to further understand their effects on consumer behaviors and potentially reveal new findings on this researched relationship.

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CHAPTER 1 Introduction

1.1 Development in the Study of Compulsive Buying Behavior

Compulsive purchasing behavior has received increasing attention in recent years, especially among adolescents. Its relevance is partly caused by the increased influence of social media and marketing strategies that target young people. The rise of short-form content on sites such as Instagram and TikTok would make it easier to show articles to a wide audience who can purchase the articles with a few clicks on the screen. For example, it appears that one in four TikTok users indicate that short-form content has influenced them to purchase within three minutes of seeing a product for the first time (Express, 2024). Compulsive buyers who were already planning to buy something can thus more easily satisfy their buying behavior through these platforms.

Social media has been found to influence the buying behavior of both impulsive and compulsive buyers. However, there is a difference between the two shoppers. Impulsive buyers often don't plan to buy anything, while compulsive buyers purchase products in a much more systematic way. Before the arrival of short-form content, compulsive shoppers would turn to shopping apps like H&M, Shein, and ASOS. Compulsive buyers indicate that they could simply delete the apps at the time, but now that social media platforms are centralizing their services, it is proving more difficult to stay away from shopping temptations (Eda, 2022). In any case, it appears that the rise of growing online purchases made through social media platforms has not improved the grip on compulsive buying behavior (CBB).

In a survey among business students, it became apparent that those with compulsive buying tendencies were significantly more likely to accumulate substantial credit card debt (Joireman et al., 2010). The survey shows a concerning trend: compulsive buyers who prioritize immediate gratifications over long-term consequences are at an increased risk of facing significant financial burdens. While the straightforward solution for compulsive buying tendencies (CBT) is frequently considered to be cognitive behavioral therapy (Müller et al., 2015), the root causes of this behavior appear to be diverse as previous studies have identified various internal and external factors.

1.2 Compulsive Buying Behavior among Dutch Adolescents

A total of 4.9% of adults are affected by CBB globally with a similar prevalence in the Netherlands of 5% (Maraz et al., 2016). The prevalence is even higher among university students at 8.3%, while in shopping-specific samples, the prevalence can be as high as 16.2%. Young people and women have an increased tendency towards compulsive buying behavior regardless of their location (Maraz et al., 2016). There is a growing concern in the Netherlands about the increasing incidence of compulsive buying behavior in adolescents partly because of the increase in online shopping and the influence of social media platforms such as Instagram and TikTok. Young people are constantly exposed to advertising and influencer marketing which contributes to impulsive purchases and can lead to more problematic compulsive behaviors (Albertella et al., 2021). The advanced digitization in the Netherlands does not help either as it makes access to online stores and payment methods easy.

Dutch adolescents are a particularly interesting group to study in relation to compulsive buying behavior for several reasons. Firstly, the Netherlands has one of the highest internet penetrations in Europe, which means that young people are used to online activities, including shopping, from a young age. Within the European Union, an average of 87% of all households have internet access, while the Netherlands leads the way with 98% (CBS, 2018). This increases the likelihood of exposure to digital marketing strategies and influencers that can drive compulsive buying behavior. Moreover, Dutch adolescents generally have a relatively high disposable income partly due to part-time jobs and a culture of financial independence. The Central Bureau of Statistics (CBS) (2023) also reports that the average income of young people between 18 and 25 increased from 16,000 euros to 16,400 euros from 2020 to 2021. This can lead to more voluntary spending and a higher likelihood of impulsive and compulsive purchases. Dutch young people are also often well-informed and socially connected through digital platforms which can have both positive and negative influences on their buying behavior. In addition, education in the Netherlands is also characterized by a high degree of digitization and integration of technology into the daily lives of students. This means that adolescents are not only technologically proficient but also sensitive to online social pressures, both of which can play a role in compulsive buying behavior. The adolescent years are a period for identity development which makes them particularly susceptible to external influences and social pressures. This demographic group is relevant to the study because understanding their buying behavior can contribute to the development of preventive measures and interventions to reduce the problematic consumer behavior of CBB.

1.3 Problem Definition

Compulsive buying behavior can be considered irresponsible and can stem from different factors. Compulsive buying is defined as a repetitive and excessive purchasing pattern that serves as a primary response to negative emotions, offering immediate gratification but leading to detrimental outcomes for both the individual and others, such as overwhelming debt, feelings of remorse, and negative relationships with family and peers (Gallagher et al., 2017). Given the numerous adverse effects of this behavior on financial circumstances and psyches, coupled with its increasing occurrences, identifying and analyzing the factors contributing to the development of this behavior has been a priority for many researchers' agendas. Previous research shows that consumers who believe in the stability of their personal traits are likely to be more susceptible to deal offers and social comparison (Japutra & Song, 2020). Consequently, these motivations heighten the desire to pursue hedonic pleasure which correlates with an increased tendency towards compulsive buying. Current research on personality traits does not seem to be on a similar line. On one hand, studies show that traits such as agreeableness, neuroticism, and openness positively influence compulsive buying (Shehzadi et al., 2016). On the other hand, other research suggests that groups with high compulsive buying propensities demonstrate significantly elevated levels of neuroticism, alongside notably lower levels of agreeableness (Otero-López & Villardefrancos Pol, 2013). In any case, most researchers seem to agree on one thing: personality influences buying behavior.

In addition to the internal motivation to compulsively plan purchases, consumers can also be externally motivated. For example, individuals who are prone to compulsive buying behavior are often subject to manipulative marketing tricks (Mikołajczak-Degrauwe & Brengman, 2013). According to Japutra and Song (2020), consumer behavior is also largely influenced by shopping motives: deal proneness, social comparison, and hedonic motives. Marketers who respond to these shopping motives can trigger buying behavior among vulnerable consumers. Consumers may regret their purchase as a result which not only has financial and personal consequences for the consumer but also for the company. Manipulative marketing tricks can cause reputational damage which can lead to financial losses in the long run (Koran et al., 2006).

Problematic consumer behavior such as compulsive buying behavior therefore appears to be influenced both internally and externally. However, the question is to what extent internal personality traits and external shopping motives influence compulsive buying behavior. This sheds light on the intersection between personality traits and consumer behaviors and shows the need for further investigation, especially among vulnerable demographics like adolescents. Understanding this relationship between compulsive buying and personality traits is of necessity as it not only impacts individual well-being but also has broader societal implications, such as shaping the responsible and increased utilization of social media which research indicates is positively associated with CBT

(Jameel et al., 2024). By exploring the influence of personality traits, specifically the Big Five traits (regarding openness, conscientiousness, extraversion, agreeableness, and neuroticism), on compulsive buying behavior among Dutch adolescents, underlying mechanisms driving CBT are better understood. As young people are more prone to compulsive buying (Dittmar, 2005a), understanding the factors influencing their spending habits can facilitate solutions, enabling this demographic to enhance their financial literacy.

Compulsive buying behavior is a topic of increasing relevance. Academics are researching CBB because of the significant influence it has on both small and large scales. At the personal level, CBB can result in significant financial strain and psychological distress (Russell et al., 2023). With consumer culture and easy access to credit playing influential roles, the widespread presence of CBT continues to rise, making problems worse for a handful of people. In fact, university students have shown an increasing rate of compulsive buying tendencies globally in 2016 (Maraz et al., 2016), while certain European countries such as Poland have shown even higher rates with studies reporting a prevalence of 11.6% (Tarka and Kukar-Kinney, 2022). Beyond individual consequences, CBB also has economic implications on a large scale as it influences market trends, consumer spending habits, and debt levels which could lead to higher unemployment rates, increased interest rates, increased bankruptcy rates, less family support structure, and excessive depletion of natural resources on a larger scale (Moon and Attiq, 2018). By studying the factors that could influence CBB, we could gain a better grip on our purchasing behavior and develop interventions that contribute to improving our financial behavior, resulting in a healthier consumer pattern.

1.4 Research Question and Sub-Questions

Studies show how personality traits like openness, agreeableness, and extroversion are correlated with hedonic shopping values, whereas emotional stability and conscientiousness seem to be correlated with utilitarian shopping values (Huang and Yang, 2010). Yet, a further connection between compulsive buying seems to be less explored, especially among Dutch adolescents. This may be because of limited attention given to the nuances of compulsive buying behavior within this population which calls for further exploration of CBT in Dutch adolescents. In terms of context, Zipser et al., (2016) show how Chinese adolescents are progressively inclined to showcase their social status through shopping and increasingly dedicate a larger portion of their income to new shopping experiences, similar to Dutch adolescents (Croes and Bartels, 2021), even though both populations show different cross-cultural differences. While Japutra and Song (2020) show that the mindsets of Chinese adolescents affect CBT, the question remains whether similar patterns emerge within the context of Dutch adolescents regarding personality traits.

While the English language refers to adolescents as people between 10 and 19, this research will focus on people aged between 18 and 26 because this period includes developmental changes in the brain and body, extending the transition to adulthood (Nederlands Jeugdinstituut, 2024; Bonnie et al., 2015). For clarity and consistency, the terms ‘adolescents’ and ‘young adults’ will be used interchangeably to refer to this age group in this study.

Personality has been found to influence consumer behavior. For example, extroverted consumers would be more likely to make purchases that allow them to express themselves socially than introverted consumers. Some consumers may even be more inclined to make excessive purchases which may even manifest as CBB for some. Moreover, consumers appear to make purchases for certain reasons. The question, however, is which personality traits play a role in the creation of compulsive buying behavior. This leads to the central research question of this thesis:

How do the Big Five personality traits affect compulsive buying behavior among Dutch adolescents?

To answer this central research question, the following theoretical and empirical sub-questions have been formulated:

The theoretical sub-questions are:

1. How does the consumer decision-making process work?
2. What is compulsive buying behavior?
3. What entails personality traits?
4. What entails Dutch adolescents?

The empirical sub-questions are:

1. What is the consumer decision-making process like for Dutch adolescents?
2. What are the distinguishing characteristics of a Dutch compulsive buyer?
3. How do personality traits influence compulsive buying behavior among Dutch adolescents?

1.5 Ethics and Possible Research Limitations

Ethics are a necessary part of any research involving people. Informed consent has to be obtained from participants which ensures they understand the study's purpose, their rights, and any potential risks involved. Additionally, researchers must look out for potential psychological effects on participants, particularly when investigating sensitive topics such as compulsive buying behavior. Some participants could experience distress during or after the research process which is why support will be provided to those who need it. Maintaining honesty in data collection, analysis, and reporting is also necessary to sustain the credibility and trustworthiness of the study.

Despite careful planning, research can encounter various limitations that may impact its findings. Participant honesty is a key consideration because individuals may not always provide accurate or truthful responses. This could potentially cause bias in the results and decrease the internal validity of the research. Also, the sample collected for the study may not fully represent the broader population which limits the generalizability of the findings and decreases the external validity of the research. Moreover, the reliability and validity of measurement tools used in the study may influence the accuracy of the results. Finally, there may be confounding variables that could affect the outcomes which is why certain control variables will be included.

1.6 Structure of the Thesis

In the remainder of this thesis, the structure will be as follows: Chapter 1 is about introducing the subject of the thesis, including the research question and associated sub-questions, outlining the relevance of the study, and discussing possible limitations. Chapter 2 discusses the literature review that answers the theoretical sub-questions and presents the hypotheses. This chapter touches upon consumers' decision-making process, compulsive buying behavior, personality traits, and Dutch adolescents. Chapter 3 explains the research methodology, detailing the design of the empirical research, the data collection methods, the sample, a description of the data and the variables, and an explanation of the performed data analysis. This chapter will also touch upon researcher bias. Chapter 4 presents the research results, starting with general results, followed by testing the hypotheses and discussing the main findings. Finally, Chapter 5 concludes by drawing from the literature and research findings, comparing the key findings, discussing the central research question and hypotheses, including recommendations for compulsive buyers and future researchers, discussing the limitations of the study, and reflecting on the research process.

CHAPTER 2 Literature Study

2.1 Consumer Decision-Making Process

Consumer behavior refers to the process in which individuals progress through various stages of decision-making when making purchases, involving factors that influence their decisions and product use. The decision-making process is a structured approach that consumers use to decide whether to purchase a product. This process is iterative as it can loop back to earlier stages if new information is acquired or if the consumer's needs change. It is therefore not necessary to always go through all the stages of this process. According to Stankevich (2017), this process consists of five steps.

The very first stage of the model is the needs recognition when consumers realize they need something. Internal stimuli such as hunger and thirst can trigger needs recognition, while external stimuli such as advertising or word-of-mouth can do the same. For example, smartphone advertisements might make consumers realize that their current phone is outdated which could start the first stage of the decision-making process.

Once a need is recognized, the consumer seeks information to make an informed decision. Consumers may internally search by recalling past experiences with the same or with similar products or they might externally search by seeking information from various sources like the internet, friends, or advertisements. The extent of the search depends on the complexity of the decision and the consumer's prior knowledge.

Next, consumers will evaluate different products or brands based on various attributes such as price, quality, and features of the product. By comparing the alternatives, consumers see which product best satisfies their recognized needs. This evaluation is influenced by objective criteria, such as technical specifications, and subjective criteria, such as the brand image.

The consumer makes the purchase decision in the fourth stage. This decision can be influenced by factors such as brand preference, price, availability, and perceived value. External factors like promotional offers or peer pressure can also impact the final purchase decision. At this stage, the consumer selects the product they believe will best satisfy their need. The consumer may also express an intention to purchase but not close the deal because of additional decisions that need to be made, such as deciding the best time to buy the product, determining where to buy the product, and figuring out how much money to spend. This causes a time delay between the formation of a purchase decision and the actual purchase. Complex purchases of durable items have a larger time delay than nondurable products.

The final stage is the post-purchase evaluation where the consumer reflects on their purchase decision. They assess whether the product meets their expectations and satisfies their need. This stage can lead to satisfaction or dissatisfaction which can influence future purchase decisions and brand loyalty. Positive post-purchase experiences can lead to repeat purchases while negative experiences can result in returns or negative word-of-mouth. This last stage of either positive or negative assessment could therefore influence the second stage of another customer, altering someone else's decision-making process.

To conclude, the consumer decision-making process consists of five steps: needs recognition, searching for information, the evaluation of alternatives, the purchase, and post-purchase behavior. Some steps may be skipped, depending on the recognized need of the customer.

2.2 Compulsive Buying Behavior

This study's definition of compulsive buying behavior must be precise as it will guide its measurement. Common definitions define compulsive buying in two different words with “compulsive” referring to doing something a lot and being unable to stop it and “buying” as getting something by paying money for it (“Cambridge Dictionary | English Dictionary, Translations & Thesaurus,” 2024). The medical term for people who have an uncontrollable and compulsive desire to shop, sometimes also referred to as “shopaholics”, is called “oniomania” which roughly translates to “sale insanity”. Similarly, academic definitions align with this perspective, characterizing compulsive buying as an obsession with buying and shopping, showcasing frequent buying episodes, or having uncontrollable urges to buy that are perceived as irresistible and senseless (Müller et al., 2015). In this research paper, ‘compulsive buying behavior’ (CBB) and ‘compulsive buying tendencies’ (CBT) are used interchangeably.

Compulsive buying behavior has been a subject matter for more than a century. In the late 1800s, the term "oniomania" was introduced by French psychiatrist Valentin Magnan (1892), who portrayed CBB as a symptom of societal decline. This perspective was further supported by German physician Max Nordau (1895) in his work "Degeneration", where he labeled oniomania or "buying craze" as a sign of degeneration. In 1909, Emil Kraepelin recognized oniomania as a pathological desire to excessively purchase items without a genuine need for them, grouping it with other impulse-related conditions like kleptomania (Kearney and Stevens, 2012). However, CBB did not receive any serious attention as a mental health concern until the late 20th century. Even in the 21st century, it has remained relatively overlooked as a mental illness. Despite initial hesitation, there has been a gradual shift in recognition since the behavior was included in the 2019 edition of the International Classification of Diseases (ICD-11) under "other specified impulse control disorders" as compulsive

buying-shopping disorder (Müller et al., 2021). This categorization is a step forward in acknowledging the complexities of CBB within the mental health field. However, despite its global prevalence estimated at 5% (Maraz et al., 2016), there is still no consensus on the specific factors contributing to the disorder's development. Currently, compulsive buying is described as a behavioral dependence and falls within the broader category of behavioral addictions or impulse control disorders (Lejoyeux and Weinstein, 2010). These disorders involve repetitive behaviors that an individual feels the urge to perform despite the negative consequences. Compulsive buying shares similarities with other behavioral addictions, such as gambling addictions, internet addictions, and sexual addictions, mostly because of the repetitive and uncontrollable nature of the behavior and its impact on the individual's well-being (Granero et al., 2016). Previous research shows how CBB includes different behavioral tendencies. According to it Ridgway et al. (2008), it includes impulsive and obsessive-compulsive purchasing tendencies. Impulsive buying involves spontaneous purchases driven by rapid decision-making, while obsessive-compulsive buying entails an uncontrolled urge to diminish anxiety through repetitive purchasing.

Extensive research has been conducted on factors influencing CBB. Examples of significant psychological contributors include self-esteem issues (Roberts et al., 2014), anxiety, stress (Weinstein et al., 2015), and hedonic pleasure-seeking (Horváth and Adıgüzel, 2018). Age also seems to play an important role since young consumers show stronger CBT than older consumers (Achtziger et al., 2015) with as many as 11% of compulsive buyers belonging to the younger demographic (Roberts and Manolis, 2000). According to Dittmar (2005a), the prevalence of uncontrolled purchasing tendencies among teenagers appears to be high because of their susceptibility to advertising stimuli and their limited ability to control their spending habits. Moreover, research suggests that early adolescents buy compulsively as a coping strategy to deal with the stress associated with academics (Roberts and Roberts, 2012). Materialistic young adults are also more likely to engage in CBB compared to less materialistic young adults (Islam et al., 2017). Furthermore, shopping behavior, including CBT, seems to be influenced by interpersonal factors (Roberts et al., 2008). A seminal study by Koran et al. (2006) revealed a typical profile of a compulsive buyer, characterized as a young adult with a reported income of under 50,000 dollars. The study also revealed similar rates of CBT between genders, contrary to their hypothesis for a higher prevalence among women.

