

QATAR UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

COLOR ROLES IN APPAREL PURCHASE INTENTIONS OF FEMALE

CONSUMERS: THE MODERATING EFFECT OF BUYER PERSONALITY

BY

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A Thesis Submitted to

the College of Business and Economics

in Partial Fulfillment of the Requirements for the Degree of

Master of Science in Marketing

June 2020

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ABSTRACT

LOVRIC, MARIJA., Masters : June : [2020:], Master of Science in Marketing

Title: Color Roles in Apparel Purchase Intentions of Female Consumers: The Moderating Effect of Buyer Personality

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Motivated by the paucity of research on the application of color in marketing, the study evaluates the effect of color dimensions on purchase intentions of Croatian female consumers of apparel, along with the moderating effects of personality traits in the relationship. Precisely, the paper models color dimensions, namely color significance/meaning, normative color, attitude towards color, color self-efficacy, and color attractiveness as antecedents of purchase intentions. The paper also investigates the moderating effects of two personality traits, extraversion and openness to experience. Data were collected in Zagreb, the capital city of Croatia, and analyzed using the hierarchical multiple regression technique. The results reveal that the five color dimensions explain a significant amount of variance in purchase intentions. Color significance/meaning, normative color, attitude towards color, color self-efficacy, color attractiveness, and purchase intentions are significantly related. There is partial support for the moderating effects of extraversion and openness to experience in the relationship of color dimensions with purchase intentions. Key theoretical and managerial implications of the findings are presented.

DEDICATION

To my beloved parents, Mira and Drago, and my dear brother Dominik.

Thank you for your unwavering support and love.

ACKNOWLEDGMENTS

I would like to express my deepest gratitude to my thesis supervisor, prof. dr. Nelson Ndubisi for his mentorship and advice. Professor Nelson provided valuable guidance and immense commitment towards perfecting my work. I would like to also thank him for all the insightful and meaningful discussions we had along this thesis journey. Without his support, this accomplishment would not be possible.

Moreover, I would like to thank prof. dr. Belaid Aouni for his experienced advice as well as his continued support and availability throughout the thesis process.

Lastly, I would like to thank the faculty and staff of Qatar University as well as my friends who have contributed to my success during the studies.

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CHAPTER 1: INTRODUCTION

1.1 Overview

Over the years, interest and research into the use of color in marketing have been growing. Both marketers and researchers are realizing the significant effect color exerts on consumer behavior (Hoyer, & MacInnis, 2008). Brands have used color for years to differentiate between themselves, to craft brand personalities and increase familiarity and likeability. Marketers understand the importance of color for their brands. For that reason, many successful brands have trademarked their brand colors, or at least attempted to. For instance, Tiffany's robin's egg blue has been in use since 1845 (Klara, 2017) and has been trademarked since 1998 (Steigrad, 2011). The company is in a position where its signature color is immediately associated with the brand even without any other brand identifiers. However, Cheerios and Cadbury have lost their legal battles for trademarking. Cheerios attempted to trademark the use of yellow on their cereal boxes but faced rejection since the color yellow has so far been used by numerous other cereal brands (Klara, 2017). On the other hand, Cadbury trademarked its iconic purple wrapping but has lost the trademark after Nestle challenged it (Bird, 2019). Hence, color is an important brand identifier that contributes to consumers' meaning of a brand.

Moreover, companies do not only use colors to associate with their brand, but also to increase demand for their products. This can be seen from the fact that even technology companies, such as Apple, Dell, and GE, who previously conformed to offering a limited number of classic color choices - black and grey - are now offering consumers a broad range of color choices for laptops, mobile phones, kitchen appliances, etc. (Labrecque, Patrick & Milne, 2013; Apple Newsroom, 2020). Companies can pursue mass customization strategies by offering products in a variety

of colors. For instance, Nike allows consumers to customize their shoes by offering a selection of different colors for each part of the shoe. Offering a wider variety of product color options allows consumers to express their personality or even try out a different look. Likewise, the role of color in mass customization can be seen from the case of July Luggage. This brand allows customers to personalize their luggage by choosing from an assortment of colors for the suitcase and for the letters of the imprinted monogram on the suitcase (Burns, 2020). It is clear that one of the main considerations, when companies decide to extend their line of products or pursue mass customization strategies, is offering their products in a wider color palette.

While extending product lines and product customizations can be risky and costly endeavors, particularly for companies in capital-intensive industries, it also allows companies to charge more for those products. Research has shown that customers who invest time, energy or labor by customizing a product (Franke, Schreier, & Kaiser 2010; Moreau, Bonney, & Herd, 2011) develop feelings of ownership. When customers develop feelings of ownership, the outcomes include increased valuation and willingness to pay (Fuchs et al., 2010; Peck & Shu, 2009; Shu & Peck, 2011) as well as consumer satisfaction, loyalty, and word of mouth (Jussila, et al., 2015). Therefore, these strategies can be rewarding for a company's growth in the market. Meaning that it is crucial for brands to make informed decisions when choosing among different colors for the product line. Companies should offer colors that are attractive to their customers and increase sales. By understanding their target market and the factors that play a role in consumers' color choice in a particular product, it is possible to reach these informed decisions. Nevertheless, while brands have realized the importance that color exerts on consumers, researchers have not, leaving marketing practitioners with limited theoretical guidance. Specifically, there

is a gap in the extant color literature with regards to how color influences buyer behavior or behavioral intentions, leaving meaningful opportunities for marketing research.

1.2 Research Contribution

Throughout the years, several researchers have pointed to the lack of research on color in the marketing literature (Funk & Ndubisi, 2006; Labrecque & Milne, 2011; Labrecque, Patrick & Milne, 2013) (Lovric & Ndubisi, 2020). Meanwhile, research in this area is essential for the advancement of marketing theory (Labrecque, Patrick & Milne, 2013) and for improving managerial practice. Researchers have not paid adequate attention to the understanding of the dimensions of color, and how these dimensions might impact behavioral intentions or actual behavior of consumers. Of the few existing scholarship on color dimensions, the majority focused on the three object-based dimensions of color, namely *Hue* (that is, word descriptions of color such as blue, black, purple, red, etc.), *Value* (the overall intensity to how light or dark a color is), and *Saturation* or *Chroma* (referring to the strength of the hue) (Gorn, Chattopadhyay, Sengupta & Tripathi, 2004; Labrecque & Milne, 2011; Babin, Hardesty, & Suter, 2003; Bellizzi, Crowley, & Hasty, 1983). However, very limited attention has been paid to the psychological and personality aspects that influence the application of color in consumer decision-making processes and purchase intentions. This study aims to fill this void. By considering the characteristics of both the object (color) and the subject (the buyer), and the interactions of the object- and subject-based dimensions, a more advanced understanding of the role of color in the buyer decision-making process can be gained.

This study makes significant theoretical and managerial contributions. In terms of literature, the current research extends existing knowledge on the understudied

interface of color and marketing by examining color-related variables that have gained limited or no attention at all from the existing scholarship. The color dimensions examined in the thesis combine psychological and personality aspects with color to explain consumer behavior. Therefore, these findings make contributions to marketers by determining the extent to which color variables other than hue, value, and saturation, influence purchase intentions. The study identifies relevant psychological and personality aspects of color that managers should consider when developing their color strategies.

1.3 Research Objectives

Through the lens of the gender schema theory (Bem, 1981), the theory of planned behavior (Ajzen, 1991; Ajzen, 2002) and personality theories (McCrae & John, 1992), the current study models and argues that personality factors and their interactions with color dimensions provide a more robust explanation for the role of color in consumer purchase intentions than just hue, value, and saturation. Specifically, the thesis examines the effect of color dimensions, namely color significance/meaning, normative color, attitude towards color, color self-efficacy and color attractiveness on consumer apparel purchase intentions. Moreover, the moderating effects of personality traits of extraversion and openness to experience are also investigated. Thus, the study examines to what extent the identified color variables influence the apparel purchase intentions of female consumers.

1.4 Research Context

The setting of the study is of great significance. Conducted in Croatia, a very little-known European market with very limited consumer research attention, yet the Republic of Croatia is a key member of the European Union (the largest trading block in the world), with a high standard of living. The country itself is colorful going by the

multiple colors featuring in the national symbols such as the Flag and the Coat of arms. Even Croatian fashion designers have drawn inspiration from the colors featured in the flag to design collections with socio-political themes that send patriotic messages (Lončar, 2018). Likewise, Croatian fashion designers readily experiment with various colors in their designs making the setting of the study appropriate for this research (Zečić, 2019; Gloria.hr, 2019). It is the aim of this study to address both the paucity of research on the interface of color and marketing and consumer behavior and drivers in Croatia, thus making the country a fitting context for this color research.

The current study focuses on female consumers of apparel for several different reasons. According to Statista, women's and girls' apparel makes up the largest segment in the international apparel market with the revenue of US\$669,875 million in 2019 and an expected annual growth of 4.2% (Statista, 2019). Likewise, in 2017, female's clothing expenditure was found to be three times greater than that of males (Brown, Haas, Marchessou, & Villepelet, 2018). Furthermore, females have been connected with fashion innovativeness and identified as fashion "innovators" and "early adopters" in terms of fashion diffusion (Beaudoin, Lachance & Robitaille, 2003). Also, females, more so than males, are less conservative when it comes to experimenting with colors or in combining colors in their apparel. As compared to womenswear, menswear is more classic, driven by small detail changes, and therefore hasn't changed much over the years. While menswear is focused on functionality, womenswear designers take inspiration from the abstract subject matter, (Leach, 2014), which often turn out more colorful. In view of this market trend and women's propensity to experiment with fashion, the current study focuses on female consumers.

Females generally have a greater propensity to experiment with colors in apparel. The following case examples illustrate the significant role color plays in the

purchase behaviors of females. For these women, color plays a key role in their life and they refuse to wear anything other than in their favorite color (New York Post Video, 2017; New York Post Video, 2017; New York Post Video, 2018; New York Post Video, 2018; New York Post Video, 2018; Menon, 2019). Identifying themselves as monochromatic, some women experiment with different shades and styles of clothing, whereas the color remains the same. Different motives are associated with this behavior.

Based on the analysis of interviews given by these women, the majority of the constructs measured in the current study resonates. For instance, Ella London, the yellow lady (see figure 6), states “Yellow has a lot of different meanings. It means everything from happiness and sunshine, to danger, to cowardice” (New York Post Video, 2018). Clearly pointing to color significance or meaning. Moreover, Sandra Ramos, the purple lady (see figure 5), refers to the construct of color attractiveness when she states “It’s mostly purple that attracts me.” (New York Post Video, 2018). Moreover, Ramos justifies painting her house purple, since it was previously green, a color she did not find attractive (New York Post Video, 2018). Moreover, these women have strong positive attitudes towards their preferred colors. They find wearing their favorite color enjoyable and positive as seen from the statement by Elisabeth Sweetheart, the green lady (see figure 3), that she “will continue to be green, because it’s so positive” (New York Post Video, 2018). Lastly, the construct of color self-efficacy, in terms of the perceived ease of using their favorite color to achieve their desired look, is evidently present since these monochromatic ladies have been wearing their favorite color for many years. For instance, the red lady, Zorica Rebernik (see figure 1 and 2), has been wearing only red for four decades (Menon, 2019).