Consumers make a final decision to buy a product during the fourth stage of the consumer decision-making process. According to Shoham and Makovec Brenčič (2003), CBB significantly affects the purchase stage. They distinguish between two types of in-store purchases: spontaneous and impulse purchases. Spontaneous purchases occur under certain conditions such as when consumers are unfamiliar with the store's layout, are under time constraints, or are reminded by in-store displays to buy a product. In contrast, impulse purchases happen when consumers feel an irresistible urge to buy

something. Retailers often encourage impulse buying by strategically placing items, like candy, near checkout counters. The degree to which consumers engage in spontaneous and impulse purchases can indicate their tendencies toward compulsive buying behavior. Consumers who frequently make spontaneous and impulsive decisions in-store are more likely to show CBT. Furthermore, the likelihood of engaging in impulse buying and, consequently, compulsive buying depends on how much consumers plan and stick to their shopping lists.

To conclude, compulsive buying behavior is a complex behavior that has been recognized both historically and in recent research as a significant mental health concern. CBB falls within the broader categories of behavioral addictions and impulse control disorders because of the characterization of uncontrollable urges to buy items without genuine need. There remains a lack of consensus on the precise factors contributing to the development and maintenance of CBB despite its long-lived presence in medical literature and recent inclusion in the ICD-11. The behavior is influenced by psychological factors such as low self-esteem, anxiety, stress, and the pursuit of hedonic pleasure. Demographically, younger consumers appear more susceptible to CBB because of their increased responsiveness to advertising and greater use of buying as a coping mechanism for stress. CBB impacts the final purchase stage through spontaneous and impulse purchases which demonstrating just how strong compulsive tendencies can be. Based on the review of existing literature and findings, the following hypothesis is proposed:

H1: Compulsive buying behavior increases the amount of unplanned purchases.

2.3 Personality Traits

For this study, it is essential to provide a clear understanding of personality because it will inform how personality traits are assessed in this research. According to standard definitions, personality refers to the type of person someone is, shown by the way they behave, feel, and think (“Cambridge Dictionary | English Dictionary, Translations & Thesaurus,” 2024). Though academic descriptions differ as to what precisely describes personality, Bergner (2020, p. 4) defines personality as “the enduring set of traits and styles that he or she exhibits, which characteristics represent dispositions of a person and ways in which this person differs from the ‘standard normal person’ in his or her society”. Bergner (2020) goes on to say that the ‘big five’ personality traits are naturally flexible and align well with what we observe in daily life, often conceptualized within the framework of the Five-Factor Model (FFM). Also known as the Five-Factor Theory of Personality, this model identifies five broad dimensions: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. Personality traits are a type of psychological characteristics that help to define the uniqueness of a

person. Other examples of psychological characteristics include cognitive abilities, emotional intelligence, or psychological disorders.

The assessment of personality traits has a history dating back to the late 19th century. In 1884, Sir Francis Galton introduced the concept by studying how language could help classify different human personality traits (Shrout and Fiske, 2014). American psychologists Gordon Allport and Henry Odbert (1936) built upon Galton's work by conducting a seminal study in which they categorized adjectives from Webster's New International Dictionary and slang words to create a list of 4504 adjectives believed to describe observable and relatively permanent traits. A British-American psychologist named Raymond Cattell (1943) further advanced the field by reducing Allport and Odbert's list to 171 traits through factor analysis. Cattell's subsequent studies in the late 1940s and early 1950s led to the development of the 16 Personality Factors (16PF) Questionnaire which identified 16 primary personality factors (Cattell, 1957). Additionally, Hans Eysenck proposed the two fundamental dimensions of personality, Extraversion, and Neuroticism, in 1947 (Revelle, 2016). Throughout the mid-20th century, researchers like Donald Fiske, John French, Ernest Tupes, and Raymond Christal contributed to the development of personality trait models, resulting in the identification of the "Big Five" personality traits: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience (Cattell, 1957; Fiske, 1949; French, 1953; Tupes and Christal, 1958). These studies laid the foundation for modern personality assessment tools. However, the application of these assessments has not been without controversy. For example, the FFM-associated test was utilized by Cambridge Analytica which sparked the "psychographic profiling" controversy during the 2016 United States presidential election (Sellers, 2023).

The concept of personality traits is surrounded by some misinformation that needs to be addressed. There is a common misunderstanding that personality traits are highly heritable, unchangeable, and isolated from environmental influences. However, research challenges this assumption. For instance, while conscientiousness is indeed heritable, the best estimate of its heritability is between 40% and 50% (Krueger et al., 2008). This suggests that environmental factors play a significant role in shaping personality traits. Also, the idea that traits are unchangeable is inaccurate since empirical evidence demonstrates that traits such as conscientiousness and impulse control are adaptable well into adulthood (Jackson et al., 2009). While personality traits show robust consistency over time, they also undergo gradual changes with most of these changes happening during young adulthood between the ages of twenty and forty (Roberts and Mroczek, 2008). Similarly, results from a study by Harris et al. (2016) show low overall stability in personality traits over a lifespan. Even those in their seventies can still experience changes.

The Five-Factor Model, also known as the Big Five personality test, has gained broad recognition as a valid method for assessing personality traits. The model is applied beyond psychology in various scientific domains, including economics and marketing (Müller and Schwieren, 2012). For instance, research suggests that personality traits influence financial burdens. Neuroticism, for example, has been shown to incur costs 2.5 times greater than those associated with common mental disorders (Widiger and Crego, 2019). Well-integrated tools used for measuring the Five-Factor Model already exist, like the 44-item Big Five Inventory (John et al., 2012) and the NEO-Personality Inventory (Costa Jr. and McCrae, 2000). Even though these tools are scientifically justified instruments, they are too expensive to apply in this research because of time constraints. Kovaleva et al. (2013) developed an alternative tool, called the BFI-K, specifically to tackle this concern. The BFI-K comprises just 21 Likert items, making it a concise and cost-effective approach for assessing the Five-Factor Model compared to the previously mentioned models.

The relationship between personality traits and compulsive buying behavior has been studied across different countries in numerous contexts, though with differing results. Prior seminal research even suggests that people who buy compulsively are more likely to demonstrate compulsivity as a personality trait (O'Guinn & Faber, 1989). Mowen and Spears (1999) linked the Big Five personality traits to CBB among American college students and found that CBB was positively related to neuroticism and agreeableness, and negatively related to conscientiousness. Their findings indicate that a positive correlation between agreeableness and CBB suggests that uncontrolled shopping tendencies are linked with qualities such as kindness, empathy, and politeness, while the negative correlation between conscientiousness and CBB implies that individuals struggling to regulate their purchasing may also reveal disorganization, lack of precision, and inefficiency in their daily activities. Another study among Taiwanese students reports that individuals with high levels of openness to experience and agreeableness may develop a passion for online shopping activities, which is related to CBB, while highly conscientious buyers are expected to show less excessive buying tendencies (Wang and Yang, 2008). While Shehzadi et al. (2016) show heightened levels of agreeableness, neuroticism, and openness among compulsive buyers in Pakistan, Otero-López & Villardefrancos Pol (2013) indicate increased levels of neuroticism alongside lower levels of agreeableness among Spanish compulsive buyers. This last conclusion was drawn after assessing differences in specific aspects and overall characteristics across three groups with low, moderate, and high CBT. Given that most individuals are part of a group, it is plausible to assume the same positive relationship will be found when studying individual levels of personality traits and CBB, though it is important to note that one level of aggregation may not hold on another level. While the results of the studies in different countries may vary, some findings seem to be consistent, such as the increased levels of neuroticism, and decreased levels of conscientiousness among compulsive buyers.

Multiple measurements have been used to study the relationship between personality traits and CBB, alongside the BFI-K tool. In the late 1980s, the Big Five Inventory was constructed, which included 44 items. At the time, a test of this length was considered too short to suggest anything about a subject's personality, although modern researchers have reduced this 44-item test to 10 items, suggesting that the demand for super-short measures is growing, especially in correlation analyses (Rammstedt and John, 2007). Furthermore, Costa and McCrae developed the NEO Personality Inventory (NEO-PI-R) in 1985 (Boyle et al., 2008). The test originally consisted of 60 items while the full version entails 240 items. Otero-López and Villardefrancos Pol (2013) have used this measure to examine CBB and the FFM using the NEO-PI-R, which assists in assessing whether there are differences in both facets and broad traits in low, moderate, and high compulsive buying propensities. A similar but shorter metric was subsequently developed by the same authors in 1992, the NEO-Five Factor Inventory (NEO-FFI). Many personality measurements have been critiqued in the past. For example, Widiger (2001) has criticized the NEO for not controlling for social desirability bias as participants could be dishonest in settings where people get praised for presenting themselves more favorably. Others argue that the use of the FFM for the NEO PI-R is flawed since they believe the FFM model became popular mainly because of the academic status of its authors, McCrae and Costa, and their influence in the psychological community, and not because it was the best model (Provost, 2006). Some researchers also argue the unnecessary complexity of the NEO PI-R, while others state how people are too complex to be reduced to a simple categorical label. Provost (2006) mentions how personality tests oversimplify complex human behavior while also ignoring the influence of context and environment. The author warns against reducing individuals to narrow labels because it fails to capture their full complexity. Despite concerns about reliability and validity, personality tests remain widely used, which, according to the author, requires further emphasis on the need for caution when interpreting their findings. Newer models have been developed as a result of the critique, such as the International Personality Item Pool (IPIP) (Goldberg et al., 2006).

Compulsive buying behavior shows similarities to impulse control disorders (ICD) such as irresistible impulses to buy, and feelings of excitement and pleasure derived from shopping and buying (Mueller et al., 2010). For those reasons, many investigators place CBB as a type of impulsive-compulsive spectrum disorder (Dell'Osso et al., 2006). Beatty and Elizabeth Ferrell (1998) define impulsive buying as a "sudden and immediate purchase with no intentions beforehand either to purchase the product or to fulfill a specific buying task". While people who buy compulsively and impulsively show many similarities, CBB and impulsive buying are distinguished by the degree of control maintained over the behavior. Compulsive consumption is considered to be a consistent behavioral trait that frequently exceeds someone's control, whereas impulsive buying tends to be more situational and responsive to external influences (Faber, 2010). Turkyilmaz et al. (2015) present a link with personality traits: extraversion, openness, and agreeableness have positive effects on impulsive

buying, while conscientiousness and neuroticism have negative effects. These findings suggest the potential for similar relationships between these personality traits and CBB.

It is suggested that impulsive buying, which is driven by the urge for pleasure, stems from the pursuit of higher-level needs as described in Maslow's Hierarchy of Needs (McLeod, 2024). Those who try to fulfill these higher needs often find themselves purchasing impulsively. For instance, the urge to enhance one's self-perception may lead to a desire to make purchases, driven by feelings of self-dissatisfaction or a need to bolster self-esteem (Dhandra, 2020). Maslow (1943) introduced the "Hierarchy of Needs" to categorize the fundamental needs of individuals in society, suggesting that human needs follow a hierarchical structure: basic physiological needs, like food, water, and shelter, are at the bottom, while higher order needs, such as self-esteem and self-actualization, are at the top. This theory proposes that individuals strive to fulfill these needs in a structured order from bottom to top. As ICD shows many similarities to CBB, compulsive buyers may relate to the fulfillment of certain psychological needs associated with personality traits. For example, highly extroverted people may be more inclined to seek social status through material possessions, while highly neurotic people may use compulsive buying as a coping mechanism for dealing with negative emotions and boosting self-esteem. Although Maslow's hierarchy has faced criticism, such as not considering varying goals at different ages, it still holds potential for studies examining the development of CBB since the hierarchy has been applied in research on ICD and other addictions (e.g., Cui et al., 2021).

While many models and theories can capture the potential relationship between personality traits and compulsive buying behavior, such as the HEXACO Personality Model or Cloninger's Temperament and Character Inventory (TCI) (Ashton and Lee, 2008; Garcia et al., 2020), the Five-Factor Model has been extensively used in previous research for this goal. This theoretical framework states that individual personality differences can be reduced to five broad dimensions: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. Each of these traits is linked to different types of behaviors, including consumer behavior. FFM has often been linked to addictive disorders, including compulsive buying behavior, in various contexts. Studies that outline personality types through the lens of the FFM have established links with CBB among Spanish university students (Otero-López et al., 2021), Egyptian shopping malls' customers (Shemeis et al., 2021), English and Norwegian university students (Andreassen et al., 2013), and many more. For these reasons, this research will use the same theoretical framework, the Five-Factor Model, to study compulsive buying behavior among Dutch adolescents. To effectively answer the central research question, the central focus will be placed on the five personality traits measured in individuals using the FFM. The subsequent sections will provide descriptions of each personality trait.

2.3.1 Openness to Experience

Openness to experience refers to the willingness to embrace new ideas and experiences (McCrae and Greenberg, 2014). This trait is about having a broad and receptive mindset, always seeking out fresh perspectives and adventures. Although it is different from intelligence, it is related to divergent thinking and creativity. Individuals displaying high levels of openness are more likely to pursue new experiences with enthusiasm. They are considered curious, imaginative, and willing to explore unconventional paths. On the other hand, those with low levels of openness are more likely to prefer familiarity and routine over change and novelty. These people may be cautious, traditional, and likely stick to what is known to them. They are also more rigid in their thinking and show resistance to new ideas or experiences (Steinmetz et al., 2011).

One potential reason why openness to experience might positively influence compulsive buying behavior could be related to the inclination of individuals with higher levels of this trait to seek out new experiences and novelty (Wang and Yang, 2008). People who are more open to experience are more likely to engage in compulsive buying as a means of satisfying their desire for new products, driven by their curiosity for exploring different experiences. Their increased sensitivity to mood fluctuations may also raise feelings of restlessness and impatience, further intensifying their urge to engage in compulsive buying behavior to seek novelty and excitement (Forgas and Ciarrochi, 2001).

2.3.2 Conscientiousness

Conscientiousness is represented by the degree of organization, responsibility, and self-discipline displayed by an individual (Roberts et al., 2009). This trait is associated with being organized and goal-oriented. Individuals high in conscientiousness show strong impulse control, follow deadlines and schedules, and prioritize achievement and success in their endeavors. They are often seen as reliable and efficient workers who want to achieve excellence in their tasks. Conversely, individuals with low levels of conscientiousness may struggle with disorganization, impulsivity, and a lack of follow-through. They may find it challenging to maintain focus and discipline, which could lead to difficulties in meeting obligations and fulfilling commitments.

Highly conscientious people tend to prioritize long-term goals, including those related to their finances. Individuals with higher levels of conscientiousness are likely to possess better financial literacy skills and are more inclined to engage in responsible financial behaviors by budgeting, planning, and making prudent financial decisions, which all lead to greater financial stability and wealth accumulation (Letkiewicz and Fox, 2014). Highly conscientious buyers are also expected to show less excessive buying tendencies (Wang and Yang, 2008). Research suggests that this personality trait is inversely related to CBB with lower competence potentially leading to higher instances of compulsive buying (Andreassen et al., 2013).

2.3.3 Extraversion

Extraversion involves the extent to which an individual is outgoing, sociable, and energetic in social interactions (Wilt and Revelle, 2017). This trait is characterized by assertiveness, enthusiasm, and a tendency to seek out social stimulation. Highly extroverted individuals thrive in social settings, enjoy meeting new people, and often possess leadership qualities (Grant et al., 2011). They are typically seen as outgoing and confident people who enjoy being the center of attention. Conversely, individuals with low levels of extraversion, often referred to as introverts, may prefer solitude or one-on-one interactions over large social gatherings. They may be more reserved and contemplative, preferring deep conversations to superficial small talk.

Unlike introverted individuals who tend to keep to themselves, extroverts are more outgoing and expressive, often seeking social interactions and rewards. This outgoing behavior might contribute to CBT, especially when individuals seek excessive external stimulation (Chugani and Irwin, 2020). Moreover, extroverts may purchase products as a way to express themselves or identify with a particular group (Verplanken and Herabadi, 2001). Therefore, the association between extraversion and CBB is expected to be stronger among those who are socially active (Shahjehan et al., 2012).

2.3.4 Agreeableness

Agreeableness is depicted by the degree of warmth, kindness, and cooperativeness displayed by an individual in their interactions with others (Graziano and Tobin, 2009). This trait is associated with empathy, compassion, and consideration for others' feelings and perspectives. Highly agreeable people prioritize harmonious relationships and tend to avoid conflict or confrontation. They are often seen as friendly, cooperative, and altruistic individuals who go out of their way to help others in need. On the other hand, individuals with low levels of agreeableness may be more competitive, skeptical, or argumentative in their interactions with others. They may prioritize their own needs and desires over those of others, which could lead to interpersonal conflicts and strained relationships.

Prior research seems to be divided on the influence of agreeableness on CBB. On one hand, agreeable individuals may be more inclined to engage in compulsive buying to fulfill perceived social expectations, even at the expense of their financial well-being (Heo et al., 2018). Highly agreeable people are also more easily persuaded by others, leading them to engage in CBB to conform to social norms (Graziano and Eisenberg, 1997). On the other hand, compulsive buying is socially disapproved (Mikoajczak-Degrauwe et al., 2012). Therefore, highly agreeable individuals are expected to engage less in CBB because of their desire to maintain positive social relationships. Compulsive buyers also often lack traits like trust, altruism, and modesty, unlike highly agreeable people. However, most researchers agree that agreeableness seems to be inversely related to CBB (Andreassen et al., 2013).

2.3.5 Neuroticism

Neuroticism is related to the extent of emotional instability, anxiety, and negative affect experienced by an individual (Widiger, 2009). This trait is characterized by feelings of stress and worry.

Individuals high in neuroticism may show an increased sensitivity to perceived threats or challenges and they usually struggle with managing their emotions. They may experience frequent mood fluctuations, feelings of insecurity, and a tendency to catastrophize minor setbacks. Conversely, individuals with low levels of neuroticism, often referred to as emotionally stable people, tend to be more resilient, composed, and emotionally balanced. They are less prone to experiencing intense negative emotions and are better equipped to cope with stressful factors calmly and rationally.

Emotional instability, a vulnerability in highly neurotic individuals, is often influenced by compulsive buying (Mueller et al., 2010), resulting in increased levels of anxiety and depression (Claes and Müller, 2017). These individuals are less satisfied with life and more likely to complain (Souiden et al., 2019) which could lead these people to engage in CBB as a way to compensate for negative feelings (Otero-López and Villardefrancos Pol, 2013).

According to Roozmand *et al.* (2011), personality traits cause differences in purchasing behavior, such as open and extroverted people having a bigger need for dominance and status while agreeable people feel the need to keep social harmony. For example, agreeable people see cars as a social need rather than a way of showing off or showing dominance. Personality traits therefore likely influence the needs recognition in the consumer decision-making process. This suggests that personalities shape how people identify and perceive needs or problems within the consumer decision-making process.

In conclusion, personality traits play an important role in shaping individuals' behaviors, including their decision-making processes as consumers by identifying needs or problems. The Five-Factor Model provides a broad framework for understanding the personality traits of openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. Although misconceptions about the stability and heritability of personality traits do exist, research indicates that they are subject to both environmental influences and small changes over time. Based on this, the following hypotheses are formulated:

H2a: Openness to Experience positively influences compulsive buying behavior.

H2b: Extraversion positively influences compulsive buying behavior.

H2c: Neuroticism positively influences compulsive buying behavior.

H3a: Conscientiousness negatively influences compulsive buying behavior.

H3b: Agreeableness negatively influences compulsive buying behavior.

2.4 Dutch Adolescents

Adolescence is an important period of one's life as many changes take place. Young adulthood, spanning ages 18 to 26, is a time for achieving financial independence, forming relationships, and taking on societal responsibilities (Bonnie et al., 2015). Brosdahl and Carpenter (2011) categorized generations based on their birth years and mentioned Generation X (1961 – 1980), Generation Y (1981 – 1990), and Generation Z (1991 to current). As the oldest individuals of Gen Z are 33, most adolescents are currently part of Gen Z. Contrary to the other generations, Gen Z has uniquely grown up with rapid technological advancements and pervasive digital media, which significantly influence their consumer habits. This generation has been exposed to the internet, social media, and smartphones from a young age, which has shaped their social interactions and shopping behaviors. This constant connectivity has created a culture of instant gratification and continuous access to information and trends. As a result, Gen Z consumers are typically well-informed but also highly susceptible to digital marketing and peer influences through social media (Childers and Boatwright, 2021).

Age might affect compulsivity in purchasing behaviors. Research suggests that as individuals grow older, they become more risk-averse and, hence, less inclined to buy compulsively (Shoham and Makovec Brenčič, 2003). Adolescents, on the other hand, often show higher levels of impulsivity because of ongoing neurological development and a greater propensity for sensation-seeking behaviors (Steinberg et al., 2008). This developmental stage makes them more vulnerable to CBT, especially in an environment filled with targeted advertisements and influencer endorsements.

Dutch adolescents are no exception to these trends. The high degree of digital connectivity and social media engagement among Dutch young adults increases their exposure to persuasive marketing strategies, which could lead to compulsive buying behavior (Fineberg et al., 2022). The constant exposure to advertisements and the pressure to conform to social norms and trends can increase impulsive purchasing decisions and, consequently, compulsive buying behavior. The cultural context in the Netherlands also plays a role in forming the behaviors of Dutch adolescents. The Netherlands is known for its high standard of living and a strong emphasis on consumerism, which can further influence the buying behaviors of its youth. The combination of cultural factors and the inherent traits of Generation Z creates an environment where compulsive buying behavior can be particularly prevalent.

In summary, the distinctive traits of Gen Z, particularly among Dutch adolescents aged 18 to 26, combined with the unique cultural and societal context of the Netherlands, contribute to an environment that encourages compulsive buying behavior. Their constant connectivity and exposure to targeted marketing because of high social media engagement make them particularly susceptible to

impulsive and compulsive purchasing decisions. Considering the increased likelihood of these behaviors during adolescence, it is hypothesized that:

H4: Dutch adolescents are more likely to exhibit compulsive buying behavior compared to other age groups.

2.5 Hypotheses and Conceptual Research Model

H1: Compulsive buying behavior increases the amount of unplanned purchases.

H2a: Openness to Experience positively influences compulsive buying behavior.

H2b: Extraversion positively influences compulsive buying behavior.

H2c: Neuroticism positively influences compulsive buying behavior.

H3a: Conscientiousness negatively influences compulsive buying behavior.

H3b: Agreeableness negatively influences compulsive buying behavior.

H4: Dutch adolescents are more likely to exhibit compulsive buying behavior compared to other age groups.

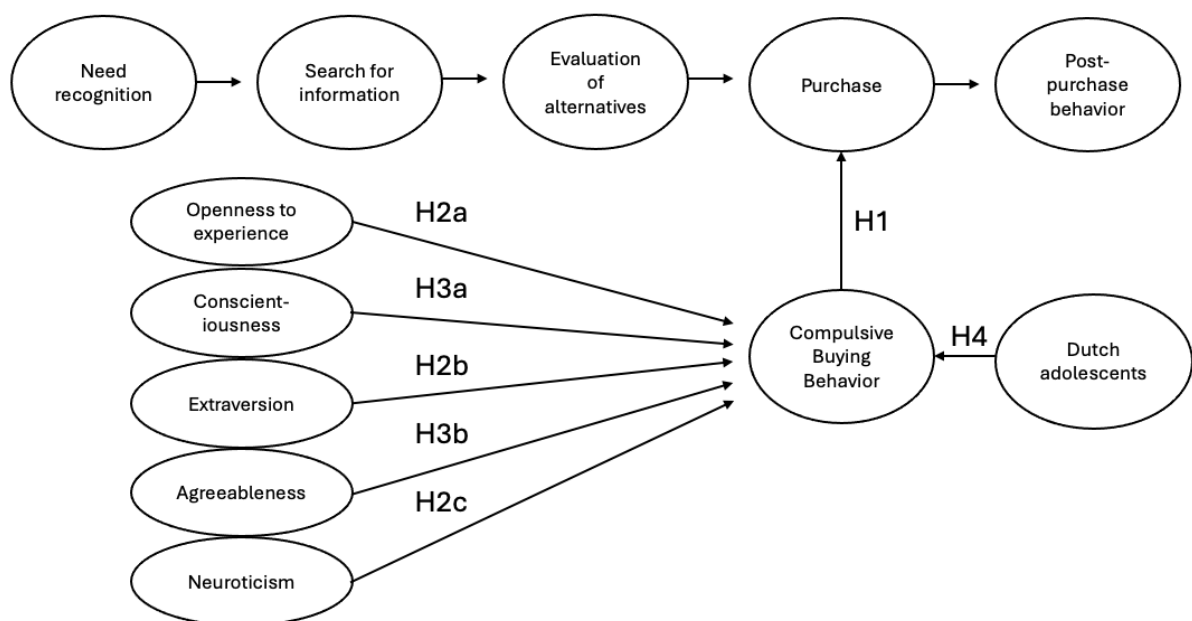


Figure 1: Conceptual research model

CHAPTER 3 Research Methodology

3.1 Quantitative or Qualitative Research Design

Research requires data collection and measurements to test hypotheses and answer questions. In marketing, this involves qualitative or quantitative methods to understand consumer behavior. Quantitative research uses numerical data to test hypotheses. This type of research offers high objectivity and can be generalized to a broader audience if a representative sample is chosen. It includes experimental, descriptive, correlational, and causal-comparative research. Experimental research tests hypotheses by manipulating variables and observing effects, establishing cause-and-effect relationships by controlling variables and randomly assigning participants to groups (Bloomfield and Fisher, 2019). Descriptive research gathers data through surveys to detail the characteristics of a population (Siedlecki, 2020). Correlational research explores relationships between variables using statistical techniques, revealing patterns and associations (Seeram, 2019), while causal-comparative research identifies cause-and-effect relationships by comparing groups that differ on a particular variable of interest (Schenker and Rumrill, 2004). On the other hand, qualitative research involves collecting non-numerical data such as interviews and focus groups to understand underlying motivations behind behaviors and attitudes. This research is more subjective and exploratory, which provides insights into specific, less explored cases but often cannot generalize findings to a broader population. Qualitative researchers do not manipulate or control variables like quantitative researchers but rather use ethnography and anthropology to study their research subjects (Hammersley, 2018). It is not uncommon for both research types to be implemented with qualitative research often serving as a starting point for unexplored phenomena, which can then be investigated on a larger scale using quantitative research, which is also known as a mixed research method (Östlund et al., 2011). This dissertation used quantitative research to identify patterns between personality traits and compulsive buying behavior among Dutch adolescents. This approach allows for data collection from a larger sample, which supports statistical analysis and the identification of significant correlations.

3.2 Data Collection Methods

A literature review was conducted to gather information about compulsive buying behavior, personality traits, and the relationship between these concepts with the aim of providing an answer to the theoretical sub-questions that relate to the central research question of this study. The findings from the literature were used to build a conceptual research model in which the relationships studied can be investigated using quantitative analyses.

Multiple data collection methods exist in quantitative research (Bloomfield and Fisher, 2019). Survey research gathers data from participants about their opinions, behaviors, or characteristics to perform data analysis. They can be administered in various ways, such as online, in person, or by mail, allowing researchers to collect data from many people. Surveys always contain a questionnaire to acquire participant data. Surveys typically also include descriptive research, which aims to describe the characteristics of a population, and correlational research, which determines if a relationship exists between variables. Data collection through experimental research involves the manipulation of variables to observe the effect on other variables, establishing a cause-and-effect relationship. Participants are randomly assigned to different treatment and control groups, ensuring that the manipulation causes any differences. Quasi-experimental research aims to establish cause-and-effect relationships without the reliance on random assignment. Researchers may also use existing data collected for purposes different from the researcher. This secondary data analysis allows researchers to answer research questions without gathering new data as long as the provided data is reliable and relevant to the study.

This study used an online survey as the main data collection method, alongside descriptive and correlational research. Online surveys can be distributed to many participants through convenience sampling and social media platforms quickly and easily, which makes it feasible to gather data from a larger sample of Dutch adolescents. Surveys are generally more cost-effective than other methods like qualitative interviews. Adolescents are also typically proficient in technology and comfortable with digital platforms, making them more likely to respond to an online survey. Moreover, given the time constraints of this study, an online survey allowed for quicker data collection. Respondents completed the survey anonymously, which encouraged honest responses about the potentially sensitive topic of compulsive buying. The online survey method provided an efficient way of collecting data to explore the relationship between personality traits and CBB among Dutch adolescents. The survey is provided in Appendix 2.

Data was collected using Likert scales adapted from previous research. Likert scales combine responses from multiple Likert items to measure attitudes in a scientifically validated way (Joshi et al., 2015). The individual responses to these items are typically added together to create a score for a group of items to prepare for data analysis. This is why Likert scales are often referred to as summative scales. CBB was measured using a 6-item Likert scale introduced by Ridgway et al. (2008). This scale for measuring compulsive buying is known for its widespread use. It is often cited for its strong theoretical foundation, well-documented measurement characteristics, and relevance to the broader consumer population. All six items regarding CBB were measured on a 5-point Likert scale, ranging from 'strongly disagree' (1) to 'strongly agree' (5). The original CBB scale was measured on a 7-point Likert scale, but to avoid confusion among respondents, it was decided to keep

all Likert scales on an equal scale of five points. Furthermore, personality traits were measured with a different number of items: Openness to Experience was measured on a 5-item Likert scale, while Conscientiousness, Extraversion, Agreeableness, and Neuroticism were each measured on a 4-item Likert scale. All items were measured on a 5-point Likert scale, ranging from ‘strongly disagree’ (1), to ‘strongly agree’ (5). Various scales have been used to assess personalities, and differences in these measurements have been shown to impact the assessment outcomes (Angleitner and Wiggins, 2012). Therefore, this study has chosen a widely recognized and utilized assessment, while also considering budget and time constraints. To fit these criteria, this study used the BFI-K scale for personality trait measurements introduced by Kovaleva et al. (2013). Lastly, unplanned purchases were measured using a 2-item Likert scale, introduced by Shoham and Makovec Brenčič (2003). The two items were measured on 5-point Likert scales, ranging from ‘never’ (1) to ‘always’ (5). All variables in this research are considered numerical ordinal variables.

3.3 Research Sample

This study has surveyed 250 individuals residing in the Randstad region. After getting rid of all uncompleted surveys, all missing values, removing non-Dutch responses to focus on the target group, and deleting the responses that did not pass the attention check, 210 usable responses were left. An online survey on the platform Qualtrics was sent out on the 4th of June 2024 and the total sample was collected by the 10th of June 2024. Survey links were sent out to students studying for a bachelor’s or master’s degree with the use of social media platforms like Instagram, LinkedIn, and WhatsApp. Students of different ages answered the survey with the youngest respondents under 18 and the oldest over 65, but most students were between 18 and 24 (about 48%). The gender distribution was almost balanced with 51% male and 49% female.

3.4 Data Analysis

The data analysis was performed with the software SPSS, a tool used for data management and statistical analysis. Before testing hypotheses, data was imported and checked for errors or missing values. Once the missing values were dealt with, three transformations were made. First of all, some personality measurement items were reverse-coded, ensuring internal validity as respondents had to draw their attention as much as possible to the given statements. Negative wording items have been used in combination with positive wording items in the BFI-K instrument, which reduced the response style bias: the tendency to give answers without actually paying attention to the content of the question (Menictas et al., 2011). This formula was used for 8 out of 21 items in the BFI-K. The relevant statements with the corresponding formula are located in Appendix 2. Furthermore, a single variable was created from all corresponding statements by taking the sum of the Likert item scores (Harpe,

2015). Therefore, a second transformation was done by taking the sum of each measured item. However, the sums of each variable were not measured on similar scales. Therefore, a third transformation was performed by standardizing all variables to ensure that they can all be compared on similar scales regardless of their original measurement units. After these transformations, descriptive statistics of the sample follow. The descriptive statistics were calculated for each composite score, including the mean, standard deviation, and range, while the distribution of demographics was described using frequency tables and graphs. The reliability of measurement instruments was then checked by calculating Cronbach's alpha for each construct by selecting the items for each Likert scale, including CBB, personality traits, and unplanned purchases. Before the hypotheses were tested, a correlation analysis took place.

The first three hypotheses were tested using Ordinary Least Squares (OLS) with standardized variables, which identify the significance of coefficients for each personality trait on CBB as well as stating the magnitude and the sign of the effect. The robustness of the OLS model was also tested by performing a second analysis. An ordered logistic regression (OLR) helps assess the OLS model's strength, which was done by comparing signs of the coefficients of independent variables between the OLS and OLR models. This verifies if the effects of independent variables on the dependent variables were consistent. We can infer that the OLS model is robust if the coefficients of the independent variables in both models are consistent and demonstrate alignment in their direction. The fourth hypothesis was tested using ANOVA, which enables us to compare multiple age groups.

Lastly, the goodness-of-fit test was conducted to ensure that the statistical model adequately represents the observed data. This test evaluates how well the model fits the data points and whether the predictions accurately reflect the actual outcomes. Goodness-of-fit testing assesses the reliability and validity of the regression model by determining whether it effectively captures the variability in the dependent variable. Metrics like R-squared (R^2) or pseudo R-squared are commonly used to indicate goodness-of-fit. A higher R^2 value indicates a better fit, suggesting that the model is more effective in explaining the observed data. However, traditional R^2 measures do not apply to logistic regressions because of categorical variables. Therefore, ordered logistic regression uses pseudo R^2 to approximate predictive power. According to McFadden (1973), a pseudo R^2 value between 0.2 and 0.4 indicates a strong goodness-of-fit. This means that the model is considered to have a good fit if it falls within this range and can therefore effectively capture the variability in the data.

3.5 Possible Research Bias

The validity and reliability of the research outcomes are necessary to prevent research bias. Therefore, a few actions were taken. Firstly, statements within an item construct were randomized, leading everyone to see a different order of questions related to the variables studied. Randomization reduces sequencing effects which increases reliability by reducing response patterns, and it minimizes fatigue effects, leading to fairer responses (Altman, 1991). Response style bias was also reduced by translating the survey into Dutch and adding this as an option to suit the target audience of Dutch adolescents. Additionally, reverse coding was applied for specific statements. The data collection relied on convenience sampling, a type of non-probability sampling method that involves selecting a sample from a readily available part of the population (Emerson, 2015). While this increases the risk of sampling bias, it also provides the benefit of quick sampling. The survey also included three control variables, namely materialism, impulsivity, and social influence, which are meant to account for their potential impact on the main variables of interest. Also, since research shows that results are more often contaminated due to inattention or confusion (Sonderen et al., 2013), an incentive alignment was added, which increases both the response rate and the accuracy of the answers (Ding et al., 2005). Moreover, an attention check was implemented in the survey to check if the responses were valid.

CHAPTER 4 Research Results

This chapter will analyze the survey results to test the hypotheses to formulate an answer to the central research question: “How do the Big Five personality traits affect compulsive buying behavior among Dutch adolescents?” The first glance of the data is shown with descriptive statistics, located in Appendices 4 and 5. Preliminary data findings, testing of the four main hypotheses, and a summary of the results are discussed in the following section.

4.1 Preliminary Data Findings

Details about the research sample can be found in Appendix 4. The tables and graphs indicate that the majority of respondents were male (51%), between the ages of 18 and 24 (47.6%), highly educated with a university bachelor’s degree (31%), a monthly net income between €500 and €1500 (32.4%), and a daily social media usage between one to two hours per day (30%).

4.1.1 Descriptive Statistics

Several observations appear noteworthy from the demographic data. Firstly, the gender distribution seems to be nearly perfectly balanced with the survey only including three more males than females. Also, almost half of the respondents are between the ages of 18 and 24. About 62% of all respondents are between the ages of 18 and 34, indicating that the survey has effectively reached its intended audience of adolescents. The responses of this age group will provide important insights for this study. However, there is something else that stands out about the age distribution, which is the large number of respondents between the ages of 55 and 64 (21.4%). Although this is not the target group of this study, this group will be used for comparison with other age groups to observe differences in CBB, which will mainly help test the fourth hypothesis. Moreover, the majority of respondents are highly educated with either a higher professional education, a university bachelor’s degree, or a university master’s degree (cumulatively 82.4%), or actively pursuing one. Most respondents who have obtained or are pursuing a university bachelor's degree fall within the age bracket of 18 to 24 years, aligning with the typical age range for obtaining this qualification. Additionally, most respondents had a net income between €500 and €1500, though most reported a net income over €2500 (60% cumulative). Furthermore, almost three-quarters reported spending less than three hours per day on social media (77.2% cumulative). Lastly, the nationality was checked through the location data of survey responses, all of which were answered in the Netherlands, indicating that the respondents were likely Dutch.