Figure 1. Red lady (Menon, 2019).



Figure 2. Zorica's closet (Menon, 2019).



Figure 3. Green lady (Schmidt, 2018).



Figure 4. Purple lady. (New York Post, 2018).



Figure 5. Pink lady. (Phillips, 2009).



Figure 6. Blue lady. (Goddard, 2008).



Figure 7. Yellow Lady (London, 2019).

1.5 Research Methodology

The implemented research methodology is a quantitative and explanatory research study using a self-administrated survey. The measurements for the survey consist of validated items that have been adapted from extant literature. Then, the questionnaire was distributed in an electronic and hard copy format through the mall intercept method or an email invitation. Data were gathered using the systematic random sampling procedure and a total of 358 usable responses were analyzed using SPSS Statistics.

1.6 Thesis Structure

The thesis is structured into five chapters and organized in the following manner: The first chapter, introduces the topic, identifies the research objectives and context and presents the research contributions. The following chapter two presents the theoretical lens underpinning the conceptual model as well as the conceptual framework and hypothesized relationships along with the literature review of the examined variables. Next, in chapter three, the adopted research methodology is discussed. Subsequently, chapter four describes the data analysis techniques and the study's results. The research concludes with chapter five that identifies the theoretical and managerial

implications and discusses the study's conclusions, limitations, and suggestions for further research.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The current study is grounded in three established theories - the gender schema theory (Bem, 1981), the theory of planned behavior (Ajzen, 1991; Ajzen, 2002) and personality theories (McCrae & John, 1992). Drawing from these theories, a conceptual model that incorporates personality factors and their interactions with color dimensions is developed. The thesis investigates five direct effects of color dimensions, specifically color significance/meaning, normative color, attitude towards color, color self-efficacy and color attractiveness on apparel purchase intentions of females. Additionally, the thesis examines moderating effects two of personality traits - specifically extraversion and openness to experience. This chapter elaborates on the origins and theory supporting each measured construct. Then, the chapter presents the established theories supporting the research in the theoretical framework. Next, the chapter provides the literature review for each examined variable and how each examined variable relates to color leading to hypothesis development. Finally, the chapter introduces the conceptual framework guiding the research.

2.2 Significance / Meaning

Brand significance or meaning originates from brand perceptions and refers to the evaluation of what a brand represents in the consumer's mind. Brand meaning encompasses consumer's expectations, feelings, and beliefs about a brand (Gaustad, Samuelsen, Warlop & Fitzsimons, 2018). McCracken stated that "Brands are first and foremost a bundle of meanings. Were it not for these meanings, it would be impossible to talk about brand images, brand personalities, or brand positions." (2005, p. 179). McCracken claimed that brand meaning develops through the model of meaning

transfer which includes the interplay of two sources of meaning transfer. The first source being where brand meaning originates and is known as the culturally constituted world (1989). This source includes the firm and its marketing-generated sources, such as advertising, that deliver meaning. Moreover, culturally constituted world also includes the broad cultural production systems, for instance, the media world, that also communicates and delivers meaning about a brand (McCracken, 1989). At this point, meaning is transferred to the consumer good. However, the second source of meaning transfer includes customers' personal sources, such as direct experience (McCracken, 1989). Customers' perception of the brand is crucial since consumers are not only passive receivers of brand meaning but they are the ones who ultimately assign meanings to brands from their experiences and encounters with the brand (Batey, 2008). These experiences and encounters may include commercials, packaging, and color. Brand meaning is transferred from brands to consumers when consumers use brands to build their self-concepts and express their identity (Gaustad et al, 2018). Thus, meaning transfer can be considered a two-way process influenced by the culturally constituted world and the individual consumer (Batey, 2008).

Brand meaning is a dynamic construct that is able to change over time by being linked to new associations in the consumer's mind (Gaustad et al, 2018). The impact that brand meaning has on consumers can be seen from the fact that consumers do not always react positively to changes in brand meaning. As mentioned above, consumers' consumption of brands is used to build their self-concepts and identities. A famous case example of consumers protesting a change in brand meaning is Porsche's introduction of their SUV Porsche Cayenne. Existing Porsche consumers associated the brand with speed and masculinity and the new SUV was conflicting with their established perceptions of what the brand meant (Gaustad et al, 2018).

Likewise, brand meaning is dynamic across cultures. For instance, global brands, such as Nestle and Barbie, were found to have alternative and negative meanings among religious Turkish consumers (Izberk-Bilgin, 2012). For brands operating in international markets, it is imperative to consider how the brand's meaning will be perceived by different cultures. All things considered, brand meaning is strongly influenced by consumers and their views, values, and culture. Brands should keep examining how the brand meaning they are communicating to the consumer differs from the brand meaning interpreted by the consumer.

2.3 Attitude

People form favorable or unfavorable evaluations of nearly all aspects of the world. These evaluations that form due to experience, long-term values, and social factors are known as attitudes. People have attitudes or evaluative responses toward certain attitude objects (Bohner, & Wanke, 2002). Attitudes are one of the central constructs from social psychology since they can determine our behavior and cause emotional reactions to events and people (Baron & Branscombe, 2012). Attitudes may comprise of cognitive, affective, and behavioral responses (Bohner, & Wanke, 2002). The affective component considers the feelings or emotions that a person holds towards the attitude object. Meanwhile, the behavioral component refers to how an attitude an individual holds, influences how one acts or behaves. Finally, the cognitive component indicates beliefs or thoughts a person holds about an attitude object. Thus, attitudes may influence how individuals feel, think and act. For instance, a person may strongly believe that smoking is dangerous to health (cognitive); this individual may get angry when they see another person smoking (affective); and this person may avoid areas where smoking is permitted (behavioral). Therefore, these response classes are not separate from each other and may be intertwined. Certain attitudes may

be comprised of all three response classes while others may be comprised of exclusively one response class (Bohner, & Wanke, 2002).

Attitude objects refer to the concepts for which attitudes are formed. People form and have attitudes towards color in the same way that they form and have attitudes towards other attitude objects such as events, issues, social groups, ideas, etc. (Olson & Kendrick, 2008; Petty, Wheeler, & Tormala, 2003). The attitudes consumers form and hold towards a product are of crucial importance to marketers. Attitudes are formed through social learning which involves situations where people interact with or observe other people (Baron & Branscombe, 2012). One way through which social learning can occur is classical conditioning. Marketers often use this basic form of leaning in an attempt to influence consumers' attitude formation for their products. They aim to produce positive attitudes regarding their products by associating an attitude object that consumers already respond positively to (an unconditioned stimulus) with their product (the previously neutral or conditioned stimulus). By consistently pairing their product with the unconditioned stimulus, advertisers are able to influence the attitudes that are formed toward the product (Baron & Branscombe, 2012). Therefore, the importance of consumers' attitudes has been recognized by marketing practitioners.

Likewise, attitudes have been extensively applied and studied in marketing literature. Researchers have found a link between customers holding positive brand attitudes and higher willingness to pay (Keller, 1993), intention to purchase (Voester, Ivens, & Leischnig, 2016) and brand loyalty (Liu, Li, Mizerski & Soh, 2012). Positive brand attitudes were found to be crucial drivers of brand equity (Ansary & Nik Hashim, 2017; Kim, Ko, Xu, & Han, 2013). Previous research has also established a link between brand attitude and customer brand identification (Augusto & Torres,

2018). Moreover, attitudes and their effect on intentions through of theory of planned behavior have been examined in the marketing literature. For instance, customers with positive attitudes towards visiting green hotels had greater intentions to visit such hotels (Chen & Tung, 2014). The current study considers how attitudes towards color influence one's behavior through the theory of planned behavior (Ajzen & Fishbein, 1980).

2.4 Subjective Norms

Normative social influence comprises of changes in behavior to meet the expectations of others and is one of the main reasons why people conform. Fitting in and being similar to their peers, friends, and family, makes people feel more comfortable (Baron & Branscombe, 2012). When people conform, they succumb to pressures to change their attitudes or behavior in a certain way that is perceived as appropriate by a reference group or society. With this change, individuals adhere to existing social norms (Baron & Branscombe, 2012). These social norms are informal rules specifying how people are expected to behave in particular circumstances. Even though people are unaware or underestimate the influence of conformity on their own actions (Pronin, Berger & Molouki, 2007), most of the time individuals behave in agreement with social norms and their actions are predictable. This is particularly the case in situations where norms are more obvious. While some norms are explicit such as signs in public places (e.g. keep off the grass), other norms are implicit (e.g. forming a line and waiting at the supermarket or cinema). Social norms are present in expectations for people's choice of attire. While it is the norm for students on a university campus to dress casually, on the New York's Wall Street it is expected from the employees to wear business suits. Therefore, people follow social norms in many different aspects of the social world (Baron & Branscombe, 2012).

Individuals conform to social norms for two main motives. These motives are the desire to be liked and accepted by other people as well as the desire to be correct (Deutsch & Gerard, 1955; Insko, 1985). People's desire to be liked leads them to adopt behaviors that are similar to those of the social groups whose approval they are craving. When people modify their behavior to meet the expectations of others it is known as normative social influence. The greater the need to be accepted and liked by a social group (e.g. a person's peers, friends, and family), the more people want to avoid exhibiting any kind of behavior that will separate them from that group (Turner, 1991). This can be seen from the fact that people are often similar to their peer groups by wearing similar styles of clothing, enjoying the same books, movies, and music, etc. Moreover, people may conform to others' opinions and actions in situations where they desire to be correct or accurate. This motive is known as informational social influence. By referring to other people's behavior and opinions as information sources concerning the social world, people are able to guide their own behavior and opinions (Deutsch & Gerard, 1955; Insko, 1985). Clearly, these motives make normative social influence an influential force that can guide people's behavior.

However, people often underestimate the extent to which conformity has an effect on their actions (Pronin, Berger & Molouki, 2007). This is due to people's desire to be unique (Snyder & Fromkin, 1980). Even though people may act similarly to their peers, once they sense their uniqueness is endangered, people actively oppose pressures to conform to social norms. People do so in order to reestablish their sense of uniqueness (Snyder & Fromkin, 1980). Therefore, different desires play a role in determining the extent to which individuals conform. This study considers the effect of a variable, normative color, that takes into consideration the extent to which

consumers' peers, friends, and family influence the color choice of the consumer. This influence on the color choice may be strong, but yet, unnoticed.

2.5 Self-Efficacy

Self-efficacy is a construct, developed by Albert Bandura, that refers to "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (1986, p. 391). Essentially, it refers to people's beliefs in their own abilities to perform a task and be successful (Bandura, 1986). The construct originated from the self-efficacy theory. According to this theory, self-efficacy improves performance since individuals set goals of greater difficulty which leads to them exerting a higher level of effort and persistence (Bandura, 1977; 2012; Bandura & Locke, 2003). People are inclined to avoid executing courses of action where they have a low sense of self-efficacy. However, they are motivated to undertake tasks about which they have a strong sense of self-efficacy (Forbes, 2005). Research from various fields has confirmed a positive relationship between self-efficacy and performance. The construct of self-efficacy has been applied in fields as diverse as health, business, psychology, sport, etc. (Wilski, & Tasiemski, 2016; Piperopoulos, & Dimov, 2015; Judge, & Bono, 2001; Feltz, Short, & Sullivan, 2008). The power of self-efficacy can be seen from the finding that the construct was found to improve performance by 28% making it a more powerful effect than others such as goal setting, behavior modifications, and feedback interventions (Stajkovic & Luthans, 1998; Sitzmann, & Yeo, 2013).

Self-efficacy begins to form from early childhood and develops throughout our life from four different sources. The first and most effective source of high self-efficacy is mastery experiences. This development of self-efficacy stems from executing an action successfully. When people perform a certain task correctly, it

gives them confidence in their ability to perform this task and improves the people's sense of self-efficacy. Meanwhile, when people fail to appropriately execute an action, it can weaken their sense of self-efficacy (Bandura, 1997). Secondly, when an individual observes others, who are similar to the observer, perform a task successfully it strengthens that persons' sense of self-efficacy. In this case, individuals start to believe that they also have the competences to succeed in performing the task (Bandura, 1997). The following source is social persuasion. Individuals can be convinced by verbal encouragement from other people that they possess the ability and skill to succeed in completing a certain task. By overcoming self-doubt as a result from encouragement from another person, people are able to increase their self-efficacy (Bandura, 1997). Lastly, Bandura referred to our psychological responses to different situations as a factor affecting self-efficacy. For instance, when someone becomes stressed and nervous before holding a presentation in class, this can lead to the person developing low self-efficacy for public speaking. Yet, it is important to note, that it is not the strength of the psychological response, such as stress, that leads to lower self-efficacy, but the persons' perception and interpretation of said psychological reaction. An individual with a low sense of self-efficacy about public speaking interprets the psychological responses as an indication of an inability to perform which lowers self-efficacy even further. On the contrary, an individual with a high sense of self-efficacy about public speaking would interpret the same signs as common and not related to their ability to perform the task. Therefore, it is the persons' perception of the psychological response that affects self-efficacy (Bandura, 1997).

Self-efficacy has a mobilization component meaning that the performance of individuals with the same skills may vary due to their utilization and combination of these skills (Wool & Bandura, 1989). Moreover, self-efficacy is a dynamic construct

that can change over time as individuals gain new information and experiences (Park & John, 2014). Furthermore, Bandura emphasized that self-efficacy does not represent a global trait (e.g. 'I am fashionable'), but that these self-efficacy beliefs are connected to specific tasks (e.g. 'I have confidence in my ability to use the color to achieve the desired look') (Bandura, 1988; Bandura & Wood, 1989; Wood & Bandura, 1989; Park & John, 2014). The current study examines the relationship between the consumers' perceived ease of use of color to create the desired look with purchase intentions.

2.6 Attractiveness

Attraction is defined as "a quality or feature that evokes interest, liking or desire" for something or someone (Hanks, Pearsall & Stevenson, 2010). Observable characteristics are one of the most common and powerful influences on attraction. Attractiveness and outward appearance affect numerous types of interpersonal evaluations (Baron & Branscombe, 2012). Therefore, more attractive individuals are evaluated as healthier, smarter, more reliable and are attributed with desirable interpersonal qualities like kindness and generosity (Lemay, Clark, & Greenberg, 2010). These positive evaluations stem from people holding the "what is beautiful is good" stereotype to be true. This stereotype is also known as the physical attractiveness stereotype and is a result of people holding positive stereotypes for more attractive people (Dion, Berscheid & Walster, 1972).

The research from social psychology on the construct of attractiveness was found to be relevant in the marketing context. In the same way that people make inferences about others based on their attractiveness, they also use the product's visual appeal to draw conclusions regarding the product's attributes (Bloch 1995; Creusen & Schoormans, 2005). Therefore, esthetic design and attractiveness have been studied in marketing literature and were found to have a significant influence on consumers'

intentions to purchase clothing (Eckman & Wagner, 1994). Likewise, the “what is beautiful is good” stereotype was found to be accurate, since customers` conclusions regarding the functional features and quality of a product were derived from the products` attractiveness (Dion et al. 1972; Hoegg, Alba & Dahl, 2010). This positive influence of attractiveness on product quality has been confirmed in many different contexts ranging from websites (Wang, Minor & Wei, 2011) to retail stores (Richardson, Jain & Dick, 1996). Regarding marketing practice, advertisements often use source attractiveness by featuring attractive models or celebrities to improve consumers` brand attitudes (Hoyer, & MacInnis, 2008). Moreover, ads featuring more attractive models were evaluated as more appealing, attention-grabbing and interesting and increased willingness to purchase the advertised product as compared to ads featuring less attractive models (Petroshius & Crocker, 1989) (Hoyer, & MacInnis, 2008).

Precisely, in marketing literature, attractiveness is mainly studied in the branding and product context. Namely, the constructs of brand attractiveness and product attractiveness are widely researched. Brand attractiveness occurs when customers evaluate a brand positively in terms of the brand enabling consumers to meet their self-definitional needs (So, King, Hudson, & Meng, 2017). Antecedents that have a positive influence on customer brand attractiveness include brand prestige, brand distinctiveness, and memorable brand experiences (So et al., 2017).

Customers consume brands that they evaluate as attractive since it brings them benefits like maintaining social prestige and differentiating themselves from others by consuming distinctive brands (So et al., 2017).

Meanwhile, product attractiveness refers to the esthetic or visual appeal of a product stemming from its design (Eckman & Wagner, 1994; Chang, Oboyle,

Anderson, & Suttikun, 2016). Companies aim to improve the attractiveness of their products as this construct positively influences purchase intentions (Schnurr, Brunner-Sperdin, & Stokburger-Sauer, 2016). Moreover, attractiveness aids companies by differentiating their product from the competition and achieving customer recognition (Bloch *et al.*, 2003). Consumers' perceptions are influenced by the visual aesthetics of a product. In turn, these perceptions affect the customer's behavioral response to a product in terms of approach or avoidance behavior (Crilly, Moultrie, & Clarkson, 2004; Bloch 1995). Precisely, when customers evaluate a product as attractive, they exhibit approach behavior that includes spending more time observing the product or increased willingness to purchase (Schnurr, et al., 2016). Thus, the product's visual appearance plays a significant role in the commercial success of a product and consumer behavior (Creusen & Schoormans, 2005).

The current study's construct is more closely related to product attractiveness than brand attractiveness as color is one of the main visual attributes in apparel (Eckman & Wagner, 1994). Likewise, color can elicit aesthetic responses in people (Hekkert & Leader, 2008). Therefore, the thesis examines the relationship between color attractiveness and customers' purchase intentions of fashion products.

2.7 Personality Traits

Gordon Allport, as one of the first psychologists to study personality, defined the term as 'the dynamic organization within the individual of those psychophysical systems that determine his unique adjustments to the environment' (Allport 1937, p. 48). Human personality allows us to comprehend why people behave in a particular way in different situations. Personality is comprised of thoughts, emotions, tendencies, qualities, personal dispositions or characteristic behaviors that distinguish people

from one another and determine their response to the environment (Hoyer, & MacInnis, 2008).

Trait theory is an approach to studying personality with a small number of key traits or factors used to describe individuals. According to trait theorists, traits are fundamental building blocks of personality (Hogan, Johnson & Briggs, 1997). Furthermore, traits are stable, enduring qualities that lead to characteristic responses. People's personality traits are inferred from their behavior and can be used to predict future behavior (Coon & Mitterer, 2014).

Allport was considered a trait psychologist and one of the first architects of the trait theory. He aimed to determine which range of traits make up human personality. This task led him to extract approximately 18,000 dictionary words that could describe personality (Allport & Odbert, 1936). Allport concluded that a rational strategy to lower the number of personality-describing words would be to organize them in overarching categories. Eventually, Raymond Cattell was able to reduce the number of personality-describing words from Allport's list by using factor analysis and develop the sixteen-personality-factor model (Cattell, 1943; Cattell, & Mead, 2008). Finally, personality psychologists developed the renowned five-factor model to describe personality (McCrae & John, 1992).

The Five Factor model was developed to study personality with the use of five basic personality dimensions, or factors (McCrae & John, 1992). These factors include extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. This model has grown to become the most popular personality model and has been applied in various contexts (John, Naumann & Soto, 2008). After a thorough study of existent literature, the current study focuses on two personality traits from the Five Factor model- extraversion and openness to experience.

Extraversion depicts individuals who are outgoing, sociable, carefree and often long for excitement. They are action-oriented individuals who are enthusiastic and energized by social interaction. On the contrary, introverts are quiet and shy individuals who prefer spending time alone. Introverted individuals are viewed as more reflective and they get anxious when in the company of other people. Moreover, they prefer less stimulating environments as compared to extraverts (Coon & Mitterer, 2014; McCrae & Sutin, 2007; Myers & DeWall, 2018).

Openness to experience describes curious and creative individuals who appreciate art, music, and beauty as well as adventures and new ideas. These individuals are imaginative and have a preference for novelty over routine. Also, individuals scoring high on openness to experience possess an intellectual curiosity that allows them to re-examine traditional values. Meanwhile, individuals who score low on openness to experience are considered as closed to experience. They are likely to be more close-minded and express conventional and traditional views and behavior. People with low openness to experience prefer familiar surroundings and routines over novelty. Their range of interests is narrower and they are not particularly artistic or creative. Contrary to individuals who score high on openness, individuals who are closed to experience do not have the same level of aesthetic engagement and therefore they fail to see the value in things like art and music (Coon & Mitterer, 2014; McCrae & Sutin, 2007; Myers, & DeWall, 2018).

The current study examines how these two personality traits that are relevant to its context—extraversion and openness to experience—moderate the relationship between color dimensions and purchase intentions. These two personality traits were chosen as moderating variables for several reasons. Firstly, the two traits, extraversion and openness to experience, tend to be positively correlated (Aluja, Garcia & Garcia,

2003). Moreover, they share the words and expressions which are used to describe color. For instance, an extraverted individual can be portrayed as vibrant, bold or lively and these same adjectives can be used to depict high-chroma colors. In the same way, an individual who is open to experience can be portrayed as deep or dense while an individual who is closed to experience can be portrayed as shallow or colorless. Thus, the same words that people use to depict the chroma dimension of color are also used to depict the two traits - extraversion and openness to experience (Pazda & Thorstenson, 2018). Lastly, these two personality traits were selected for the analysis since previous research has linked the two traits with color. A study in which participants made associations between different colors and the Big Five personality traits found a positive association between chroma, also known as the strength or vividness of the color and the two personality traits - extraversion and openness (Wu & Lin, 2016). Further, individuals who were surrounded by or dressed in high-chroma colors were rated to be more extraverted and open to experience (Pazda & Thorstenson, 2018). As for the above mentioned reasons, these two personality traits were selected out of the Big Five to assess their role in the relationship between color dimensions and purchase intentions.