Both Ordinary Least Squares (OLS) regression and Ordered Logistic Regression (OLR) are used to analyze the data in this study. While OLS uses continuous scales to test hypotheses, OLR uses ordinal variables. Therefore, descriptive statistics for both the summed scores and the medians of the individual Likert-scale items are presented in Appendix 5. The personality traits and CBB are

measured by creating composite variables out of the summed scores of the Likert-scale items. Summed scores capture the overall tendency of respondents across multiple related questions and provide a reliable measure of each construct. Any random errors that might occur in individual responses are also averaged out which leads to more consistent measurements. Additionally, the medians of individual items retain the ordinal variable type of the Likert-scale responses which makes them useful for OLR.

The descriptive statistics, which are presented in Table 16 and Table 17 in Appendix 5, indicate that 'openness to experience' scored an average of 19.333 on a scale of 10 to 25. This means that most people in the sample scored relatively high on openness. The median score of 3.962 on a scale of 1 to 5 also indicates a relatively high degree of openness. The average score of 'conscientiousness' is 14.919 on a scale of 5 to 20 with a median score of 3.757, meaning that most people in the sample also scored high on conscientiousness. The average score of 'extraversion' is 13.786 on a scale of 4 to 20 with a median score of 3.445. This means that the prevalence of extroversion in the sample is average. The sample scored an average of 14.510 on a scale of 6 to 19 for 'agreeableness', and the median score is 3.691, indicating a relatively high level of agreeableness. Most people did not score high on 'neuroticism' in the sample since the average score is 9.881 on a scale of 4 to 19 and the median score is 2.493. The average score for 'compulsive buying behavior' is 12.891 on a scale of 6 to 26, and the median score was 2.098. This indicates a relatively low degree of CBB. Unplanned purchases are also not very frequent in the sample as the average score is 5.086 on a scale of 2 to 10, and the median score is 2.543. Furthermore, the mean and median scores for the control variables 'materialism', 'impulsivity', and 'environment' are close to each other, indicating a moderate level of materialism, impulsivity, and social influence. The sample seems to score high on openness to experience, conscientiousness, and agreeableness. The average extroversion scores are moderate, which may indicate a mix of extroverted and introverted individuals in the sample. The low scores for neuroticism suggest that most people in the sample do not score high on emotional instability. Moreover, compulsive buying behavior and unplanned purchases do not seem to frequently occur in this sample. Figures 6 through 13 in Appendix 5 display the distributions of the summed scores for the main variables of interest. While most variables have a non-normal distribution, the 'openness to experience' variable appears to be closest to a normal distribution.

4.1.2 Internal Reliability

Cronbach's Alpha was calculated separately for each measured construct to assess the internal reliability of the Likert scales. Table 18 in Appendix 5 shows the Cronbach's Alpha values for 'openness to experience' (.638), 'conscientiousness' (.668), 'extraversion' (.822), 'agreeableness' (.587), 'neuroticism' (.829), 'compulsive buying behavior' (.848), and 'unplanned purchases' (.529). While 'extraversion,' 'neuroticism,' and 'compulsive buying behavior' demonstrate acceptable

reliability, the other constructs, particularly 'agreeableness' and 'unplanned purchases,' show lower reliability. The average Cronbach's Alpha value is 0.703, which suggests an adequate level of internal reliability overall.

4.1.3 Correlations

A correlation matrix examines relationships between variables using summed items and demographics in Table 19 of Appendix 5. 'Openness to experience' correlates positively with 'conscientiousness', 'extraversion', and 'unplanned purchases', while 'age' and 'openness to experience' correlate positively. 'Conscientiousness' correlates positively with 'extraversion' and 'agreeableness', and negatively with 'neuroticism' and 'compulsive buying behavior' (CBB). 'Gender', 'age', and 'income' correlate positively with 'conscientiousness' and negatively with 'social media usage'. 'Extraversion' correlates negatively with 'neuroticism' but positively with 'income'. 'Agreeableness' correlates negatively with 'neuroticism' but positively with 'gender'. 'Neuroticism' correlates positively with CBB, 'unplanned purchases', 'gender', and 'social media usage', but negatively with 'age', 'income', and 'education'. CBB correlates positively with 'unplanned purchases', 'gender', and 'social media usage', but negatively with 'age' and 'education'. 'Unplanned purchases' correlates positively with 'gender' and 'social media usage'. 'Age' correlates positively with 'education' and 'income' but negatively with 'social media usage'. 'Education' and 'income' correlate positively, while 'income' and 'social media usage' correlate negatively.

4.2 Hypothesis 1

The first hypothesis states: "Compulsive buying behavior increases the number of unplanned purchases." According to the literature, individuals with tendencies to buy compulsively are likely to affect the purchasing step in the consumer decision-making process by increasing the amount of unplanned purchases. Individuals who frequently make spontaneous and impulsive purchases are more likely to buy compulsively, as pointed out by Shoham and Makovec Brenčič (2003). This suggests that CBB influences the frequency of unplanned purchases, including both impulse and spontaneous purchases.

The first hypothesis has been tested by using OLS by taking the standardized variable of 'compulsive buying behavior' as the independent variable and the standardized variable of 'unplanned purchases' as the dependent variable. OLR has also been applied by taking the median of the statements regarding 'compulsive buying behavior' as the independent variable and the median of the statements regarding 'unplanned purchases' as the dependent variable. The results are presented in Table 1. They indicate a high significance for both the OLS and the OLR models, which suggests that 'compulsive buying behavior' reliably predicts 'unplanned purchases'. The OLS model demonstrates a strong goodness-of-fit with an R^2 of 0.226, which means that the model explains 22.6% of the variation in unplanned

purchases. The OLR model shows a lower goodness-of-fit with a pseudo R^2 of 0.066, which is below the recommended range of 0.2 to 0.4 (McFadden, 1975). Despite this, the direction of coefficient values remains consistent across both models, ensuring the robustness of the OLS model. ‘Compulsive buying behavior’ and ‘unplanned purchases’ seem to be significant at a 1% significance level. The results indicate that a one-unit increase in ‘compulsive buying behavior’ corresponds to a 0.475-unit increase in ‘unplanned purchases’. The coefficient of the independent variable remained significant regardless of whether three control variables or five demographic variables were included in the regressions. This suggests that individuals with higher compulsive buying tendencies are more likely to make unplanned purchases. The consistency of positive independent variables across models provides enough statistical support for Hypothesis 1, indicating that ‘compulsive buying behavior’ has a significant positive effect on ‘unplanned purchases’. Thus, Hypothesis 1 is accepted.

Table 1: Regression results of Hypothesis 1

| Variables | Unplanned Purchases | |
|----------------------------|---------------------|---------------------|
| | OLS | OLR |
| Compulsive Buying Behavior | 0.475*** (0.610) | 0.923*** (0.141) |
| R^2 | 0.226 | |
| Pseudo R^2 | | 0.066 |
| LR chi-2 | | 47.072*** |
| Observations | 210 | 210 |

*Notes: This table reports the linear regression results of compulsive buying behavior on unplanned purchases. Standard errors are given in brackets. The significance of the coefficients is indicated by asterisks: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.*

4.3 Hypothesis 2

The second hypothesis is divided into three separate sub-hypotheses: “Openness to Experience positively influences compulsive buying behavior.”, “Extraversion positively influences compulsive buying behavior.”, and “Neuroticism positively influences compulsive buying behavior.” Individuals who are more open to experience may be more inclined to engage in compulsive buying to satisfy their curiosity and enthusiasm for new products and experiences. Their increased sensitivity to mood fluctuations can lead to feelings of restlessness and impatience, further driving the urge to seek novelty and excitement through compulsive buying behavior (Forgas and Ciarrochi, 2001). Outgoing behavior might also contribute to compulsive buying tendencies, particularly when individuals seek excessive external stimulation (Chugani and Irwin, 2020). Extroverts may also purchase products as a means of self-expression or to identify with specific social groups (Verplanken and Herabadi, 2001). Neurotic individuals, who often experience lower life satisfaction and a tendency to complain

(Souiden et al., 2019), might engage in compulsive buying behavior as a way to compensate for their negative feelings (Otero-López and Villardefrancos Pol, 2013).

Separate linear regression analyses were conducted for each personality trait. This approach ensures clarity in interpreting individual effects, made possible by the absence of significant multicollinearity among predictor variables. The Variance Inflation Factor (VIF) was calculated, revealing values well below the threshold of 10 which indicates no substantial multicollinearity. Additionally, correlation analysis found no excessively high correlations, further confirming independence among predictor variables. Relevant control variables enhance the robustness of the analysis by accounting for potential confounding factors impacting the relationship between personality traits and CBB.

4.2.1 Hypothesis 2a

Hypothesis 2a has been tested by using OLS by taking the standardized variable of ‘openness to experience’ as the independent variable and the standardized variable of ‘compulsive buying behavior’ as the dependent variable. OLR has also been applied by taking the median of the statements regarding ‘openness to experience’ as the independent variable and the median values of the statements regarding ‘compulsive buying behavior’ as the dependent variable. The results are presented in Table 2. They indicate insignificance for both the OLS and the OLR models, suggesting that openness to experience does not reliably predict CBB. The OLS model demonstrates a strong goodness-of-fit with an R^2 of 0.421, which means that the model explains 42.1% of the variation in compulsive buying behavior. The OLR model shows a lower goodness-of-fit with a pseudo R^2 of 0.145, which is below the recommended range of 0.2 to 0.4 (McFadden, 1975). Despite this, the direction of coefficient values remains consistent across both models, ensuring the robustness of the OLS model. ‘Openness to experience’ and ‘compulsive buying behavior’ seem to be insignificant at a 1% significance level. Therefore, ‘openness to experience’ is not significantly different from zero, which means that there is not enough evidence to conclude that ‘openness to experience’ has a significant influence on ‘compulsive buying behavior’. All three control variables seem to have a significant positive effect on CBB. The lack of significant coefficients does not give enough statistical support for Hypothesis 2a. Therefore, we cannot conclude that ‘openness to experience’ has a significant positive effect on ‘compulsive buying behavior’. Thus, Hypothesis 2a is rejected.

Table 2: Regression results of Hypothesis 2a

| Variables | Compulsive Buying Behavior | |
|------------------------|----------------------------|---------------------|
| | OLS | OLR |
| Openness to Experience | -0.070 (0.055) | -0.309 (0.206) |
| Materialism | 0.324*** (0.058) | 0.966*** (0.155) |
| Impulsivity | 0.426*** (0.058) | 0.990*** (0.159) |
| Environment | 0.146** (0.056) | 0.297** (0.145) |
| R ² | 0.421 | |
| Pseudo R ² | | 0.145 |
| LR chi-2 | | 110.936*** |
| Observations | 210 | 210 |

Notes: This table reports the OLS and OLR regression results of openness to experience on compulsive buying behavior. Standard errors are given in brackets. The significance of the coefficients is indicated by asterisks: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

4.2.2 Hypothesis 2b

Hypothesis 2b has been tested by using OLS by taking the standardized variable of ‘extraversion’ as the independent variable and the standardized variable of ‘compulsive buying behavior’ as the dependent variable. OLR has also been applied by taking the median of the statements regarding ‘extraversion’ as the independent variable and the median values of the statements regarding ‘compulsive buying behavior’ as the dependent variable. The results are presented in Table 3. They indicate insignificance for both the OLS and the OLR models, suggesting that extraversion does not reliably predict CBB. The OLS model demonstrates a strong goodness-of-fit with an R² of 0.424, which means that the model explains 42.4% of the variation in compulsive buying behavior. The OLR model shows a lower goodness-of-fit with a pseudo R² of 0.101, which is below the recommended range of 0.2 to 0.4 (McFadden, 1975). Despite this, the direction of coefficient values remains consistent across both models, ensuring the robustness of the OLS model. ‘Extraversion’ and ‘compulsive buying behavior’ seem to be insignificant at a 1% significance level. Therefore, ‘extraversion’ is not significantly different from zero, which means that there is not enough evidence to conclude that ‘extraversion’ has a significant influence on ‘compulsive buying behavior’. All three control variables seem to have a significant positive effect on CBB. The lack of significant coefficients does not give enough statistical support for Hypothesis 2b. Therefore, we cannot conclude that

‘extraversion’ has a significant positive effect on ‘compulsive buying behavior’. Thus, Hypothesis 2b is rejected.

Table 3: Regression results of Hypothesis 2b

| Variables | Compulsive Buying Behavior | |
|-----------------------|----------------------------|---------------------|
| | OLS | OLR |
| Extraversion | -0.088 (0.055) | -0.223 (0.148) |
| Materialism | 0.315*** (0.058) | 0.961*** (0.155) |
| Impulsivity | 0.431*** (0.057) | 0.973*** (0.158) |
| Environment | 0.153*** (0.056) | 0.320** (0.144) |
| R ² | 0.424 | |
| Pseudo R ² | | 0.101 |
| LR chi-2 | | 118.869*** |
| Observations | 210 | 210 |

*Notes: This table reports the OLS and OLR regression results of extraversion on compulsive buying behavior. Standard errors are given in brackets. The significance of the coefficients is indicated by asterisks: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.*

4.2.3 Hypothesis 2c

Hypothesis 2c has been tested by using OLS by taking the standardized variable of ‘neuroticism’ as the independent variable and the standardized variable of ‘compulsive buying behavior’ as the dependent variable. OLR has also been applied by taking the median of the statements regarding ‘neuroticism’ as the independent variable and the median values of the statements regarding ‘compulsive buying behavior’ as the dependent variable. The results are presented in Table 4. They indicate significance for both the OLS and the OLR models, suggesting that neuroticism reliably predicts CBB. The OLS model demonstrates a strong goodness-of-fit with an R² of 0.466, which means that the model explains 46.6% of the variation in compulsive buying behavior. The OLR model shows a lower goodness-of-fit with a pseudo R² of 0.114, which is below the recommended range of 0.2 to 0.4 (McFadden, 1975). Despite this, the direction of coefficient values remains consistent across both models, ensuring the robustness of the OLS model. ‘Neuroticism’ and ‘compulsive buying behavior’ seem to be significant at a 1% significance level. The results indicate that a one-unit increase in ‘neuroticism’ corresponds to a 0.232-unit increase in ‘compulsive buying behavior’, holding all other variables constant. All three control variables seem to have a significant positive effect on CBB on at least a 10% significance level. The consistency of positive independent variables

across models provides enough statistical support for Hypothesis 2c, indicating that ‘neuroticism’ has a significant positive effect on ‘compulsive buying behavior. Thus, Hypothesis 2c is accepted.

Table 4: Regression results of Hypothesis 2c

| Variables | Compulsive Buying Behavior | |
|-----------------------|----------------------------|---------------------|
| | OLS | OLR |
| Neuroticism | 0.232*** (0.054) | 0.572*** (0.132) |
| Materialism | 0.288*** (0.056) | 0.652*** (0.138) |
| Impulsivity | 0.401*** (0.053) | 1.041*** (0.141) |
| Environment | 0.103* (0.055) | 0.270** (0.131) |
| R ² | 0.466 | |
| Pseudo R ² | | 0.114 |
| LR chi-2 | | 237.959*** |
| Observations | 210 | 210 |

*Notes: This table reports the OLS and OLR regression results of neuroticism on compulsive buying behavior. Standard errors are given in brackets. The significance of the coefficients is indicated by asterisks: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.*

4.4 Hypothesis 3

The third hypothesis is divided into two separate sub-hypotheses: “Conscientiousness negatively influences compulsive buying behavior.” and “Agreeableness negatively influences compulsive buying behavior.” Individuals high in conscientiousness tend to show strong financial literacy and responsible financial behaviors, leading to greater financial stability (Letkiewicz & Fox, 2014). They are also less likely to engage in excessive buying tendencies (Wang & Yang, 2008). Highly agreeable individuals prioritize positive social relationships and are thus expected to engage less in compulsive buying behavior, which is socially disapproved (Mikoajczak-Degrauwe et al., 2012). Compulsive buyers often also lack traits associated with high agreeableness, such as trust and altruism.

4.3.1 Hypothesis 3a

Hypothesis 3a has been tested by using OLS by taking the standardized variable of ‘conscientiousness’ as the independent variable and the standardized variable of ‘compulsive buying behavior’ as the dependent variable. OLR has also been applied by taking the median of the statements regarding ‘conscientiousness’ as the independent variable and the median values of the statements

regarding ‘compulsive buying behavior’ as the dependent variable. The results are presented in Table 5. They indicate insignificance for both the OLS and the OLR models, suggesting that conscientiousness does not reliably predict CBB. The OLS model demonstrates a strong goodness-of-fit with an R^2 of 0.424, which means that the model explains 42.4% of the variation in compulsive buying behavior. The OLR model shows a lower goodness-of-fit with a pseudo R^2 of 0.143, which is below the recommended range of 0.2 to 0.4 (McFadden, 1975). Despite this, the direction of coefficient values remains consistent across both models, ensuring the robustness of the OLS model. ‘Conscientiousness’ and ‘compulsive buying behavior’ seem to be insignificant at a 1% significance level. Therefore, ‘conscientiousness’ is not significantly different from zero, which means that there is not enough evidence to conclude that ‘conscientiousness’ has a significant influence on ‘compulsive buying behavior’. All three control variables seem to have a significant positive effect on CBB. The lack of significant coefficients does not give enough statistical support for Hypothesis 3a. Therefore, we cannot conclude that ‘conscientiousness’ has a significant negative effect on ‘compulsive buying behavior’. Thus, Hypothesis 3a is rejected.