2.8 Theoretical Framework

2.8.1 Gender Schema Theory

The current study focuses on female apparel consumers. The reason for this is supported by the gender schema theory and established literature on female consumer behavior. According to the gender schema theory, people in society obtain and express traits, attitudes, and actions consistent with their gender roles (Bem, 1981). Gender schemas are known as mental frameworks regarding gender roles and norms that aid individuals in organizing and interpreting social information. These schemas

influence social cognition in terms of having an impact on people's attention, encoding and retrieval of information. Gender schemas about the meaning of masculinity and femininity start developing in children from an early age through interaction and observation of their environment, people and culture.

In terms of shopping, it has been associated with the female role and therefore perceived as a feminine activity (Lunt & Livingstone, 1992). Researchers have shown that males and females tend to exhibit different fashion consumption behaviors allowing them to socialize into their gendered roles (Gupta & Gentry, 2015). Compared to males, females have a stronger interest in clothing, visit clothing shops more often, purchase apparel more frequently and spend more money on clothing items (Millan & Tiu Wright, 2018). Moreover, researchers have found that relative to males, females express a stronger preference for the self-expressive and hedonic meanings of apparel. Since womenswear is more ornamented and varied in an assortment of colors and styles (Baumeister & Sommer, 1997), female consumers are able to express themselves through clothing while also gaining hedonic experiences from clothing (Millan & Tiu Wright, 2018). For female consumers, shopping for clothing is a pleasure-seeking activity since they have greater hedonic shopping motivations when it comes to purchasing clothes (Chen-Yu & Seock, 2002). Therefore, due to the above-mentioned reasons, the current study focuses on female consumers of apparel.

2.8.2 Theory of Planned Behavior (TPB)

According to the theory of planned behavior, attitudes towards the behavior, subjective norms, and perceived behavioral control are determinants of behavioral intentions, which influence actual behavior (Ajzen, 1991). The five color dimensions investigated in this study namely, attitude towards color, normative color, color self-

efficacy, color attractiveness, and color significance are underpinned by the theory of planned behavior. Attitude refers to people's tendency to form favorable or unfavorable evaluations of a particular entity (Olson & Kendrick, 2008; Petty, Wheeler, & Tormala, 2003). Besides, an individual's attitude towards a particular color could be based on the significance and/or the attractiveness of the color. In the study, attitude towards color refers to the customer's favorable or unfavorable evaluation of a particular color. Subjective norms refer to people's perceptions of whether important referent individuals or groups will approve or disapprove of a particular behavior (Ajzen, 1991). In the context of color, normative refers to important people in the life of the consumer, such as peers, friends, and family who have an influence on the color choice of the consumer. Note of approval, affirmation, compliment, and other forms of validation of a buyer's color choice are some of the mechanisms through which normative color is positively transmitted by important people to the individual. Lastly, perceived behavioral control is "the perceived ease or difficulty of performing the behavior" (Ajzen 1991, p. 188). In the present study, self-efficacy is used as the perceived behavioral control construct to measure the perceived capability of performing a particular behavior. Color self-efficacy refers to the customer's perceived ease or difficulty of using the color to achieve their desired look. The influence on purchase intentions of these five TPB-based color dimensions are examined, as well as the moderating effects of personality.

2.8.3 Personality Theory

Various approaches are used in social sciences to study the human personality. One such approach, known as the trait theory, describes personality in terms of traits. Traits are human characteristics that are considered to be the fundamental building blocks of personality by trait theorists (Hogan, Johnson & Briggs, 1997). Tendencies of

behavior that are stable over time are known as dispositions. Traits are defined as broad dispositions that characterize a person's personality and can be used to predict future behavior (Allport 1937; Asendorpf 2009; Coon & Mitterer, 2014). Therefore, trait theorists would describe people in terms of their traits, such as approachable, sincere, grumpy or nervous, and use these traits to foresee their behavior.

Several models have been developed to understand the human personality. Arguably the most popular personality model, the Big Five Personality Model is a general taxonomy of personality traits that is derived from the natural language terms used by individuals to describe themselves and others (John, Naumann & Soto, 2008). To develop the Big Five Personality Model, researchers used factor analysis to explore common traits (John, Naumann & Soto, 2008), which resulted in what are dubbed the five basic dimensions of human personality, namely extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. Trait theorists have found that the Five Factor Personality Model can be applied to examine personalities across people with different cultures, as well as social and economic backgrounds (Carver & Scheier, 2004; John, Naumann & Soto, 2008). Moreover, the Big Five have shown to predict certain life outcomes. For instance, the Big Five have been linked to work and academic outcomes (Goldberg, Sweeney, Merenda & Hughes, 1998; Barrick & Mount, 1991; Mount, Barrick, & Stewart, 1998), social behaviors (Karney & Bradbury, 1995; Robins, Caspi, & Moffitt 2002; Watson, Hubbard & Wiese, 2000) and health behaviors (Kenford, Smith, Wetter, Jorenby, Fiore & Baker, 2002).

2.9 Conceptual Framework and Hypothesis Development

The following section presents the literature review on the eight variables being measured in the study. The literature review links the examined constructs with the

research on color leading up to the development of the hypothesis. Then, the conceptual model guiding this research is presented and discussed.

2.9.1 Purchase intentions

According to the theory of planned behavior, attitudes towards the behavior, subjective norms, and perceived behavioral control are determinants of behavioral intentions which are believed to be a close estimate of actual behavior (Ajzen, 1991). Behavioral intentions can often predict if we will act out our attitudes (Ajzen, 1987). The theory of planned behavior has garnered support in the consumer behavior domain. Purchase intentions refer to a consumers' willingness to make a purchase and have been used to predict future purchase behaviors (Jamieson & Bass, 1989). Numerous studies have investigated purchase intentions and argued that they are good predictors of actual behavior (Cannière, Pelsmacker, & Geuens, 2009). Researchers have found that consumer attitudes have an effect on purchase intentions in several different industries (Cheah, Phau, & Liang, 2015; Das, 2014). Likewise, interpersonal influence by peers and norms has shown to have a positive effect on customer's purchase intentions (Cheah et al., 2015; Cannière, Pelsmacker, & Geuens, 2009).

With regard to color, there is a gap in the literature that applies the theory of planned behavior to color research or connects color to customers' behavioral intentions. The limited research investigating color and purchase intentions mostly focuses on atmospherics (Bellizzi et al., 1983; Bellizzi and Hite, 1992; Crowley, 1993). The current study is unique as it introduces novel color dimensions and evaluates their impact on purchase intentions of Croatian female customers of apparel. The five dimensions of color are discussed in the following sections.

2.9.2 Color significance/meaning

Similarly to brand meaning, color associations and meanings vary across people, nations, and cultures. For years researchers have been examining color meanings and preferences (D'Andrade, & Egan, 1974; Bellizzi, Crowley, & Hasty, 1983; Jacobs, Keown, Worthley, & Ghymn, 1991; Madden, Hewett & Roth, 2000). Colors have shown to have both universal and unique meanings across countries and cultures. For instance, a study with participants from China, Japan, South Korea, and the United States showed a universal association of the color yellow with happiness and purity, of the color blue with high quality, of the color red with love and adventure and of the color black with expensive and powerful. On the other hand, unique meanings across cultures emerged for purple, grey, brown, green. In three Asian countries, China, Japan, and Korea purple was associated with being expensive while grey with being inexpensive. Meanwhile, in the United States, purple was associated with being inexpensive and grey with being expensive and of high quality. Furthermore, brown was identified as good tasting in China, while in Japan, Korea, and the US brown was identified as inexpensive and yellow was identified as good tasting (Jacobs et al., 1991). These results were corroborated by a study comparing participants from Austria, Brazil, Canada, Colombia, Hong Kong, China, Taiwan, and the United States showed agreement across all nations regarding the association of black and brown with "sad" and "stale". However, it was also viewed as "formal" in Brazil, Colombia, China, and Taiwan and masculine in Austria, Hong Kong, the US. Moreover, red was associated with "active", "exciting" and "vibrant" across cultures while in China and Taiwan it was also associated with "pleasant". Blue, green and white were associated with "peaceful", "gentle" and "calming" across all countries (Madden et al., 2000). Therefore, color significance may be pancultural, regional or unique across countries,

and individuals in these cultures might be influenced by the significance of a particular color in their purchase intentions.

The fact that colors are charged with meaning can be seen from real-life instances of people wearing colors to send specific sartorial statements. As seen in figure 8, Congresswomen from the US democratic party were dressed in white during the State of the Union address to send a message. White's association with purity and virtue along with its historical significance with the women's suffrage movement has led to the color being labeled as "Suffragette white" (see figure 9). Therefore by wearing this color, the democrat women honored the legacy of women's suffrage and showed their support for gender equality as well as sent a message about the democratic party's focus on women's issues (Mills, 2019; Shoot, 2019). Accordingly, the paper hypothesizes as follows:

***H1:** There is a significant positive relationship between color significance and purchase intentions.*



Figure 8. Congresswomen (Nittle, 2019).



Figure 9. Women's suffrage (Hayes, 2012).

2.9.3 Attitude towards color

Researchers have examined towards which colors people hold the most favorable attitudes and how consumers react to different colors. The color blue has shown to have the most favorable attitudes in people across genders and cultures (Jacobs et al., 1991; Madden et al., 2000; Funk & Ndubisi, 2006). Moreover, warm colors produce higher arousal and attention when compared to cool colors (Birren, 1978; Schaie & Heiss, 1964). Meanwhile, cool colors generate more relaxation and pleasure when compared to warm colors (Guilford & Smith, 1959; Jacobs & Seuss, 1975; Gorn, Chattopadhyay, Sengupta & Tripathi, 2004).

Consumer attitudes have been studied in color marketing literature mostly in the context of store atmospherics. Past researchers have found that cool-colored store environments produce more favorable reactions and increase purchase intentions over warm-colored store environments (Bellizzi et al., 1983; Bellizzi & Hite, 1992; Crowley, 1993). The results of Babin, Hardesty and Suter's (2003) study provide additional support for the preference of the cool-colored over warm-colored store environments. Interestingly, in addition, the participants reported relatively higher purchase intentions and price fairness in the blue store as opposed to the orange store (Babin et al., 2003).

Earlier, Gorn, Chattopadhyay, Yi, and Dahl (1997) examined the effects of color in ads on consumers' feelings and attitudes. They found that higher value colors, meaning lighter colors, resulted in greater liking for an ad. The positive evaluation of the ad was mediated by the feelings of relaxation that were produced by the higher value color, according to the authors. On the other hand, the researchers showed that higher levels of saturation resulted in greater feelings of excitement. These feelings increased ad likeability (Gorn, Chattopadhyay, Yi & Dahl, 1997). Thus, an

individual's attitude towards a color can affect their purchase behavior, as stated in the following hypothesis:

H2: *There is a significant positive relationship between attitude towards color and purchase intentions.*

2.9.4 Normative color

The normative influences that play a role in consumer choice have been examined in the marketing literature. In the study by Simonson (1989), participants tended to conform more when they expected that they will have to justify their choice to others such as superiors, spouses or friends, thus they choose options that they expected would be judged more favorably and less likely to be criticized. Because individuals generally like affirmation, compliments, and favorable appraisal, they are more likely to choose a color that will generate a positive review or evaluation by people who are important or matter to them. This notion is supported by the research done by Funk and Ndubisi (2006) in which normative color had a significant relationship with consumers' automobile color choice. Purchase of high involvement products, such as an automobile and apparel is more likely to involve more justification to important others, than a low involvement purchase such as a toothpaste. For that reason, when choosing an automobile or apparel color, normative influences on the color choice will be significant. Likewise, high involvement products are accompanied by social risk and for that reason may have higher levels of social conformity when it comes to color choice (Grossman & Wisenblit, 1999).

A counter-argument states that peoples' reference group may have an influence on lower involvement purchases as well, after all, it is common to see people wearing the same style of clothing as their friends (Baron & Branscombe, 2012; Chan, Berger and Boven, 2012). Dress conformity has shown to have a significant effect among

different consumer groups (Manrai, Lascu, Manrai & Babb, 2001; Lumpkin, 1985). However, apart from the need to conform, people have the desire for uniqueness. This desire becomes especially prevalent when people's uniqueness is threatened (Imhoff & Erb, 2009). Research by Chan, Berger, and Boven (2012) found that both of these conflicting motives play a part in consumers' choice. For instance, people conform when choosing a brand of clothing while expressing their uniqueness through their choice of color. This effect also may reverse, if wearing a particular color is more significant in communicating group identity, so people will conform to the color choice and use other attributes to satisfy their desire for uniqueness (Chan et al., 2012). The potential influence of normative color on the behavioral intentions of consumers is captured in the next hypothesis.

H3: There is a significant positive relationship between normative color and purchase intentions.

2.9.5 Color self-efficacy

Self-efficacy has shown to affect consumption. Self-efficacy has been applied in the context of the online marketplace where adolescents' online shopping involvement and usage were positively associated with their online shopping self-efficacy (Hill & Beatty, 2011). As an individual improves in shopping and has greater self-efficacy with regards to shopping, the individual plans to shop more while also gaining more value from the shopping activity (Hill & Beatty, 2011). When choosing apparel, customers choose from various clothing items on their own without any assistance. Therefore, the assessment of their ability to use color to achieve the desired look could largely encourage or discourage them to purchase apparel in a certain color (Lovric & Ndubisi, 2020). Self-efficacy has also shown to have a crucial role regarding customers' adoption of new processes and technologies by being an

antecedent of perceived ease-of-use and object use-ability (Venkatesh & Davis, 1996). Therefore, color self-efficacy could have a key role in predicting customers' purchase intentions and usage of color in apparel. Thus, the paper hypothesizes as follows:

H4: There is a significant positive relationship between color self-efficacy and purchase intentions.

2.9.6 Color attractiveness

The link between color and attractiveness can be witnessed from ancient to modern times. This notion is particularly true for the color red. Ancient Egyptian tombs contained cosmetics and lipsticks in the color red which were used by women to enhance their physical attractiveness. In turn, social psychologists, Elliot and Niesta, examined the relationship between the color red and attractiveness (2008). In the studies, male and female participants were showed images of strangers in front of either a red background or a white, gray or green background. Furthermore, they were shown pictures of strangers dressed in either a red shirt or a blue shirt. After viewing the images, the participants evaluated the attractiveness of the strangers. The results across every study consistently showed that color red significantly increases men's attractiveness ratings of the female strangers. When male participants were presented with an image of a female stranger in front of a red background, she was rated as more attractive than the same stranger in front of a white background (Elliot & Niesta, 2008). Therefore, these social psychologists show that the color red is indeed seen as attractive.

Attractiveness in the marketing context can be seen from the fact that many customers like to purchase aesthetically pleasing products (Creusen & Schoormans, 2005). Meanwhile, color is one of the crucial product design elements

that contributes to a products' appearance. When it comes to product design, research has shown that consumers are affected behaviorally and psychologically by the aesthetic appeal of a product (Bloch, 1995). When faced with a choice between products equal in price and functions, consumers choose the one they find to be more attractive (Kotler & Rath, 1984). Considering colors when creating an aesthetic experience through attractive packages is crucial. This notion is supported by Stoll, Baecke, and Kenning (2008) who found that attractive packages gain more attention than unattractive packages. According to the authors, consumers observe attractive packages more intensively and carefully (Stoll et al., 2008).

Attractiveness has shown to be an important element in consumer choice. Consumers' perception of color attractiveness has shown to have an effect on their product choice (Funk & Ndubisi, 2006). However, color attractiveness can vary from product category to product category. The colors that consumers deem attractive on cars may not be the same as the colors consumers deem attractive on clothing (Grossman & Wisenblit, 1999). While blue, red and black were found to be preferred colors for clothing (Pantone, 1992), gray, red, white and black were found to be preferred colors for automobiles (Mundell, 1993).

Color can also be used to minimize the attractiveness of a particular product or even make it unattractive. A market research company, GfK Bluemoon, found that opaque couché to be the world's most repulsive color (see figure 10). The color was consequently used by the Australian government on cigarette packaging to discourage smoking (see figure 11) (McNeil Jr., 2016). As this initiative has shown to be successful, government officials in the United Kingdom, France and Ireland introduced the measure and imitated the packaging with the unattractive color due to its lack of appeal (Forster, 2016; Pollak, 2018). Just as a repulsive and unattractive

color can be used to reduce the attraction to a product and influence consumer behavior negatively, attractive colors can have a positive effect on purchase intentions. The next hypothesis is as follows:

H5: *There is a significant positive relationship between color attractiveness and purchase intentions.*



Figure 10. Opaque couché (McNeil Jr., 2016).



Figure 11. Cigarettes (McNeil Jr., 2016).

2.9.7 Moderating effects of personality

Due to the idiosyncratic nature of individual preferences, the nature and strength of the relationship between the five dimensions of color and buyer behavioral intentions may be contingent on their personal traits and psychological dispositions. Based on the contingency approach (Ginsberg & Venkataraman, 1985), which argues in favor of the recognition and integration of (internal and external) contingency factors in research models to provide a richer perspective and explanation of the focal phenomenon, this research integrates buyer characteristics and evaluates how these factors affect the relationship of color dimensions and buyer behavioral intentions.

The contingent factors discussed in the next section are based on buyer traits and psychology.

2.9.8 Extraversion

Individuals scoring high on extraversion are sociable, energetic, cheerful, bold and outgoing. They tend to prefer intense and frequent interpersonal interactions. Meanwhile, introverts, that is individuals scoring low on extraversion, are shy and reserved. They tend to favor spending time with a few close friends over big groups of people (McCrae & Sutin, 2007; Coon & Mitterer, 2014). According to Eysenck (1967), while extraverts have a relatively low baseline level of cortical arousal, introverted personalities possess a relatively high baseline of cortical arousal. Due to their higher tolerance, extraverts seek out high-intensity sensory stimuli, to possibly obtain optimal levels of arousal. For instance, extraverts exhibit a greater tolerance for lights (Ludvigh & Happ, 1974) and tend to pursue noisy surroundings (Campbell & Hawley, 1982; Geen, 1984). Regarding color, extraverted individuals stated a liking for modern paintings that have lively colors, whereas introverted individuals favored paintings with more subdued colors (Eysenck, 1941). Furthermore, the extraversion trait was found to have a positive association with the preference of high-chroma colors. Relative to introverted individuals, extraverts showed a stronger preference for more intense colors (Pazda & Thorstenson, 2018).

2.9.9 Openness to experience

Individuals scoring high on openness to experience are open to new ideas, have a need for variety and seek out new experiences. Low scores indicate individuals are traditional, conservative, closeminded and favor familiarity over novelty (McCrae & Sutin, 2007; Coon & Mitterer, 2014). Extraversion and openness tend to be positively correlated (Aluja, Garcia & Garcia, 2003). These two personality traits share the

words and expressions which are used to describe color. Pazda and Thorstenson (2019) show that perceiving literal colorfulness, with the use of high- chroma colors, influences perceptions of figurative colorfulness, namely extroversion and openness to experience. In the study, individuals who were surrounded by or wearing high- chroma colors were rated to be more extraverted and open to experience than when surrounded by or wearing low- chroma colors (Pazda & Thorstenson, 2019).

The current study proposes that extraversion and openness to experience will have a significant impact on the relationship between the color dimensions and purchase intentions. Participants which score high on the extraversion and openness to experience scale, will have stronger purchase intentions for apparel in their favorite color. Therefore, the next hypotheses state as follows:

H6a: *Extraversion will significantly moderate the relationship between color significance and purchase intentions.*

H6b: *Extraversion will significantly moderate the relationship between attitude towards color and purchase intentions.*

H6c: *Extraversion will significantly moderate the relationship between normative color and purchase intentions.*

H6d: *Extraversion will significantly moderate the relationship between color self- efficacy and purchase intentions.*

H6e: *Extraversion will significantly moderate the relationship between color attractiveness and purchase intentions.*

H7a: *Openness to experience will significantly moderate the relationship between color significance and purchase intentions.*

***H7b:** Openness to experience will significantly moderate the relationship between attitude towards color and purchase intentions.*

***H7c:** Openness to experience will significantly moderate the relationship between normative color and purchase intentions.*

***H7d:** Openness to experience will significantly moderate the relationship between color self-efficacy and purchase intentions.*

***H7e:** Openness to experience will significantly moderate the relationship between color attractiveness and purchase intentions.*

2.9.10 Conceptual framework

In sum, based on the above mentioned theoretical framework and hypotheses development, the following conceptual framework is modeled. The current study examines the effect of the five independent variables, color significance, attitudes toward color, normative color, color self-efficacy, and color attractiveness on purchase intentions, as well as the moderating effects of personality traits: extraversion and openness to experience in the relationship. The schema of the research model is presented in Figure 12.