Table 5: Regression results of Hypothesis 3a

| Variables | Compulsive Buying Behavior | |
|-------------------|----------------------------|---------------------|
| | OLS | OLR |
| Conscientiousness | -0.088 (0.053) | -0.215 (0.191) |
| Materialism | 0.320*** (0.057) | 0.967*** (0.155) |
| Impulsivity | 0.399*** (0.056) | 0.900*** (0.152) |
| Environment | 0.153*** (0.056) | 0.332** (0.144) |
| R^2 | 0.424 | |
| Pseudo R^2 | | 0.143 |
| LR chi-2 | | 109.891*** |
| Observations | 210 | 210 |

*Notes: This table reports the OLS and OLR regression results of conscientiousness on compulsive buying behavior. Standard errors are given in brackets. The significance of the coefficients is indicated by asterisks: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.*

4.3.2 Hypothesis 3b

Hypothesis 3b has been tested by using OLS by taking the standardized variable of ‘agreeableness’ as the independent variable and the standardized variable of ‘compulsive buying behavior’ as the dependent variable. OLR has also been applied by taking the median of the statements regarding ‘agreeableness’ as the independent variable and the median values of the statements regarding

‘compulsive buying behavior’ as the dependent variable. The results are presented in Table 6. They indicate insignificance for both the OLS and the OLR models, suggesting that agreeableness does not reliably predict CBB. The OLS model demonstrates a strong goodness-of-fit with an R^2 of 0.418, which means that the model explains 41.8% of the variation in compulsive buying behavior. The OLR model shows a lower goodness-of-fit with a pseudo R^2 of 0.142, which is below the recommended range of 0.2 to 0.4 (McFadden, 1975). Despite this, the direction of coefficient values remains consistent across both models, ensuring the robustness of the OLS model. ‘Agreeableness’ and ‘compulsive buying behavior’ seem to be insignificant at a 1% significance level. Therefore, ‘agreeableness’ is not significantly different from zero, which means that there is not enough evidence to conclude that ‘agreeableness’ has a significant influence on ‘compulsive buying behavior’. All three control variables seem to have a significant positive effect on CBB. The lack of significant coefficients does not give enough statistical support for Hypothesis 3a. Therefore, we cannot conclude that ‘agreeableness’ has a significant negative effect on ‘compulsive buying behavior’. Thus, Hypothesis 3b is rejected.

Table 6: Regression results of Hypothesis 3b

| Variables | Compulsive Buying Behavior | |
|---------------|----------------------------|---------------------|
| | OLS | OLR |
| Agreeableness | -0.039 (0.054) | -0.127 (0.132) |
| Materialism | 0.319*** (0.058) | 0.956*** (0.138) |
| Impulsivity | 0.405*** (0.056) | 0.909*** (0.141) |
| Environment | 0.152*** (0.056) | 0.322** (0.131) |
| R^2 | 0.418 | |
| Pseudo R^2 | | 0.142 |
| LR chi-2 | | 109.166*** |
| Observations | 210 | 210 |

*Notes: This table reports the OLS and OLR regression results of agreeableness on compulsive buying behavior. Standard errors are given in brackets. The significance of the coefficients is indicated by asterisks: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.*

In Table 7, the merged OLS and OLR multiple regression highlights ‘neuroticism’ as the sole personality trait significantly linked to ‘compulsive buying behavior’. This regression shows that, even in the full regression, neuroticism is the only personality trait significantly influencing CBB while other traits have minimal impact. Among demographic variables, significant predictors include

‘gender’ (higher propensity in females), ‘age’ (younger individuals are more prone), and ‘education’ (higher levels reduce tendency). ‘Income’ and ‘social media usage’ positively correlate with compulsive buying. The control variables ‘materialism’ and ‘impulsivity’ are strongly linked with higher materialistic values and greater impulsivity increasing the likelihood of compulsive buying.

Table 7: Regression results

| Variables | Compulsive Buying Behavior | |
|------------------------|----------------------------|---------------------|
| | OLS | OLR |
| Openness to Experience | -0.015 (0.054) | -0.250 (0.132) |
| Conscientiousness | -0.053 (0.056) | -0.145 (0.216) |
| Extraversion | -0.030 (0.055) | -0.128 (0.163) |
| Agreeableness | -0.023 (0.051) | -0.150 (0.181) |
| Neuroticism | 0.185*** (0.060) | 0.452*** (0.163) |
| Materialism | 0.261*** (0.054) | 0.957*** (0.138) |
| Impulsivity | 0.348*** (0.053) | 0.960*** (0.141) |
| Environment | 0.074 (0.055) | 0.157 (0.131) |
| Gender | 0.307*** (0.108) | 0.747** (0.295) |
| Age | -0.078* (0.046) | -0.245* (0.295) |
| Education | -0.061 (0.039) | -0.245** (0.106) |
| Income | 0.133*** (0.048) | 0.412*** (0.134) |
| Social Media | 0.150*** (0.046) | 0.357*** (0.125) |
| R ² | 0.543 | |
| Pseudo R ² | | 0.203 |
| LR chi-2 | | 155.772*** |
| Observations | 210 | 210 |

*Notes: This table reports the OLS and OLR regression results of the OCEAN personality traits on compulsive buying behavior, taking demographics and control variables into account. Standard errors are given in brackets. The significance of the coefficients is indicated by asterisks: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.*

4.5 Hypothesis 4

The fourth hypothesis states: “Dutch adolescents are more likely to exhibit compulsive buying behavior compared to other age groups.” Most current adolescents are part of Gen Z and have grown up with rapid technological advancements, significantly influencing their consumer behavior compared to other generations through constant streams of information and increased peer influences through social media (Childers and Boatwright, 2021). Moreover, people become more risk-averse and less inclined to buy compulsively as they grow older (Shoham and Makovec Brenčič, 2003). Adolescents, on the other hand, often show higher levels of impulsivity because of ongoing neurological development and a greater propensity for sensation-seeking behaviors (Steinberg et al., 2008). This developmental stage makes them more vulnerable to CBT, especially in an environment filled with targeted advertisements and influencer endorsements.

Hypothesis 4 has been tested by conducting a post-hoc Turkey HSD test following an ANOVA which determines if there are significant differences in CBB scores among different age groups. The results are presented in Table 8. In the survey, respondents were able to indicate their age on a 7-point Likert scale. Age group 2 and age group 3 consisted of the ages 18 to 24 and 25 to 34, respectively. As this research defines adolescents between the ages of 18 and 26, it is hypothesized that these age groups will exhibit higher tendencies to buy compulsively. The Turkey HSD test results show a significant mean difference of 2.622 between age groups 2 and 6, a significant mean difference of 2.800 between age groups 2 and 7, and another significant mean difference of 5.067 between age groups 3 and 7. Based on these results, it can be concluded that age groups 2 and 3 show significantly higher levels of CBB compared to age group 7. Since age groups 2 and 3 include Dutch adolescents since these groups range from 18 to 24 and 25 to 34 respectively, these findings support the hypothesis that Dutch adolescents are more likely to show compulsive buying behavior compared to other age groups. Thus, Hypothesis 4 can be accepted.

Table 8: ANOVA results for Hypothesis 4

| (I) Age | (J) Age | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|---------|---------|-----------------------|------------|-------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| 1 | 2 | -1.300 | 3.288 | 1.000 | -11.092 | 8.492 |
| | 3 | -1.567 | 3.362 | .999 | -11.580 | 8.446 |
| | 4 | -1.500 | 3.759 | 1.000 | -12.695 | 9.695 |
| | 5 | .375 | 3.453 | 1.000 | -9.908 | 10.658 |
| | 6 | 1.322 | 3.327 | 1.000 | -8.586 | 11.230 |
| | 7 | 3.500 | 3.539 | .956 | -7.040 | 14.040 |
| 2 | 1 | 1.300 | 3.288 | 1.000 | -8.492 | 11.092 |
| | 3 | -.267 | .958 | 1.000 | -3.121 | 2.588 |
| | 4 | -.200 | 1.935 | 1.000 | -5.963 | 5.563 |
| | 5 | 1.675 | 1.240 | .827 | -2.017 | 5.367 |
| | 6 | 2.622* | .826 | .028 | .161 | 5.083 |
| | 7 | 4.800* | 1.462 | .020 | .445 | 9.155 |
| 3 | 1 | 1.567 | 3.362 | .999 | -8.446 | 11.580 |
| | 2 | .267 | .958 | 1.000 | -2.588 | 3.121 |
| | 4 | .067 | 2.059 | 1.000 | -6.065 | 6.198 |
| | 5 | 1.942 | 1.425 | .821 | -2.303 | 6.186 |
| | 6 | 2.889 | 1.085 | .113 | -.343 | 6.121 |
| | 7 | 5.067* | 1.623 | .033 | .234 | 9.900 |
| 4 | 1 | 1.500 | 3.759 | 1.000 | -9.695 | 12.695 |
| | 2 | .200 | 1.935 | 1.000 | -5.563 | 5.963 |
| | 3 | -.067 | 2.059 | 1.000 | -6.198 | 6.065 |
| | 5 | 1.875 | 2.204 | .979 | -4.689 | 8.439 |
| | 6 | 2.822 | 2.001 | .796 | -3.137 | 8.781 |
| | 7 | 5.000 | 2.337 | .333 | -1.959 | 11.959 |
| 5 | 1 | -.375 | 3.453 | 1.000 | -10.658 | 9.908 |
| | 2 | -1.675 | 1.240 | .827 | -5.367 | 2.017 |
| | 3 | -1.942 | 1.425 | .821 | -6.186 | 2.303 |
| | 4 | -1.875 | 2.204 | .979 | -8.439 | 4.689 |
| | 6 | .947 | 1.340 | .992 | -3.044 | 4.938 |
| | 7 | 3.125 | 1.803 | .595 | -2.245 | 8.495 |
| 6 | 1 | -1.322 | 3.327 | 1.000 | -11.230 | 8.586 |
| | 2 | -2.622* | .826 | .028 | -5.083 | -.161 |
| | 3 | -2.889 | 1.085 | .113 | -6.121 | .343 |
| | 4 | -2.822 | 2.001 | .796 | -8.781 | 3.137 |
| | 5 | -.947 | 1.340 | .992 | -4.938 | 3.044 |
| | 7 | 2.178 | 1.549 | .798 | -2.434 | 6.789 |
| 7 | 1 | -3.500 | 3.539 | .956 | -14.040 | 7.040 |
| | 2 | -4.800* | 1.462 | .020 | -9.155 | -.445 |
| | 3 | -5.067* | 1.623 | .033 | -9.900 | -.234 |
| | 4 | -5.000 | 2.337 | .333 | -11.959 | 1.959 |
| | 5 | -3.125 | 1.803 | .595 | -8.495 | 2.245 |
| | 6 | -2.178 | 1.549 | .798 | -6.789 | 2.434 |

Notes: This table shows the Turkey HSD test results following an ANOVA with the sum of compulsive buying behavior as the dependent variable and age as a factor. The age groups are divided as follows: Under the age of 18 (1), 18 – 24 (2), 25 – 34 (3), 35 – 44 (4), 45 – 54 (5), 55 – 64 (6), 65 or older. The significance of the mean difference is indicated by an asterisk: * $p < 0.05$.

4.6 Summary Key Findings

The key findings for the first hypothesis show that individuals with higher tendencies for compulsive buying behavior are more likely to make unplanned purchases. Both OLS and OLR models show significant results. Therefore, CBB reliably predicts unplanned purchases with these models. The OLS model explains 22.6% of the variation in unplanned purchases and the coefficient indicates a 0.475-unit increase in unplanned purchases for every unit increase in CBB. These findings confirm that compulsive buying behavior significantly influences the frequency of unplanned purchases. Thus, Hypothesis 1 is accepted.

The second hypothesis is divided into three sub-hypotheses. The key findings of Hypothesis 2a indicate that openness to experience does not significantly influence compulsive buying behavior. Both OLS and OLR models show insignificant results with the OLS model explaining 42.1% of the variation in compulsive buying behavior. Thus, Hypothesis 2a is rejected. Similarly, the findings for extraversion indicate no significant effect on CBB. Both regression models return insignificant results with the OLS model explaining 42.4% of the variation. Therefore, Hypothesis 2b is rejected. In contrast, the results for neuroticism show a significant positive effect on CBB. Both OLS and OLR models are significant with the OLS model explaining 46.6% of the variation in compulsive buying behavior. A one-unit increase in neuroticism corresponds to a 0.232-unit increase in compulsive buying behavior. Thus, Hypothesis 2c is accepted.

The third hypothesis is also divided into two sub-hypotheses. The findings for Hypothesis 3a indicate that conscientiousness does not significantly influence compulsive buying behavior. Both the OLS and OLR models return insignificant results with the OLS model explaining 42.4% of the variation. Thus, Hypothesis 3a is rejected. Similarly, agreeableness does not significantly influence compulsive buying behavior. The regression models show insignificant results with the OLS model explaining 41.8% of the variation in compulsive buying behavior. Therefore, Hypothesis 3b is rejected. The variables controlling for materialism and impulsivity, and the demographic variables 'gender', 'income', and 'social media usage' all positively and significantly influence CBB, while 'age' seems to negatively and significantly influence CBB.

The key findings support the fourth hypothesis. The post-hoc Tukey HSD test following an ANOVA reveals significant differences in compulsive buying behavior among age groups. Specifically, Age Groups 2 (18-24) and 3 (25-34) show significantly higher levels of compulsive buying behavior compared to Age Group 7 (55-64). Given that Age Groups 2 and 3 include Dutch adolescents, these results confirm that Dutch adolescents are more likely to exhibit compulsive buying behavior compared to older age groups. Thus, Hypothesis 4 is accepted.

CHAPTER 5 Conclusions and Recommendations

5.1 Literature Outcomes

According to Stankevich (2017), the consumer decision-making process consists of the following steps: the needs recognition, the search for information, the evaluation of alternatives, the purchase, and the post-purchase behavior. The purchase step may be influenced by various factors, including consumer behaviors. Müller et al. (2015) define compulsive buying behavior (CBB) as consumer behavior where the individual has an obsession with purchasing products by showcasing frequent buying episodes or having uncontrollable urges to buy that are perceived as irresistible and senseless. CBB falls within the broader categories of behavioral addictions and the behavior was included in the ICD-11 in 2019. Younger consumers appear to be more susceptible to CBB due to their increased responsiveness to advertising and greater use of buying as a coping mechanism for stress (Roberts, 2012). Shoham and Makovec Brenčič (2003) state how CBB affects the final purchase stage as those with compulsive tendencies are more likely to make spontaneous and impulse purchases. Individuals with tendencies to buy compulsively may therefore influence the purchase step by making more frequent unplanned purchases.

Personality traits play an important role in forming the behaviors of individuals, including their decision-making processes as consumers by identifying needs or problems. According to Bergner (2020), personality traits are inherently relativistic and consistent with everyday observation, often conceptualized within the Five-Factor Model (FFM). The FFM provides a broad framework for understanding the personality traits of openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. The relationship between personality traits and CBB has been studied extensively in varying contexts and with differing results. Early seminal studies show that people who display CBB are more likely to demonstrate compulsivity as a personality trait (O'Guinn and Faber, 1989). In the context of the FFM, most research report findings on increased levels of neuroticism and decreased levels of conscientiousness among compulsive buyers.

Openness to experience, extraversion, and neuroticism may positively influence CBB. Those more open to experience may want to satisfy their desire for novel products and experiences (Wang and Yang, 2008). Extroverted individuals are outgoing and expressive, often seeking social interactions and rewards They frequently pursue external stimulation through the purchase of products that help them express themselves, which can contribute to CBT (Chugani and Irwin, 2020). Emotional instability results in increased levels of anxiety and depression (Claes and Müller, 2017), which makes them more likely to engage in CBB as a way to compensate for negative feelings (Otero-López and Villardefrancos Pol, 2013).

Conscientiousness and agreeableness may negatively influence CBB. Highly conscientious people likely possess better financial literacy skills and are more inclined to engage in responsible financial behaviors, which could all lead to greater financial stability (Letkiewicz and Fox, 2014). Therefore, highly conscientious buyers are expected to show less excessive buying tendencies (Wang and Yang, 2008). On one hand, highly agreeable people may be more inclined to engage in CBB to fulfill perceived social expectations, even at the expense of their financial well-being (Heo et al., 2018). On the other hand, CBB is socially disapproved and are therefore less likely to engage in CBB because of their inclination to maintain positive social relationships (Mikoajczak-Degrauwe et al., 2012). Most researchers agree that agreeableness seems to be inversely related to CBB (Andreassen et al., 2013).

Age might affect CBB as individuals who grow older may become more risk-averse and therefore less inclined to buy compulsively (Shoham and Makovec Brenčič, 2003). Adolescents aged between 18 to 26 often illustrate higher levels of impulsivity due to ongoing neurological development and a greater propensity for sensation-seeking behaviors. This developmental stage makes this demographic more vulnerable to CBT, especially in environments filled with targeted advertisements (Steinberg et al., 2008). Dutch adolescents show a high degree of connectivity and social media engagement which increases their exposure to persuasive marketing strategies and leads to increased CBB (Fineberg et al., 2022). Moreover, the high standard of living in the Netherlands also likely influences the consumer behaviors of young adults. This combination of cultural factors and inherent traits of adolescents creates an environment where CBB can be particularly prevalent.

5.2 Research Outcomes

The research outcomes suggest that individuals with higher CBT are more likely to make unplanned purchases. All regression models show significant results that indicate that CBB seems to reliably predict unplanned purchases, regardless of whether control and demographic variables are included. This result indicates that those showing CBT are more likely to significantly influence the purchasing stage in the consumer decision-making process. Therefore, the first hypothesis is accepted.

The second hypothesis researched factors positively influencing CBB and was divided into three sub-hypotheses. The researched factors were the personality traits of openness to experience, extraversion, and neuroticism. Both the linear and logistic regression indicate an insignificant impact of openness to experience and extraversion on CBB. However, the linear and logistic regression of neuroticism on CBB indicate a significant positive impact. These results suggest that those high in openness to experience and extraversion are not necessarily more likely to display CBT, while there is enough statistical evidence to suggest that those high in neuroticism are indeed more likely to illustrate CBT. Therefore, only Hypothesis 2c can be accepted.

The third hypothesis researched factors negatively influencing CBB and was divided into two sub-hypotheses. This time, the researched factors were the personality traits of conscientiousness and agreeableness. Both the linear and logistic regression indicate an insignificant impact of both conscientiousness and agreeableness on CBB. These results suggest that those high in conscientiousness and agreeableness are not necessarily less likely to show CBT. Consequently, a clear conclusion on the effects that are negatively influencing CBB cannot be made. The variables controlling for materialism and impulsivity showed a significant positive effect on compulsive buying. Gender, income, and social media usage also seem to have a significant positive influence on CBB, while age seems to have a significantly negative influence on CBB.