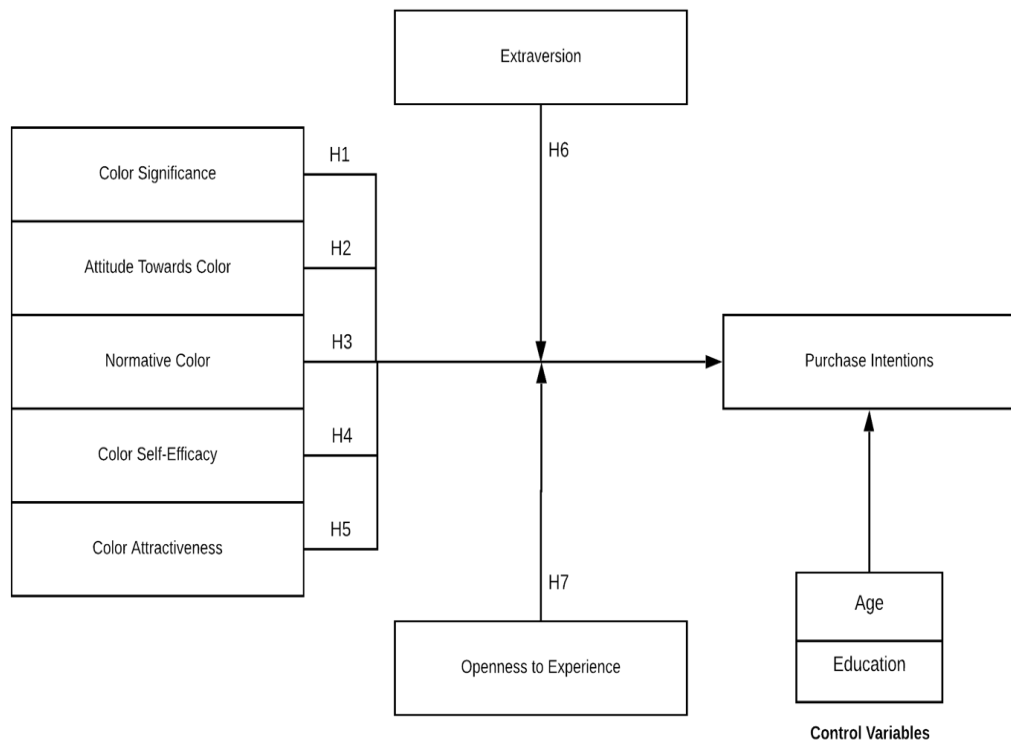


Figure 12. Conceptual Framework

2.10 Conclusion

This chapter provides the literature review of the examined constructs in the research. Specifically, the chapter opens up with supporting literature on brand significance/meaning, attitudes, subjective norms, self-efficacy, attractiveness and personality traits. Then, the chapter introduces the theoretical framework that is supporting the research and conceptual framework. Further, the chapter presents the research that combines the examined constructs and color leading to hypothesis development. Lastly, the chapter presents the conceptual framework guiding the research.

CHAPTER 3: METHODOLOGY

3.1 Introduction

The second chapter presents the literature review of the constructs examined in the study and the arguments preceding and supporting the research hypotheses. The current chapter on methodology presents the research method used to investigate the hypothesized relationships. The chapter is divided in five sections including the research type, the measurement items used to develop the survey instrument and the sources, survey context and location, the sampling procedure, and lastly the data analysis techniques and conclusion.

3.2 Research Type

This thesis examines the role of color dimensions on apparel purchase intentions of female consumers and the moderating effect of consumer personality. The five color dimensions are studied as predictor or independent variables while purchase intention is the dependent or outcome variable. The independent variables include color significance/meaning, attitudes towards color, normative color, color self-efficacy, and color attractiveness. Moreover, the moderating effects of two personality traits (namely extraversion and openness to experience) in the relationship are examined as well.

Since this research is guided by a conceptual framework that investigates the causal relationship between the independent and dependent variables, the implemented research approach is a causal research design based on quantitative data. Quantitative research is characterized by structured and statistical data that aims to provide an accurate measurement. For instance, in marketing research, quantitative methodologies could measure consumer behavior on a large sample size and obtain results that can be generalized to a larger population of people. In the realm of

quantitative research, the survey is the dominant methodology used by researchers (Cooper & Schindler, 2014) and is likewise adopted in the current study. A survey-based study may be viewed as exploratory or explanatory. The main differences between the two include - the objective of the research and the degree of structure. Since exploratory studies are the exploration or initial research of an idea or phenomenon, their objective is to lay the preliminary groundwork and discover future research areas, questions, tasks and/or hypotheses. Therefore, this type of research is marked by less structure (Cooper & Schindler, 2014). Exploratory research is followed by explanatory research that provides additional information regarding the newly explored phenomenon or theory. Explanatory research is more structured since it deals with precise procedures and investigates specific research questions and hypotheses (Cooper & Schindler, 2014). The current research is an explanatory study since the examined constructs and hypotheses are grounded in existing research and theory. Thus, the thesis aims to fill the gaps in this theory and contribute to the current literature.

3.3 Measurement Items and Sources

The measurement items consist of validated items that have been adapted from extant psychology and marketing literature. The adaptation of the pre-existing items to fit the current research objectives included slight rewording. For instance, the first pre-existing item for attractiveness by Ohanian (1990) was expressed as “this person is attractive” and reformulated to “this color is attractive”. Table 1 presents the hypotheses of the study and the variables being measured as well as the items measuring these variables and their literary sources.

Table 1. Measurement Items and Sources

Variable	Items	Source	Hypothesis
Color Meaning/Significance	<ol style="list-style-type: none"> 1. For me personally, this color is meaningful 2. For me personally, this color is a relevant part of my life 3. This color is significant to me 4. For me personally, this color is important 5. This color has a dominant presence in my life 6. I am interested in this color 7. This color means a lot to me 	(Funk & Ndubisi 2006; Miller & O’Cass, 2006)	H1: There is a significant positive relationship between color significance and purchase intentions.
Attitude towards color	<ol style="list-style-type: none"> 1. For me, choosing apparel in this color is: Extremely bad- Extremely good 2. For me, choosing apparel in this color is: Extremely undesirable- Extremely desirable 3. For me, choosing apparel in this color is: Extremely unpleasant- Extremely pleasant 4. For me, choosing apparel in this color is: Extremely foolish- Extremely wise 	(Han, Hsu & Sheu, 2010)	H2: There is a significant positive relationship between attitude towards color and purchase intentions.

Variable	Items	Source	Hypothesis
	<p>5. For me, choosing apparel in this color is: Extremely unfavorable- Extremely favorable</p> <p>6. For me, choosing apparel in this color is: Extremely Unenjoyable- Extremely enjoyable</p> <p>7. For me, choosing apparel in this color is: Extremely negative- Extremely positive</p>		
Normative color	<p>1. Most others who are important to me think I should purchase apparel in this color.</p> <p>2. Most people whose opinions I care about think I should purchase apparel in this color.</p>	(Hsu, Chang & Yansritakul, 2017)	H3: There is a significant positive relationship between normative color and purchase intentions.
Color Self-efficacy	<p>1. I know how to use the color to achieve the desired look</p> <p>2. I have confidence in my ability to use the color to achieve the desired look</p>	(Thakur, 2018)	H4: There is a significant positive relationship between color self-efficacy and purchase intentions.

Variable	Items	Source	Hypothesis
	3. I feel comfortable with my ability to use the color to achieve the desired look		
Color attractiveness	1. This color is attractive. 2. This color is classy. 3. This color is beautiful. 4. This color is elegant. 5. This color is appealing.	(Ohanian, 1990)	H5: There is a significant positive relationship between color attractiveness and purchase intentions.
Extraversion	1. I feel comfortable around people 2. I make friends easily 3. I am skilled in handling social situations 4. I am the life of the party 5. I know how to captivate people 6. I have little to say R 7. I keep in the background R	(International Personality Item Pool, 2007)	H6: Extraversion will significantly moderate the relationship between the color dimensions and purchase intentions.

Variable	Items	Source	Hypothesis
	8. I would describe my experiences as somewhat dull R 9. I don't like to draw attention to myself R 10. I don't talk a lot R		
Openness to experience	1. I believe in the importance of art 2. I have a vivid imagination 3. I carry the conversation to a higher level 4. I enjoy hearing new ideas 5. I tend to vote for the liberal political candidates 6. I am not interested in abstract ideas R 7. I do not like art R 8. I avoid philosophical discussions R 9. I do not enjoy going to the museum R 10. I tend to vote for the conservative political candidates R	(International Personality Item Pool, 2007)	H7: Openness to experience will significantly moderate the relationship between the color dimensions and purchase intentions.

Variable	Items	Source	Hypothesis
Purchase intentions	1. I am willing to purchase apparel in this color 2. I plan to purchase apparel in this color 3. I will make an effort to purchase apparel in this color	(Source: Han, Hsu & Sheu, 2010)	Dependent Variable

To ensure the items have acceptable internal consistency, validated items adapted from extant literature were used in this study. The survey instrument consists of ten sections that are preceded by a consent form. The consent form introduces the project to the subjects, and sums-up the research being conducted and the researchers' details, as well as seeks their consent to participate in the study. The questionnaire opens up with the first section that contains two filter questions regarding the participants' favorite color. The first question being "Do you have a favorite color?" and the second being "What is your favorite color?". Participants who claimed to not have a favorite color were not included in the study. Moreover, to ensure that the survey in electronic format did not reach minors under the age of 18, another filter question "Are you 18 and above?" was added to the online survey.

Subsequently, the questionnaire measured the eight constructs - color significance/meaning, attitudes toward color, normative color, color self-efficacy, color attractiveness, purchase intentions, extraversion, and openness to experience - using a 7-point scale ranging from strongly disagree (1) to strongly agree (7). To measure the subject's attitudes toward color, the second section contained seven items that were adapted from Han, Hsu, and Sheu (2010). The third section includes five measures of color attractiveness that were adapted from Ohanian (1990). Normative color was measured using two items adapted from Hsu, Chang, and Yansritakul (2017) and Funk and Ndubisi (2006). Color significance/meaning contains seven items adapted from Funk and Ndubisi, (2006), and Miller and O'Cass (2006). In section six, the three items measuring color self-efficacy adapted from Thakur (2018) are presented. The participants' purchase intentions were measured using three items adapted from Han, Hsu & Sheu (2010). In sections eight and nine, ten items for extraversion and ten items for openness to experience obtained from the International

Personality Item Pool (2007) are presented respectively. Lastly, the questionnaire ends with section eleven that contains four demographic items including gender, age, highest educational qualification, and monthly income. In total, the questionnaire consists of 53 items carefully grouped to enhance clarity and flow for the respondents (see Appendix A).

3.4 Research Context and Location

A self-administered and online survey forms were developed and distributed to the subjects. A self-administered survey is a survey intended to be completed by the participant with no intervention on the part of the researcher who is conducting the study and collecting the data (Cooper & Schindler, 2014). The questionnaire was distributed in an electronic and hard copy format. The hard copy surveys were distributed directly to subjects using the mall intercept method in Arena Centar, Zagreb. Meanwhile, the online survey invitations were sent to emails of female consumers in Zagreb that were contained in the list provided by the alumni network of a University in Zagreb. The questionnaire was turned into an online format using the Google Forms survey administration platform.

The research context is female apparel consumers in Croatia. The study was conducted in Zagreb, Croatia. According to the population estimate conducted in 2017, Zagreb is the most populous city in Croatia with a total population of 802.762. Zagreb is also the city with the largest ratio of females (53.2%) to males (46.8%) in Croatia (Croatian Bureau of Statistics, 2018). The study focuses on female consumers due to theoretical as well as industry findings. The focus is consistent with the gender schema theory, which states that people in society obtain and express traits, attitudes, and behaviors in line with their gender roles (Bem, 1981). Meanwhile, shopping has been associated with the female role and considered a feminine activity (Lunt &

Livingstone, 1992). Thus, researchers have found that female consumers express a stronger interest in clothing, make more frequent clothing shop visits and purchases, as well as spend more money on clothing items (Millan & Tiu Wright, 2018). Additionally, womenswear is more varied in the assortment of colors and styles (Baumeister & Sommer, 1997), allowing female consumers to express themselves through their clothing choices (Millan & Tiu Wright, 2018). This fact is also relevant since the study is being conducted in Croatia, where designers readily experiment with color in women's apparel design (Zečić, 2019; Gloria.hr, 2019). Moreover, findings from the industry show that female's clothing expenditure was greater than males (Brown, Haas, Marchessou, & Villepelet, 2018) and that the women's and girls' apparel make up the largest segment in the international apparel market (Statista, 2019). Thus, the current research examined female consumers.