The last hypothesis researched whether a higher prevalence of CBB existed in Dutch adolescents compared to other age groups. A one-way ANOVA revealed significant differences in CBB among age groups. Specifically, the second and third age groups, aged between 18 to 24 and 25 to 34, respectively, show significantly higher levels of CBB compared to the seventh age group, aged between 55 to 64. Given that the second and third age groups include Dutch adolescents, these results confirm that Dutch adolescents are more likely to buy compulsively compared to older age groups. Therefore, Hypothesis 4 is accepted.

5.3 Comparison between Literature and Research

A comparison between literature and research findings reveals consistencies and divergences in the factors that influence CBB. Two hypotheses and one sub-hypotheses were accepted out of four main hypotheses. The finding that individuals with higher CBT are more likely to make unplanned purchases aligns with existing literature. Müller et al. (2015) and Shoham and Makovec Brenčič (2003) have shown the significant impact of CBT on spontaneous and impulse purchases making people more likely to make unplanned purchases. This research confirms this, indicating that CBT reliably predicts unplanned purchases.

The exploration of personality traits influencing CBB produced mixed results. The literature suggests that openness to experience and extraversion may positively influence CBB (Wang and Yang, 2008; Chugani and Irwin, 2020), but this research indicated an insignificant impact of these traits. The inconsistencies could be caused by cultural differences or sample-specific factors not captured in prior studies. However, the significant positive impact of neuroticism on CBB that was identified in this research is consistent with existing literature (Claes and Müller, 2017; Otero-López and Villardefrancos Pol, 2013).

The findings related to conscientiousness and agreeableness presented unexpected results. Contrary to the literature suggesting a negative influence of conscientiousness on CBB because of better financial

literacy and responsible behaviors (Letkiewicz and Fox, 2014; Wang and Yang, 2008), this study found an insignificant impact. Similarly, the influence of agreeableness was not significant, contrary to studies that reported an inverse relationship with CBB (e.g., Andreassen et al., 2013). These surprising outcomes could be attributed to low internal reliability in measuring these traits as indicated by Cronbach's alpha in Table 18 of Appendix 5, or unique cultural factors among Dutch adolescents that have not been explored.

The additional control variables 'materialism' and 'impulsivity provided further insights. They showed significant positive effects on CBB, which aligns with existing research that links these traits to higher levels of compulsive buying. Gender, income, and social media usage were also found to significantly influence CBB positively, while age had a significantly negative influence. These findings are consistent with studies that highlight the susceptibility of younger consumers to CBB because of higher impulsivity and social media exposure (Steinberg et al., 2008; Fineberg et al., 2022).

Lastly, the research confirmed that Dutch adolescents show higher levels of CBB compared to older age groups, supporting the fourth hypothesis. This is in line with Roberts (2012) and Steinberg et al. (2008), who emphasize the vulnerability of younger consumers to CBB due to their developmental stage and responsiveness to advertising.

While the research supports established theories, such as the influence of neuroticism and age on CBB, it also produced unexpected findings related to openness to experience, extraversion, conscientiousness, and agreeableness. A further investigation into factors that might influence these relationships within the specific population of Dutch adolescents is suggested. The following table shows the results of the tested hypotheses.

Table 9: Result of tested hypotheses

| Hypotheses | | Result |
|------------|---|----------|
| H1 | Compulsive buying behavior increased the amount of unplanned purchases. | Accepted |
| H2a | Openness to Experience positively influences compulsive buying behavior. | Rejected |
| H2b | Extraversion positively influences compulsive buying behavior. | Rejected |
| H2c | Neuroticism positively influences compulsive buying behavior. | Accepted |
| H3a | Conscientiousness negatively influences compulsive buying behavior. | Rejected |
| H3b | Agreeableness negatively influences compulsive buying behavior. | Rejected |
| H4 | Dutch adolescents are more likely to exhibit compulsive buying behavior compared to other age groups. | Accepted |

5.4 Answers Empirical Sub-Questions and Central Research Question

Based on the previous comparison between the research and literature outcomes, an answer to the central research question can be formulated. An explanation will be given based on answers to the empirical sub-questions, which will be answered in the following section.

5.4.1 Consumer Decision-Making Process for Dutch Adolescents

The first empirical sub-question is: “What is the consumer decision-making process like for Dutch adolescents?” Research findings indicate that the consumer decision-making process of Dutch adolescents is significantly influenced by social media and digital marketing. Literature suggests that the needs recognition step in the consumer decision-making process seems to be influenced by individuals’ personality traits. The literature also implies that younger consumers, including Dutch adolescents, are more susceptible to impulsive and compulsive buying behaviors because of their exposure to targeted advertising (Fineberg et al., 2022). This affects the fourth stage of the consumer decision-making process, the purchasing stage. This research reinforces this by showing that social media usage positively correlates with compulsive buying behavior (CBB) among Dutch youth. This research also showed how those who buy compulsively are also more likely to make unplanned purchases.

5.4.2 Distinguishing Characteristics of a Dutch Compulsive Buyer

The second empirical sub-question is: “What are the distinguishing characteristics of a Dutch compulsive buyer?” Traits like impulsivity and materialism significantly contribute to CBB, according to Steinberg et al. (2008) and Fineberg et al. (2022). This research confirms these findings by showing the positive effects of materialism and impulsivity on CBB among Dutch adolescents. Adolescents that are influenced by digital marketing and their developmental stage show increased impulsivity and are more likely to pursue materialistic needs compared to other age groups, contributing to CBT (Dittmar, 2005a; Roberts and Roberts, 2012). Dutch compulsive buyers usually have materialistic tendencies, higher levels of impulsivity, and are more likely to be women and younger. They also tend to have lower levels of education, higher incomes, and use social media more frequently.

5.4.3 Influence of Personality Traits on Compulsive Buying Behavior among Dutch Adolescents

The third empirical sub-question is: “How do personality traits influence compulsive buying behavior among Dutch adolescents?” While the literature emphasizes that all the Big-5 personality traits within the Five-Factor Model are predictors of CBB to a certain extent (e.g., O’Guinn and Faber, 1989; Andreassen et al., 2013), this research only found neuroticism to be significant on CBB in Dutch

adolescents. This suggests a need for further investigation into the measurement tools and contextual factors affecting these traits in Dutch adolescents that were not accounted for in this research.

5.4.4 The Central Research Question

The central research question of this study is:

How do the Big Five personality traits affect compulsive buying behavior among Dutch adolescents?

By comparing the literature and research outcomes, we can accept Hypotheses 1 and 4 regarding the significant influences of CBB on unplanned purchases and age on CBB, respectively. Hypotheses 2a, 2b, and 3 regarding the impacts of openness to experience, conscientiousness, extraversion, and agreeableness on CBB require further examination because of mixed empirical findings.

In summary, the conducted research suggests that there is a positive relationship between personality traits and compulsive buying behavior among Dutch adolescents, particularly in those individuals high in neuroticism. This is partly caused by their increased emotional reactivity and tendency to seek coping mechanisms through excessive buying (Claes and Müller, 2017). Furthermore, the higher presence of CBB among Dutch adolescents compared to older age groups further emphasizes the vulnerability of younger consumers to compulsive purchasing behaviors facilitated by digital marketing and online influences (Fineberg et al., 2022). These findings contribute to a better understanding of how these factors influence the consumer decision-making process in the context of Dutch adolescents.

5.5 Recommendations to Retailers

Based on the findings of this study regarding the influence of personality traits on compulsive buying behavior among Dutch adolescents, retailers can consider implementing certain strategies to address these insights. Firstly, retailers should acknowledge the susceptibility of younger consumers to impulsive and compulsive buying influenced by advertising. Retailers should prioritize ethical marketing practices without the intention of exploiting vulnerabilities or encouraging excessive consumption. Transparent messaging emphasizing product benefits and promoting responsible purchasing habits can particularly benefit neurotic Dutch adolescents. Furthermore, collaborating with educational institutions and consumer organizations to enhance consumer literacy among adolescents is recommended. Providing online resources that teach financial management skills, encourage critical thinking in consumer decision-making, and raise awareness about psychological triggers associated with compulsive buying can empower vulnerable consumers to make informed choices. Moreover, given the significant influence of social media on compulsive buying, retailers should enhance their

social media strategies to engage effectively with vulnerable consumers. Platforms like Instagram, TikTok, and Snapchat, which are popular among adolescents, can be used not only for advertising but also for starting conversations that promote mindful consumption and offer reminders about responsible spending. Lastly, establishing customer support channels that cater to vulnerable consumers can be beneficial. These channels should provide accessible assistance for questions related to products, payments, and returns. Customer service representatives need to be trained to identify signs of compulsive buying behavior and offer appropriate guidance.

5.6 Recommendations to Future Researchers

Future researchers should consider working with a larger sample size to determine if the significance of the regression of personality traits on compulsive buying behavior improves. It is important to target the demographic more accurately since this study included a substantial number of respondents aged 55 to 64 (21.4%), despite focusing on a younger audience. Future studies should aim to prevent responses from outside the target demographic to better measure this relationship within the specific age group. Researchers should also explore other personality measures such as the NEO-PI-R or IPIP since these may offer improved internal reliability compared to the BFI-K for certain traits. Additionally, incorporating different personality frameworks, such as the HEXACO Personality Model or Cloninger's Temperament and Character Inventory (TCI), could provide a more comprehensive understanding of the relationship between personality and compulsive buying behavior. Moreover, focusing on more specific demographics, such as particular age groups, genders, or income levels, would allow for more nuanced insights. Researchers should also consider examining whether similar results are observed in different age groups or nationalities because the literature seems to be divided on which personality traits most influence compulsive buying. Lastly, it is crucial to properly define age groups in different languages as terms like "adolescents" may have different meanings in English and Dutch. Future researchers should ensure clear and accurate definitions to avoid confusion.

5.7 Possible Research Limitations

This study has several potential research limitations. Firstly, the low internal reliability of certain measured personality traits may have affected the results. Using different measurement tools could improve this issue. Additionally, a significant portion of the respondents were between the ages of 55 to 64. While this allowed for a comparison of CBB between age groups for Hypothesis 4, it was not the main target group. A more focused distribution toward a younger audience would have improved the sample's representativeness. Moreover, while some respondents were directly asked to participate in the survey, most responses were gathered through convenience sampling through social media.

Although social media is an effective way to collect a large amount of data, it offers less control over who completes the survey, potentially causing sample bias. This could have impacted the representativeness of the sample. Efforts were made to address this by excluding responses from outside the target population, such as those from countries other than the Netherlands. However, more controlled sampling methods could further enhance the study's accuracy and representativeness. Lastly, the survey asked respondents to self-report their personality traits and CBT. This limitation could result in some respondents presenting themselves more subjectively and less accurately, which might have influenced the internal validity of the research.

5.8 Reflection on the Process

The process of writing this bachelor's thesis has been a great learning journey for me. I have improved my research skills by becoming proficient at navigating academic literature and identifying credible sources. This whole process has strengthened my ability to support arguments with solid evidence. One of the main challenges was trying to stay consistent. I underestimated the effort required, which has added some stress to the process. This taught me the importance of detailed planning and following set schedules, which is important for such large projects. Despite this, I tried to stay as organized as possible, which helped smooth the writing process. Maintaining a structured outline provided by my supervisor also helped ensure my arguments flowed logically and coherently. This thesis has also improved my writing abilities by teaching me to convey complex ideas clearly, especially in English. The data analysis was also quite complicated initially, but I slowly picked it up and became more comfortable analyzing data during this research process. Gathering responses for the analysis also went smoother than I expected as I quickly surpassed the minimum goal of 200 responses. This experience has not only enhanced my academic skills but also formed me into a more resilient person. It has been both a challenging and rewarding journey by providing me with valuable skills for the future.

APPENDIX

Appendix 1: References

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Appendix 2: Survey Questions

Start of Block: Introduction text

Dear participant,

Thank you for your interest in this research project! My name is Wiecher Bolk and this project is part of my bachelor's thesis for the bachelor's degree in Economics and Business Economics at Erasmus University.

The purpose of this research is to investigate the influence of personality traits on compulsive purchasing behavior. Compulsive purchasing behavior is also known as purchasing addiction: an uncontrolled urge to buy products, without any real need and regardless of available financial resources.

Completing this survey will take between five and ten minutes. Your task is to indicate to what extent the statements apply. It is important to answer as honestly as possible. All participants will remain anonymous and personal information will be treated confidentially and not shared without your permission.

To make the survey more interesting, it is possible to win a cash prize! Five random participants will be able to win a cash prize of €30, €20 or €10. If you are interested, you can leave your details.

To support you with any problems with compulsive purchasing behavior, there is a website available with useful information and resources. If you need help, you can visit: <https://serenity-ggz.nl/koopadvies/>

If you have any questions about this research, please contact me.

Kind regards,

Wiecher Bolk

End of Block: Introduction text

Start of Block: Personality traits

I see myself as someone who values artistic, aesthetic experiences.

- Strongly disagree (1)
- Disagree (2)
- Neither agree nor disagree (3)
- Agree (4)
- Strongly agree (5)

I see myself as someone who is curious about many different things.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I see myself as someone who has an active imagination.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I see myself as someone who is ingenious, a deep thinker.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I see myself as someone who has few artistic interests.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I see myself as someone who does things efficiently.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I see myself as someone who does thorough work.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I see myself as someone who makes plans and follows through with them.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I see myself as someone who tends to be lazy.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I see myself as someone who is outgoing, social.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I see myself as someone who generates a lot of enthusiasm.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I see myself as someone who tends to be quiet.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I see myself as someone who is reserved.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I see myself as someone who is generally trusting.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I see myself as someone who tends to find fault with others.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I see myself as someone who can be cold and aloof.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I see myself as someone who is sometimes rude to others.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I see myself as someone who gets nervous easily.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I see myself as someone who worries a lot.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I see myself as someone who is depressed, blue.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I see myself as someone who is relaxed, handles stress well.

- Strongly disagree (1)
- Disagree (2)
- Neither agree nor disagree (3)
- Agree (4)
- Strongly agree (5)

End of Block: Personality traits

Start of Block: Compulsive buying

This is an attention check. Please respond “Disagree” to this statement.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

My closet has unopened shopping bags in it.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

Others might consider me a "purchasing addict."

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

Much of my life centers around buying things.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I buy things I do not need.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I buy things I did not plan to buy.

- Strongly disagree (1)
 - Disagree (2)
 - Neither agree nor disagree (3)
 - Agree (4)
 - Strongly agree (5)
-

I consider myself an impulsive purchaser.

- Strongly disagree (1)
- Disagree (2)
- Neither agree nor disagree (3)
- Agree (4)
- Strongly agree (5)

End of Block: Compulsive buying

Start of Block: Unplanned purchases & Control variables

How frequently have you purchased a planned item and an unplanned, related item at the same time (for example, searched for a shirt and bought related pants as well?)

- Never (1)
 - Seldom (2)
 - Sometimes (3)
 - Often (4)
 - Always (5)
-

How frequently have you purchased a non-planned item near the counter as you waited to check out?

- Never (1)
 - Seldom (2)
 - Sometimes (3)
 - Often (4)
 - Always (5)
-

How important do you think it is to own a lot of things?

- Not important at all (1)
 - Not really important (2)
 - Something important (3)
 - Fairly important (4)
 - Very important (5)
-

How impulsive do you consider yourself?

- Not impulsive at all (1)
 - Not really impulsive (2)
 - Something impulsive (3)
 - Fairly impulsive (4)
 - Very impulsive (5)
-

To what extent does your immediate environment (family, friends) influence your purchasing decisions?

- Not influenceable at all (1)
- Not really influenceable (2)
- Something impressionable (3)
- Fairly impressionable (4)
- Very impressionable (5)

End of Block: Unplanned purchases & Control variables

Start of Block: Demographic questions

What is your gender?

- Male (1)
 - Female (2)
 - Other (3)
-

What is your age?

- Under the age of 18 (1)
 - 18 - 24 (2)
 - 25 - 34 (3)
 - 35 - 44 (4)
 - 45 - 54 (5)
 - 55 - 64 (6)
 - 65 or older (7)
-

What is your highest level of education achieved or are you currently pursuing?

- Lower than high school diploma (1)
 - High school diploma or equivalent (2)
 - MBO (3)
 - HBO (4)
 - WO Bachelor (5)
 - WO Master (6)
 - Doctorate, PhD (7)
-

What is your monthly net income (including gifts and benefits)?

- Less than €500 (1)
 - €500 - €1500 (2)
 - €1500 - €2500 (3)
 - €2500 - €3500 (4)
 - €3500 - €4500 (5)
 - More than €4500 (6)
-

How many hours a day do you spend on social media (such as Instagram, YouTube, Facebook, X, etc.)?

- Less than 1 hour (1)
- 1 to 2 hours per day (2)
- 2 to 3 hours per day (3)
- 3 to 4 hours per day (4)
- 4 to 5 hours per day (5)
- More than 5 hours a day (6)

End of Block: Demographic questions

Start of Block: Incentive alignment

Thank you for completing the survey! If you would like to win a cash prize, leave your email here. If not, leave this field empty.

End of Block: Incentive alignment

Table 10: Reversed coded statements

| Item Factor | Reversed Statement |
|----------------------------------|--|
| "I see myself as someone who..." | |
| Openness to Experience | "... has few artistic interests." |
| Conscientiousness | "... tends to be lazy." |
| Extroversion | "... tends to be quiet." |
| Extroversion | "... is reserved." |
| Agreeableness | "... tends to find fault with others." |
| Agreeableness | "... can be cold and aloof." |
| Agreeableness | "... is sometimes rude to others." |
| Neuroticism | "... is relaxed, handles stress well." |

Notes: This table represents the statements where reversed coding will be applied with the first column indicating the appropriate item factor and the second column indicating the respective statement.

$$\text{Actual Reversed Score} = (\text{Minimum score} + \text{Maximum score}) - \text{Observed Score}$$

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | AA | AB | AC | AD | AE | AF | AG | AH | AI | AJ | AK | AL | | | | | | | |
|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|
| 111 | 4 | 4 | 5 | 4 | 2 | 2 | 2 | 2 | 2 | 4 | 4 | 3 | 2 | 1 | 4 | 4 | 4 | 2 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 1 | 4 | 4 | 4 | 3 | 2 | 2 | 3 | 2 | 2 | 5 | 2 | 2 | 5 | 2 | 2 | | | | |
| 112 | 4 | 4 | 5 | 1 | 4 | 5 | 5 | 4 | 4 | 4 | 4 | 4 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 1 | 2 | 1 | 4 | 2 | 1 | 1 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | |
| 113 | 3 | 3 | 3 | 4 | 4 | 5 | 4 | 4 | 1 | 3 | 3 | 4 | 1 | 5 | 2 | 1 | 2 | 1 | 2 | 3 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | | |
| 114 | 4 | 5 | 5 | 5 | 2 | 3 | 3 | 3 | 2 | 4 | 5 | 1 | 4 | 5 | 2 | 1 | 2 | 4 | 1 | 2 | 4 | 1 | 4 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 5 | 1 | 1 | | | |
| 115 | 4 | 3 | 4 | 3 | 2 | 4 | 4 | 4 | 5 | 2 | 5 | 4 | 2 | 2 | 4 | 1 | 1 | 2 | 4 | 1 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 4 | 1 | 2 | 2 | 3 | 2 | 5 | 8 | 6 | 2 | | | |
| 116 | 5 | 4 | 4 | 4 | 1 | 4 | 4 | 4 | 4 | 3 | 4 | 3 | 4 | 3 | 5 | 2 | 2 | 2 | 4 | 3 | 3 | 2 | 4 | 3 | 2 | 4 | 3 | 4 | 1 | 2 | 2 | 4 | 1 | 2 | 2 | 3 | 4 | 1 | 2 | 3 | 5 | 2 | 4 | | |
| 117 | 4 | 4 | 4 | 4 | 2 | 4 | 4 | 4 | 4 | 3 | 4 | 5 | 1 | 3 | 5 | 3 | 2 | 2 | 4 | 4 | 1 | 3 | 2 | 1 | 4 | 3 | 5 | 4 | 5 | 2 | 2 | 4 | 4 | 4 | 4 | 2 | 2 | 3 | 3 | 5 | 2 | 4 | | | |
| 118 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 3 | 4 | 2 | 3 | 4 | 3 | 2 | 2 | 3 | 2 | 1 | 5 | 3 | 2 | 1 | 3 | 4 | 3 | 3 | 4 | 4 | 3 | 4 | 4 | 3 | 4 | 4 | 3 | 3 | 4 | 4 | 5 | 6 | 1 | | |
| 119 | 4 | 4 | 5 | 1 | 3 | 4 | 4 | 4 | 4 | 2 | 3 | 4 | 2 | 3 | 4 | 3 | 2 | 1 | 5 | 5 | 3 | 2 | 2 | 1 | 3 | 4 | 3 | 3 | 4 | 4 | 3 | 4 | 4 | 3 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 5 | 1 | | |
| 120 | 4 | 5 | 2 | 5 | 2 | 4 | 4 | 4 | 4 | 2 | 3 | 4 | 2 | 2 | 4 | 4 | 4 | 4 | 3 | 4 | 2 | 2 | 2 | 1 | 1 | 4 | 1 | 4 | 1 | 2 | 2 | 3 | 5 | 2 | 1 | 2 | 4 | 3 | 2 | 2 | 4 | 5 | 1 | | |
| 121 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 3 | 4 | 4 | 3 | 4 | 3 | 4 | 1 | 1 | 1 | 1 | 4 | 2 | 1 | 1 | 1 | 2 | 1 | 2 | 3 | 2 | 1 | 3 | 2 | 1 | 2 | 1 | 6 | 4 | 6 | 2 | 2 | | | |
| 122 | 4 | 4 | 2 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 4 | 4 | 3 | 1 | 4 | 2 | 2 | 2 | 3 | 1 | 1 | 5 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 6 | 3 | 5 | 1 | 1 | | | |
| 123 | 4 | 5 | 3 | 2 | 2 | 4 | 4 | 4 | 5 | 1 | 5 | 5 | 2 | 1 | 4 | 2 | 2 | 2 | 3 | 1 | 3 | 2 | 1 | 4 | 2 | 2 | 4 | 3 | 4 | 4 | 3 | 4 | 4 | 3 | 4 | 4 | 3 | 4 | 4 | 5 | 2 | 2 | | | |
| 124 | 2 | 4 | 2 | 4 | 2 | 5 | 5 | 4 | 1 | 3 | 4 | 2 | 2 | 2 | 4 | 2 | 1 | 4 | 2 | 1 | 4 | 2 | 1 | 2 | 1 | 2 | 4 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 4 | 6 | 4 | 2 | 2 | | | |
| 125 | 4 | 4 | 4 | 4 | 2 | 5 | 4 | 4 | 4 | 2 | 4 | 4 | 4 | 4 | 2 | 1 | 3 | 3 | 2 | 1 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| 126 | 4 | 5 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 4 | 3 | 2 | 4 | 4 | 4 | 4 | 4 | 3 | 2 | 1 | 3 | 2 | 1 | 4 | 2 | 1 | 3 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | |
| 127 | 5 | 4 | 3 | 4 | 1 | 4 | 4 | 4 | 1 | 3 | 4 | 3 | 2 | 4 | 4 | 2 | 2 | 2 | 3 | 3 | 1 | 4 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| 128 | 4 | 4 | 5 | 4 | 3 | 4 | 4 | 4 | 5 | 2 | 3 | 4 | 3 | 2 | 4 | 4 | 2 | 2 | 3 | 3 | 3 | 4 | 2 | 1 | 1 | 1 | 1 | 4 | 4 | 3 | 3 | 4 | 2 | 4 | 2 | 4 | 2 | 5 | 4 | 3 | 3 | 3 | | | |
| 129 | 5 | 5 | 5 | 4 | 2 | 4 | 3 | 3 | 3 | 1 | 1 | 5 | 4 | 2 | 5 | 4 | 4 | 4 | 1 | 2 | 2 | 2 | 4 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| 130 | 4 | 4 | 5 | 5 | 2 | 5 | 4 | 4 | 3 | 1 | 1 | 5 | 4 | 2 | 5 | 4 | 4 | 4 | 1 | 2 | 2 | 5 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| 131 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 5 | 4 | 5 | 4 | 4 | 5 | 2 | 1 | 2 | 2 | 4 | 1 | 2 | 4 | 1 | 4 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 132 | 2 | 2 | 4 | 2 | 2 | 2 | 2 | 4 | 4 | 2 | 4 | 3 | 2 | 3 | 4 | 2 | 4 | 3 | 2 | 3 | 2 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 133 | 4 | 5 | 5 | 4 | 1 | 3 | 3 | 3 | 3 | 5 | 4 | 1 | 1 | 3 | 4 | 2 | 3 | 4 | 4 | 2 | 3 | 4 | 2 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 134 | 5 | 5 | 5 | 1 | 4 | 5 | 5 | 4 | 4 | 2 | 5 | 1 | 4 | 2 | 5 | 1 | 2 | 1 | 1 | 1 | 1 | 5 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 135 | 3 | 1 | 3 | 2 | 4 | 4 | 3 | 3 | 4 | 3 | 3 | 3 | 2 | 4 | 4 | 2 | 2 | 3 | 4 | 3 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 136 | 5 | 4 | 5 | 4 | 5 | 5 | 5 | 2 | 3 | 5 | 5 | 5 | 2 | 4 | 4 | 1 | 2 | 4 | 4 | 4 | 4 | 3 | 4 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 137 | 4 | 4 | 4 | 4 | 1 | 3 | 3 | 4 | 2 | 4 | 3 | 3 | 2 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 138 | 5 | 5 | 3 | 4 | 1 | 3 | 5 | 3 | 2 | 5 | 4 | 2 | 4 | 3 | 4 | 3 | 2 | 2 | 1 | 2 | 2 | 1 | 5 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 139 | 4 | 4 | 5 | 4 | 2 | 4 | 4 | 4 | 4 | 2 | 4 | 3 | 2 | 4 | 2 | 4 | 2 | 4 | 2 | 1 | 2 | 1 | 5 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 140 | 4 | 5 | 5 | 3 | 2 | 2 | 4 | 5 | 4 | 5 | 5 | 1 | 1 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 5 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 141 | 5 | 5 | 5 | 1 | 4 | 5 | 5 | 4 | 4 | 2 | 5 | 1 | 1 | 3 | 4 | 2 | 3 | 4 | 4 | 2 | 1 | 1 | 4 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 142 | 4 | 4 | 4 | 3 | 2 | 3 | 4 | 3 | 4 | 3 | 2 | 3 | 4 | 2 | 5 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 143 | 3 | 4 | 3 | 4 | 2 | 4 | 4 | 4 | 4 | 4 | 3 | 2 | 4 | 4 | 3 | 2 | 1 | 1 | 2 | 2 | 2 | 4 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 144 | 4 | 5 | 4 | 4 | 2 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 4 | 4 | 2 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 145 | 5 | 4 | 4 | 4 | 1 | 4 | 4 | 4 | 4 | 2 | 3 | 3 | 4 | 4 | 4 | 3 | 4 | 1 | 2 | 3 | 1 | 5 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 146 | 5 | 5 | 4 | 4 | 1 | 4 | 5 | 4 | 2 | 4 | 2 | 4 | 2 | 3 | 4 | 2 | 2 | 2 | 1 | 2 | 3 | 1 | 5 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 147 | 5 | 4 | 3 | 4 | 3 | 4 | 3 | 3 | 3 | 5 | 4 | 1 | 2 | 4 | 3 | 1 | 2 | 2 | 2 | 2 | 1 | 4 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 148 | 5 | 2 | 4 | 3 | 2 | 3 | 3 | 4 | 4 | 3 | 2 | 4 | 4 | 5 | 1 | 2 | 1 | 5 | 4 | 2 | 2 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 149 | 4 | 4 | 4 | 4 | 4 | 2 | 4 | 4 | 4 | 2 | 4 | 4 | 2 | 4 | 4 | 4 | 1 | 1 | 1 | 1 | 1 | 4 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 150 | 4 | 4 | 4 | 4 | 4 | 2 | 3 | 3 | 3 | 3 | 4 | 3 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 151 | 4 | 5 | 4 | 4 | 2 | 3 | 3 | 4 | 3 | 4 | 3 | 2 | 5 | 2 | 5 | 2 | 3 | 4 | 2 | 2 | 3 | 4 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 152 | 4 | 5 | 1 | 5 | 2 | 2 | 5 | 4 | 1 | 4 | 5 | 1 | 4 | 5 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 5 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 153 | 4 | 5 | 4 | 5 | 1 | 2 | 4 | 5 | 4 | 5 | 5 | 2 | 1 | 4 | 4 | 3 | 2 | 2 | 3 | 1 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 154 | 4 | 5 | 2 | 5 | 2 | 4 | 2 | 4 | 2 | 4 | 2 | 5 | 4 | 2 | 4 | 4 | 4 | 4 | 2 | 2 | 4 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 155 | 4 | 5 | 2 | 4 | 3 | 4 | 5 | 4 | 3 | 3 | 4 | 3 | 4 | 3 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Appendix 4: Details Research Sample

Table 11: Gender distribution

| | Frequency | Percentage |
|--------|-----------|------------|
| Male | 107 | 51.0% |
| Female | 103 | 49.0% |
| Other | 0 | 0.0% |

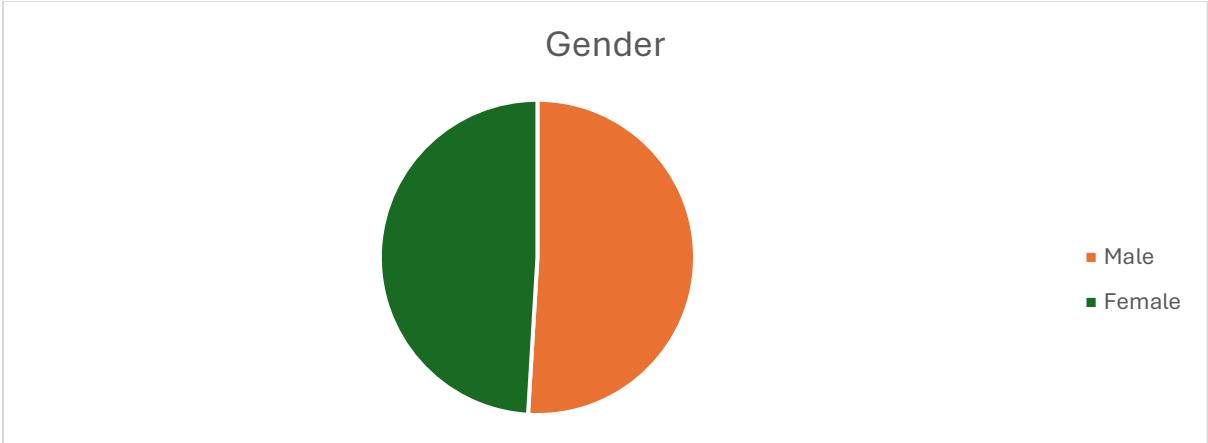


Figure 2: Gender distribution

Table 12: Age distribution

| | Frequency | Percentage |
|---------------------|-----------|------------|
| Under the age of 18 | 2 | 1.0% |
| 18 – 24 | 100 | 47.6% |
| 25 – 34 | 30 | 14.3% |
| 35 – 44 | 6 | 2.9% |
| 45 – 54 | 16 | 7.6% |
| 55 – 64 | 45 | 21.4% |
| 65 or older | 11 | 5.2% |

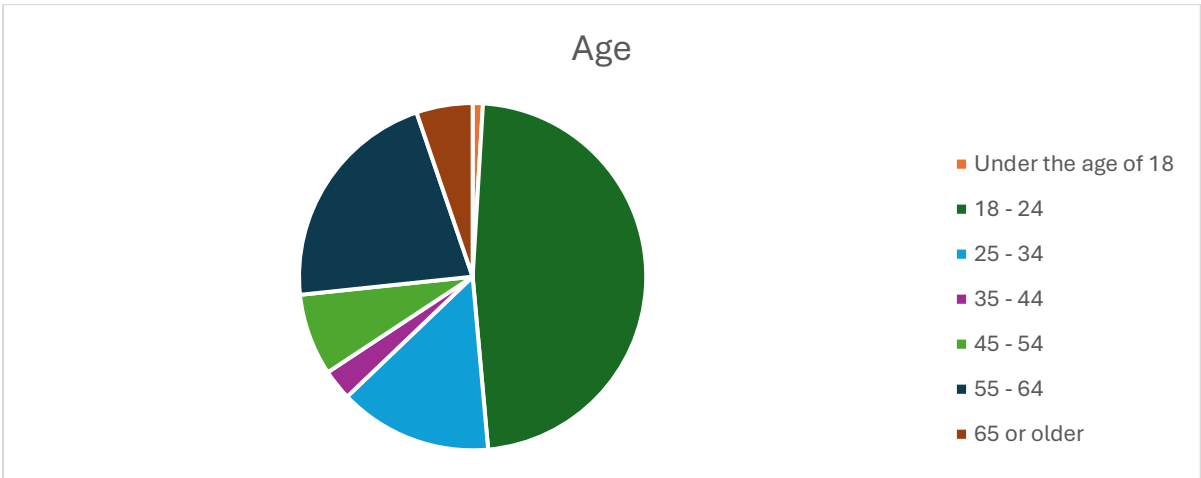


Figure 3: Age distribution

Table 13: Education distribution

| | Frequency | Percentage |
|-----------------------------------|-----------|------------|
| Lower than high school diploma | 1 | 0.5% |
| High school diploma or equivalent | 12 | 5.7% |
| MBO | 13 | 6.2% |
| HBO | 55 | 26.2% |
| WO Bachelor | 65 | 31.0% |
| WO Master | 53 | 25.2% |
| Doctorate, PhD | 11 | 5.2% |

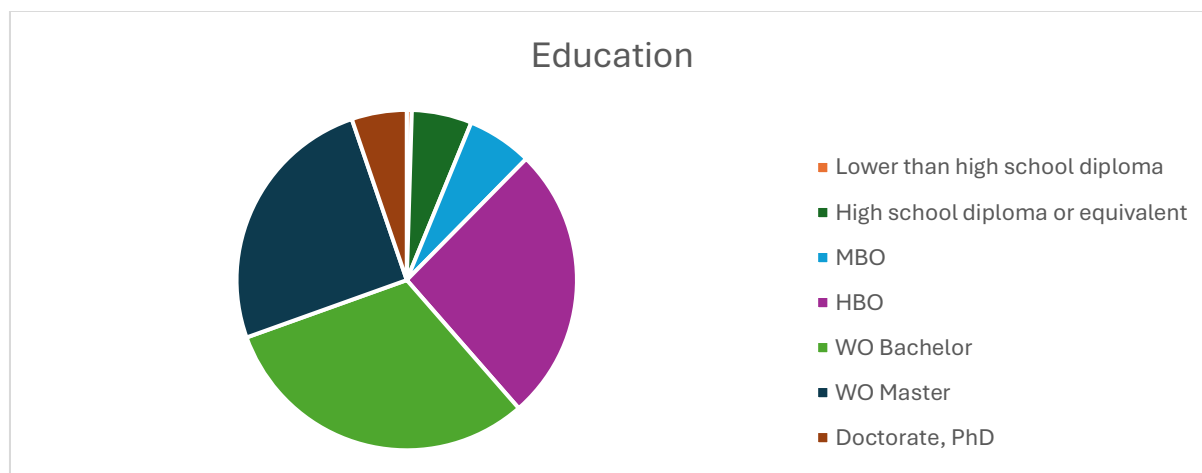


Figure 4: Education distribution

Table 14: Income distribution

| | Frequency | Percentage |
|----------------------|-----------|------------|
| Less than 500 euros | 16 | 7.6% |
| 500 – 1500 euros | 68 | 32.4% |
| 1500 – 2500 euros | 33 | 15.7% |
| 2500 – 3500 euros | 33 | 15.7% |
| 3500 – 4500 euros | 19 | 9.0% |
| More than 4500 euros | 41 | 19.5% |