3.5 Sampling

Data were gathered using the systematic random sampling procedure during the mall intercept and email address selection for the online survey. This type of sampling method is known as a probability sampling procedure where participants in the study are selected based on a fixed, periodic interval with a random starting point in the range of 1 to k. Meaning that every kth subject in the population is sampled and k is considered the skip interval (Cooper & Schindler, 2014). The subjects were invited to participate through an electronic online survey or a hard copy survey. In both, the online and physical distribution of the survey forms, the survey commenced with the first listed or approached candidate and thereafter every 3rd candidate, in accordance with the systematic random procedure. Participation by the respondents was purely non-mandatory and participants were fully informed about the aim of the study, and their freedom to withdraw from the study at any stage. Likewise, the purpose of the

research was explained to the participants who were also assured of confidentiality of their individual responses.

The hard copy surveys were distributed directly to subjects using the mall intercept method in Arena Centar, Zagreb. The mall intercept technique includes approaching mall visitors, screening whether they fit the research inclusion criteria and administering the survey. The inclusion criteria of the current research included only females, older than 16 and living in Croatia. The Arena Centar mall was picked since it is a popular and modern shopping center in Zagreb. With over 200 shops, it is the largest shopping mall in Zagreb (Jutarnji.hr, 2020). The mall's annual number of visitors in 2019 amounted to 10 million (TimeOut, 2020). The mall opens at 10 AM on the weekdays and at 9 AM on the weekends. Since weekends are significantly busier in terms of the number of mall visitors, they were picked as appropriate days to approach the potential subjects. After selecting a random starting point, every 3rd candidate was approached to participate in the study.

Meanwhile, the online survey invitations were sent to emails of female consumers in Zagreb contained in the list provided by the alumni network of a university in Zagreb. The alumni network database consisted of some 2000 members with around 50% of the database being females. The Institute performed a preselection of only female alumni members whose email addresses were forwarded for the purpose of this research. Then, an email invitation was sent to female subjects starting from the first listed email and subsequently to every 3rd email address. This database is representative of the population of females in Croatia due to a large number of members and a variety in sociodemographic characteristics. The combination of the mall intercept technique and email survey ensures sample representativeness.

The resulting sample size, obtained through the combined two sampling methods was 385, which is adequate for the nature of the research and the multivariate analysis applied in the study. Out of the, 386 responses received, 28 were voided, 13 of which was because the participants claimed they do not have a favorite color and another 15 because of incomplete data. Therefore, a total of 358 usable responses were analyzed. According to researchers, this sample size is adequate to be used for multiple regression analysis since it meets the criteria of a minimum of 5 observations per independent variable as well as the preferred ratio of 20 observations per independent variable (Hair, Black, Babin, & Anderson, 2010).

3.6 Data Analysis Methods

The data was exported from Google Forms to the Statistical Package for Social Science (SPSS) and subsequently revised and coded before conducting further analysis. Before proceeding with the data analysis, an independent T-test was run to see if there is any significant difference between the online and hardcopy survey responses. As there was no significant difference between the constructs for online and hardcopy surveys, the two were combined into one dataset. Then, the data analysis consists of descriptive data analysis, reliability analysis, and regression analysis. To analyze the profile of the respondents, the frequencies of the demographic variables were calculated. Moreover, measurements of central tendency were calculated for each of the constructs used in the study. Then, to assess the variables for reliability, the Cronbach's α (coefficient α) measure of internal consistency was used. Hierarchical multiple regression technique was used to analyze the direct effect of color dimensions on purchase intention as well as the moderating effect of personality traits (extraversion and openness to experience) on the relationship between the five color dimensions and purchase intentions.

3.7 Conclusion

Chapter three gave insight concerning the research type that this thesis falls into. Subsequently, the chapter presented the measurement scales of the research variables being examined in the study. Further, the chapter moved onto elaborating on the type of data collection instruments employed in the study. Then, the sampling section offered information regarding the reasonings behind the research context as well as the obtained sample size. Finally, the chapter gave a brief reference to the implemented data analysis which is further elaborated and focused on in the following chapter.

CHAPTER 4: DATA ANALYSIS AND FINDINGS

4.1 Introduction

Chapter four, data analysis and findings, provides the statistical analysis of the collected data along with the discussion of the obtained results. The chapter is divided into three main parts including descriptive data analysis, reliability analysis, and regression analysis. The descriptive data analysis presents the frequencies of the sample's demographic variables and the normality. The reliability data analysis provides the results of the Cronbach's α (coefficient α) measure of internal consistency. Then, the regression analysis using the hierarchical multiple regression technique allows for hypothesis testing of the direct and moderating effects. Lastly, the chapter concludes with a discussion of the results.

4.2 Descriptive Data Analysis

The current section provides the results on the sample characteristics and the normality test. A total of 386 responses were received. However, 28 were voided, 13 of which was because the participants claim they do not have a favorite color and 15 because of incomplete data. Therefore, a total of 358 usable responses are analyzed in the current chapter.

4.2.1 Profile of the respondents

The current section presents the demographic characteristics of the study's sample. The questionnaire included four demographic items including gender, age, highest educational qualification, and monthly income. Since the study focused on females, the gender item on the questionnaire was included to ensure that all subjects are female. Considering that the sample consisted of all female subjects, the following graphs provide insights about the remaining demographic items.

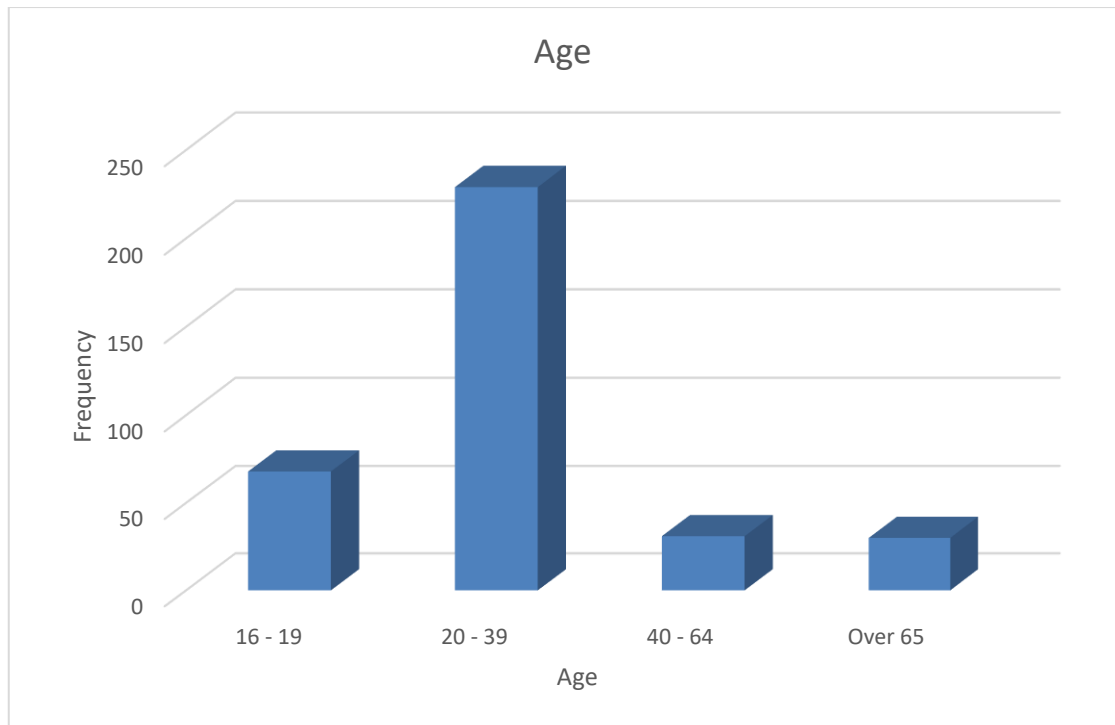


Figure 13: Age distribution graph

The item measuring the age of participants was modeled after Erikson’s eight stages of human development and included four age groups ranging from 16-19, 20-39, then 40-64 and lastly 65 and over (Erikson, 1950, 1993). According to Erikson, people aged 12-18 are in the period of their life known as adolescence while people aged 19-40 are known as young adults. Meanwhile, people aged 40-65 and 65 and over are in middle and older adulthood respectively (Erikson, 1950, 1993).

As seen from the age distribution graph (see figure 13), the majority of the women (64%) were between the ages of 20 and 39. Secondly, 19 percent of the respondents were aged 16 to 19. Then the group of respondents aged 40 to 64 made up 8.7 percent of the sample. Lastly, 8.4 percent of the respondents were aged 65 and over.

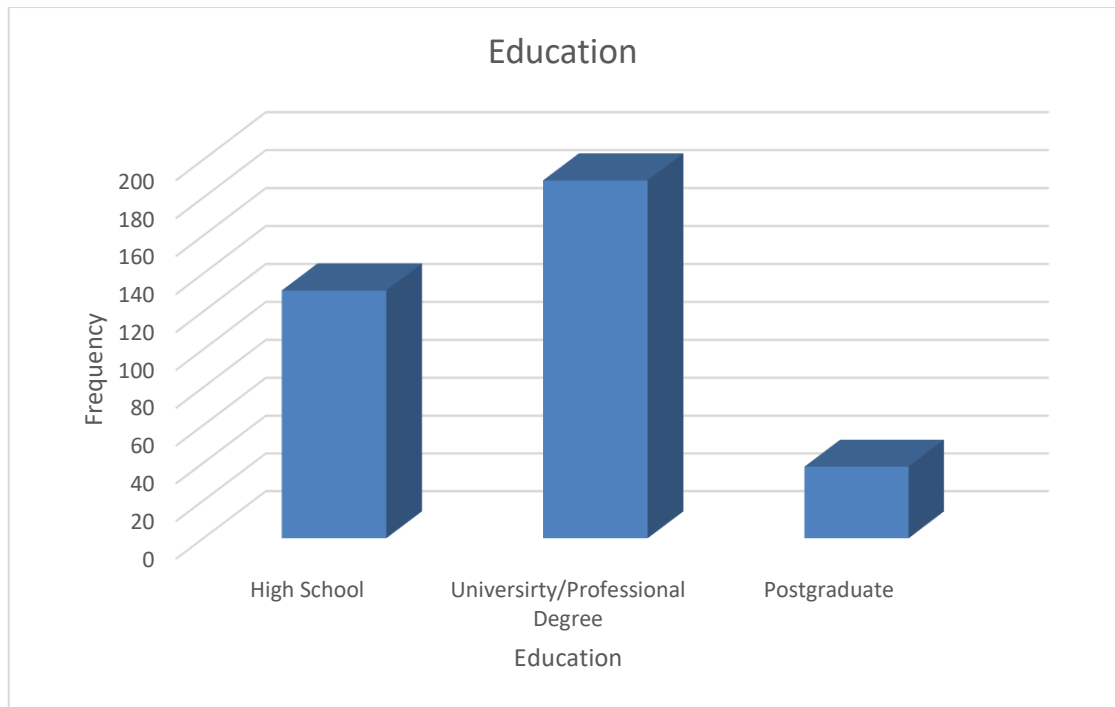


Figure 14: Education distribution graph

In the study, the educational level item included three levels, namely high school (since high school education is mandatory in Croatia), university/professional degree, and postgraduate degree. As seen from figure 14, depicting the education levels of the sample, majority of the respondents (52.8%) have a university or professional degree. Then, 36.6 percent of the respondents have a high school diploma. Lastly, 10.3 percent of the respondents are holders of a postgraduate degree.