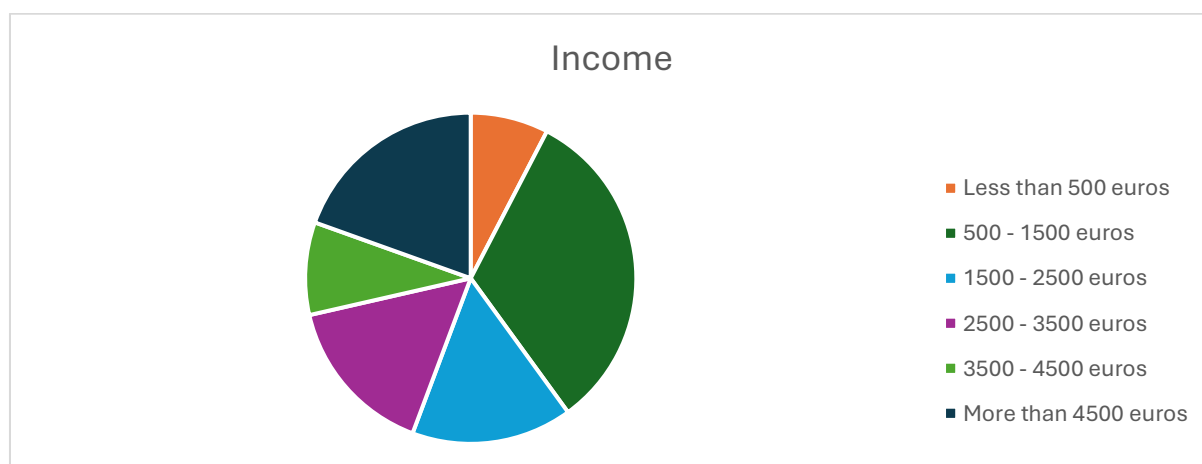


Figure 5: Income distribution

Table 15: Social media usage distribution

| | Frequency | Percentage |
|---------------------------|-----------|------------|
| Less than 1 hour | 44 | 21.0% |
| 1 to 2 hours per day | 63 | 30.0% |
| 2 to 3 hours per day | 55 | 26.2% |
| 3 to 4 hours per day | 34 | 16.2% |
| 4 to 5 hours per day | 11 | 5.2% |
| More than 5 hours per day | 3 | 1.4% |

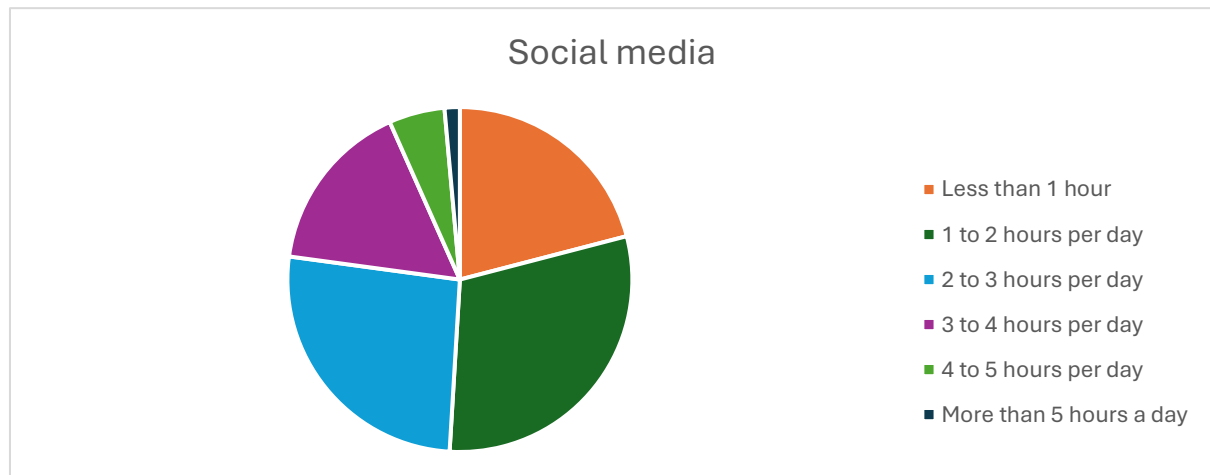


Figure 6: Social media usage distribution

Appendix 5: Descriptive Statistics

Table 16: Descriptive Statistics of Summed Items

| Variables | Frequency | Minimum | Maximum | Mean | Standard Deviation |
|----------------------------|------------------|----------------|----------------|-------------|---------------------------|
| Openness to Experience | 210 | 10 | 25 | 19.333 | 2.853 |
| Conscientiousness | 210 | 5 | 20 | 14.919 | 2.571 |
| Extraversion | 210 | 4 | 20 | 13.786 | 3.238 |
| Agreeableness | 210 | 6 | 19 | 14.510 | 2.491 |
| Neuroticism | 210 | 4 | 19 | 9.881 | 3.427 |
| Compulsive Buying Behavior | 210 | 6 | 26 | 12.891 | 4.764 |
| Unplanned Purchases | 210 | 2 | 10 | 5.086 | 1.363 |
| Materialism | 210 | 1 | 5 | 2.219 | .953 |
| Impulsivity | 210 | 1 | 5 | 2.800 | .952 |
| Environment | 210 | 1 | 5 | 2.814 | .948 |

Notes: This table shows the descriptive statistics of the summed scores of all measured non-demographic variables. Each statement is considered a construct item and was coded with the values 1 to 5, ranging from 'strongly disagree' to 'strongly agree'.

Table 17: Descriptive Statistics of Median Items

| Variables | Frequency | Minimum | Maximum | Mean | Standard Deviation |
|----------------------------|------------------|----------------|----------------|-------------|---------------------------|
| Openness to Experience | 210 | 2 | 5 | 3.962 | .655 |
| Conscientiousness | 210 | 1 | 5 | 3.757 | .683 |
| Extraversion | 210 | 1 | 5 | 3.445 | .898 |
| Agreeableness | 210 | 1 | 5 | 3.691 | .753 |
| Neuroticism | 210 | 1 | 5 | 2.493 | .960 |
| Compulsive Buying Behavior | 210 | 1 | 5 | 2.098 | .974 |
| Unplanned Purchases | 210 | 1 | 5 | 2.543 | .682 |
| Materialism | 210 | 1 | 5 | 2.219 | .953 |
| Impulsivity | 210 | 1 | 5 | 2.800 | .952 |
| Environment | 210 | 1 | 5 | 2.814 | .948 |

Notes: This table shows the descriptive statistics of the median scores of all measured non-demographic variables. Each statement is considered a construct item and was coded with the values 1 to 5, ranging from 'strongly disagree' to 'strongly agree'.

Table 18: Cronbach's Alpha coefficients

| Construct | Items | Cronbach's Alpha |
|----------------------------|--------------|-------------------------|
| Openness to Experience | 5 | .638 |
| Conscientiousness | 4 | .668 |
| Extraversion | 4 | .822 |
| Agreeableness | 4 | .587 |
| Neuroticism | 4 | .829 |
| Compulsive Buying Behavior | 6 | .848 |
| Unplanned Purchases | 2 | .529 |

Notes: Cronbach Alpha measures the internal reliability of measured constructs. This measurement has been applied to the variables 'Openness to Experience', 'Conscientiousness', 'Extraversion', 'Agreeableness', 'Neuroticism', 'Compulsive Buying Behavior', and 'Unplanned Purchases'.

Table 19: Correlation matrix

| | Openness to Experience | Conscientiousness | Extraversion | Agreeableness | Neuroticism | Compulsive Buying | Unplanned Purchases | Gender | Age | Education | Income | Social media | |
|------------------------|------------------------|-------------------|--------------|---------------|-------------|-------------------|---------------------|--------|-------|-----------|--------|--------------|---|
| Openness to Experience | 1 | | | | | | | | | | | | |
| Conscientiousness | .199** | 1 | | | | | | | | | | | |
| Extraversion | .004 | .199** | 1 | | | | | | | | | | |
| Agreeableness | .004 | .167** | .190** | 1 | | | | | | | | | |
| Neuroticism | .267** | .006 | .085 | .218 | 1 | | | | | | | | |
| Compulsive Buying | .042 | .167** | .085 | .218 | .002 | 1 | | | | | | | |
| Behavior | .545 | .167** | .085 | .218 | .002 | .366** | 1 | | | | | | |
| Unplanned Purchases | .164* | .167** | .085 | .218 | .002 | .475** | .164* | 1 | | | | | |
| Gender | .018 | .167** | .085 | .218 | .002 | .475** | .164* | .062 | 1 | | | | |
| Age | .062 | .167** | .085 | .218 | .002 | .475** | .164* | .163* | .163* | 1 | | | |
| Education | .368 | .167** | .085 | .218 | .002 | .475** | .164* | .018 | .049 | .133 | 1 | | |
| Income | .163* | .167** | .085 | .218 | .002 | .475** | .164* | .070 | .125 | .070 | .250** | 1 | |
| Social media | .005 | .167** | .085 | .218 | .002 | .475** | .164* | .005 | .005 | .005 | .005 | .005 | 1 |

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Notes: Summed items have been used for the correlation matrix

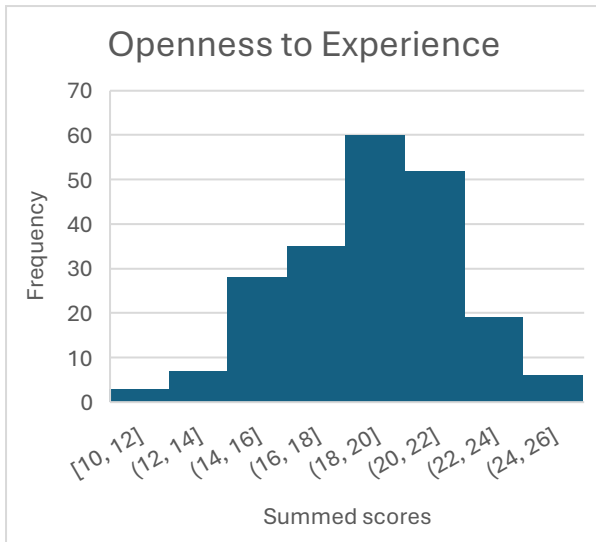


Figure 7: 'Openness to experience' distribution

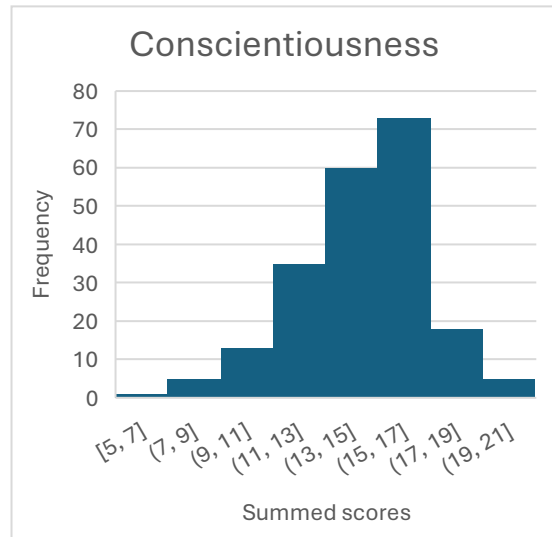


Figure 8: 'Conscientiousness' distribution

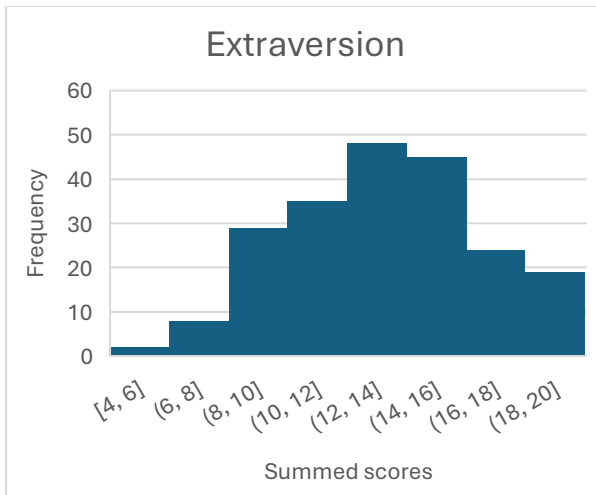


Figure 9: 'Extraversion' distribution

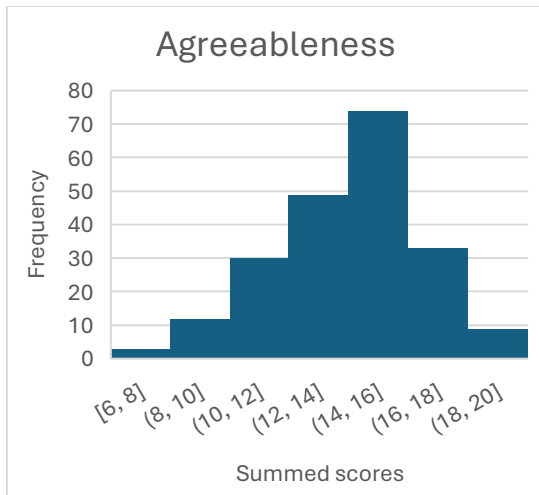


Figure 10: 'Agreeableness' distribution

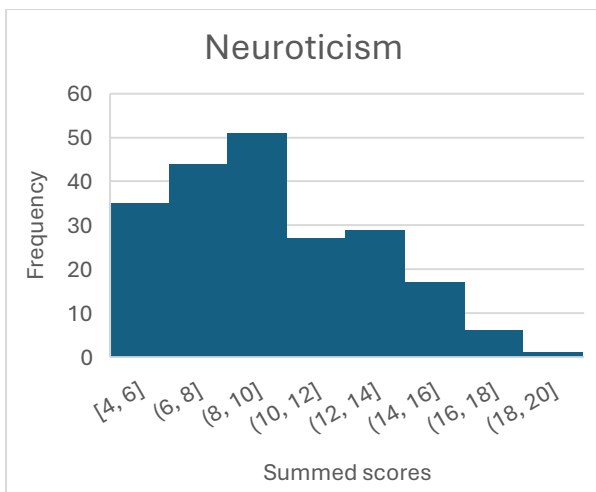


Figure 11: 'Neuroticism' distribution

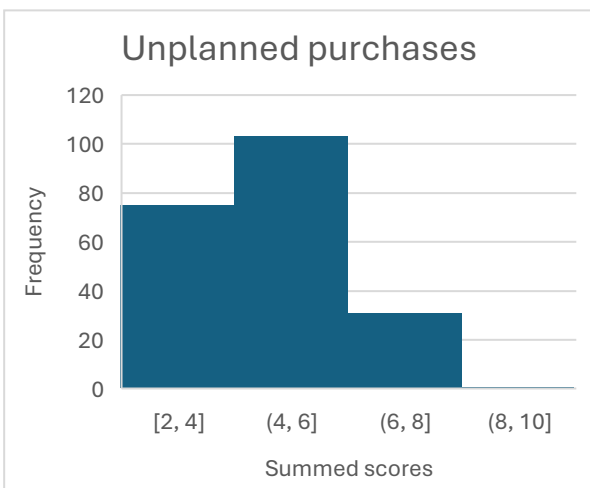


Figure 12: 'Unplanned purchases' distribution

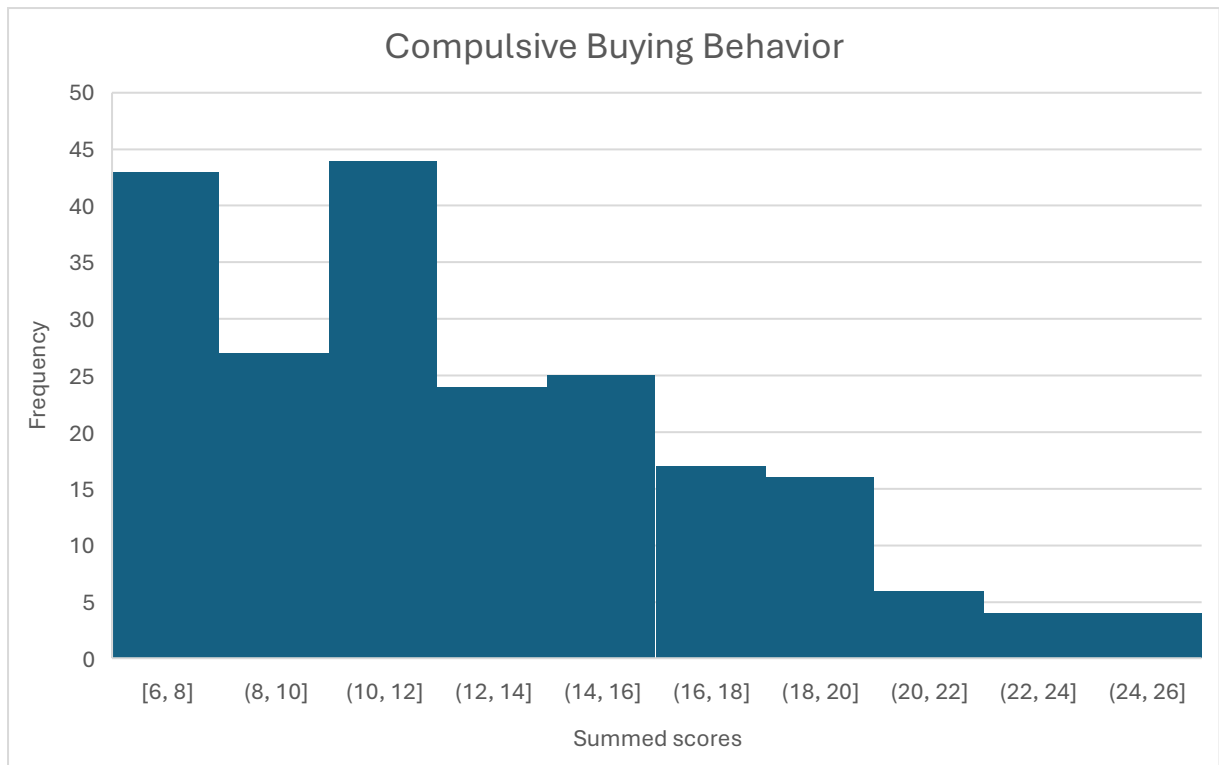


Figure 13: 'Compulsive buying behavior' distribution