Figure 15: Monthly income distribution graph

The item in the questionnaire examining income distribution was distributed over five groups including below 2,500 kn, then 2,501 kn to 5,000 kn, followed by 5,001 kn to 10,000 kn, and 10,001 kn to 20,000 kn, and lastly more than 20,000 kn. The monthly income distribution shows that the majority of the respondents (60 percent) are earning a monthly income between 2,501 and 5,000 kuna or less with the group earning below 2,500 kuna making up 30.7 percent of the sample and the group earning between 2,501 and 5,000 kuna comprising of 30.5 percent of respondents. Then, 26 percent of the participants are earning between 5,000 and 20,000 Kuna, while 3 percent are earning over 20,000 Kuna. Considering the ages of respondents, the monthly income is in accordance with the income distribution in Croatia (Wiesner, 2018).

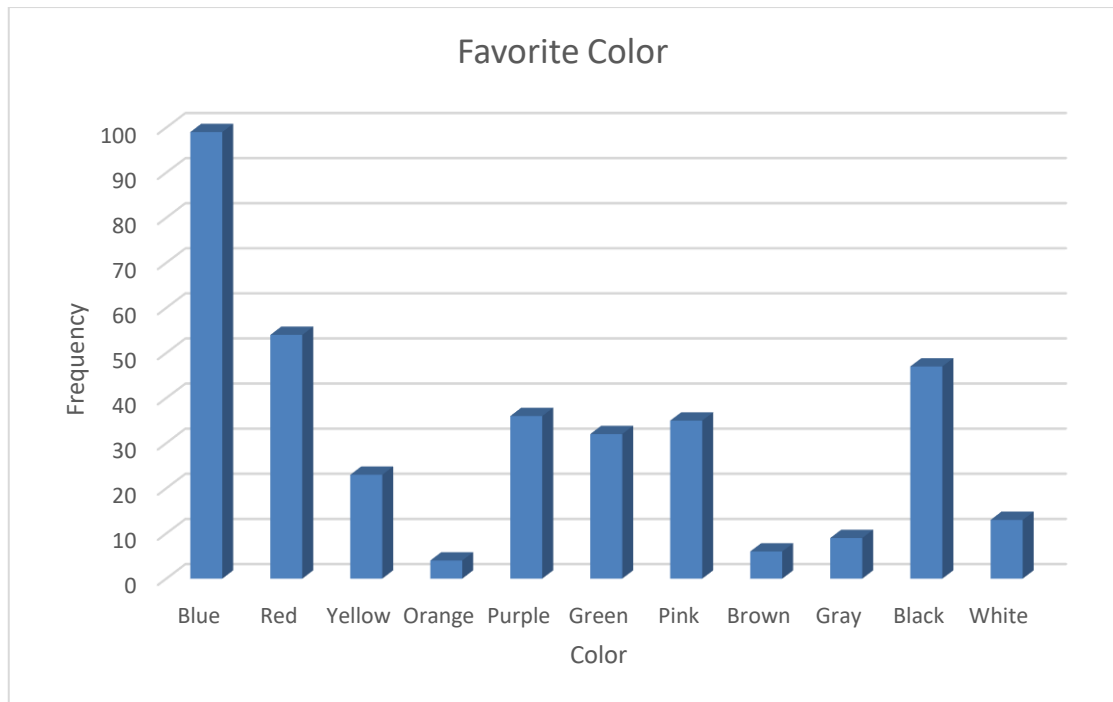


Figure 16: Favorite color distribution graph

The participants in the study also stated their favorite color. The most favored color by the participants is blue (27.7 percent), followed by red (15.1 percent), then black (13.1 percent), purple (10.1 percent), pink (9.8 percent) and green (8.9 percent). The colors favored by the minority include yellow (6.4 percent), white (3.6 percent), gray (2.5 percent), brown (1.7 percent), and finally orange (1.1 percent). Interestingly, these results confirm the effect of blue. Blue has been identified as the most favored color across studies on different genders and cultures (Jacobs et al., 1991; Madden et al., 2000; Funk & Ndubisi, 2006). As seen in figure 16, regardless of the fact that the sample consists of only female participants, the majority still refer to blue as their favorite color. This is an interesting finding, which challenges the long-standing stereotype that associates pink with females. For long, anecdotal evidence have associated pink color with females, arguing that females generically prefer the pink color and males exhibit a preference for blue. However, going by the results of this

(all female) study, majority of the respondents (28%) highlight blue as the preferred color, with only a small percentage (9.8%) reporting a preference for pink.

4.2.2. Descriptive statistics of constructs

The descriptive tests were conducted to observe the average perception of the participants for each of the measured constructs in the study. The mean and standard deviation for each examined variable can be found in Table 2. As seen from the table, the means of the dimensions range from 4.8 to 5.7 and the standard deviations range from .842 to 1.42. Therefore, when comparing the measured constructs, the results of the descriptive tests are relatively similar.

Table 2. Descriptive Tests of Constructs

Variable	Mean	Std. Deviation
Attitude Towards Color	5.6797	0.84206
Color Attractiveness	5.9858	0.84537
Normative Color	4.8419	1.41671
Color Significance	4.8506	1.32241
Color Self-efficacy	5.6752	1.07501
Extraversion	4.9903	0.92419
Openness	5.308	0.90537
Purchase Intentions	5.6857	1.10739

For the first color dimension, attitude towards color, the mean amounts to 5.7 which shows that most of the participants agree with holding positive attitudes towards their favorite color. Meanwhile, since the standard deviation is low equaling 0.84, it shows that the respondents have similar perceptions. Then, the second color dimension, color attractiveness has a mean value of 6.0 indicating that most of the participants agree that their favorite color is attractive. Once again, for this construct the standard deviation of 0.85 means that the respondents have similar perceptions. Subsequently, the third color dimension normative color has a mean of 4.8 denoting

that most of the participants somewhat agree about the effect of normative influence on their favorite color. The standard deviation for normative color is 1.42 meaning that respondents have a similar perception. The following composite variable, color significance has a mean value of 4.6 signifying that the majority of the respondents somehow agree that their favorite color is significant and has meaning to them. With the standard deviation of 1.32, it shows that the respondents have a similar perception regarding the matter. Further, the last color dimension, color self-efficacy has a mean of 5.7 and a standard deviation of 1.08. Meaning that the majority of the respondents have a similar perception that they agree about having confidence in their ability to use their favorite color to achieve their desired look with apparel.

As seen from the examined personality trait, extraversion, the mean of 5.0 signifies that the majority of the participants somehow agree with items corresponding to extraverts. The standard deviation totaling 0.92 shows that the respondents have similar perceptions. Concerning openness to experience, the mean value of 5.3 suggests that the majority of the respondents somehow agree with items that identify individuals as open to experience. Then, the standard deviation of 0.91 means that the respondents have similar perceptions. Lastly, the variable purchase intentions has a mean of 5.7 showing that the majority of the participants agree about having intentions to purchase apparel in their favorite color. With the standard deviation of 1.11, it indicates that the respondents have similar perceptions.

4.2.3 Test of mean differences

The test of mean differences was conducted using one way analysis of variance (ANOVA) to compare demographic variables and constructs. This statistical test is conducted to establish if any statistically significant differences between the means exist (Hair, et al. 2010). As seen from table 3, there is no significant difference

between the age range of the subjects and their attitudes towards color ($p > 0.05$). Meaning that there is not an age range that holds significantly different attitudes towards color than other age ranges. Thus, these results fail to reject the null hypothesis that all age ranges are the same considering their attitudes toward color. Likewise, there is no significant difference between the age range of the subjects and the rest of the color dimensions including color attractiveness, normative color, color significance, and color self-efficacy. Since the p-value is greater than 0.05, it is evident that there is no difference between the age ranges and their color dimension views. Further, there is no significant difference between the age range of the subjects and their purchase intentions ($p > 0.05$). Considering personality traits, there is no significant difference between the age ranges and extraversion ($p > 0.05$). However, there is a significant difference between the age ranges and their identification as open or closed to experience ($p < 0.01$).

Since there is a significant difference between age and openness to experience, the post hoc Duncan test was conducted to identify the age ranges that are significantly different in terms of openness to experience. As seen in table 4, there is a significant difference between younger and older adults. Younger adults aged below 40 rated themselves significantly higher on openness to experience as compared to the older adult groups aged over 40. This finding is in line with previous research that has found openness to experience to be negatively associated with age (Donnellan & Lucas, 2008).

Table 3. Test of Mean Differences Between Age and Variables

		Sum	of	Mean	F	Sig.
		Squares	df	Square		
Attitude Towards Color	Between Groups	3.258	3	1.086	1.541	0.204
	Within Groups	246.045	349	0.705		
	Total	249.303	352			
Color Attractiveness	Between Groups	0.167	3	0.056	0.077	0.973
	Within Groups	254.277	350	0.727		
	Total	254.444	353			
Normative Color	Between Groups	0.9	3	0.3	0.149	0.93
	Within Groups	705.564	350	2.016		
	Total	706.464	353			
Color Significance	Between Groups	9.814	3	3.271	1.86	0.136
	Within Groups	615.451	350	1.758		
	Total	625.265	353			
Color Self- efficacy	Between Groups	2.881	3	0.96	0.819	0.484
	Within Groups	410.608	350	1.173		
	Total	413.489	353			
Purchase Intentions	Between Groups	2.99	3	0.997	0.807	0.491
	Within Groups	432.51	350	1.236		
	Total	435.501	353			
Extraversion	Between Groups	2.161	3	0.72	0.848	0.468
	Within Groups	297.337	350	0.85		
	Total	299.498	353			
Openness	Between Groups	16.128	3	5.376	6.875	0.000
	Within Groups	272.907	349	0.782		
	Total	289.035	352			

Table 4. Duncan Post Hoc Test Between Age Ranges and Openness to Experience

Openness to Experience			Subset for alpha = 0.05		
Duncan	Age	N	1	2	3
	Over 65	30	4.7833		
	16-19	68	5.0717	5.0717	
	20-39	229		5.3953	5.3953
	40-64	31			5.6008
	Sig.		0.113	0.075	0.258

Next, the ANOVA test was conducted to examine the mean differences between the demographic variable education and the studied constructs. Table 5 shows that there is no significant difference between the education level of the subjects and the five color dimensions – attitude towards color, color attractiveness, normative color, color significance and color self-efficacy ($p > 0.05$). Signifying that there is no difference between the education level of the participants and their color dimension views. Likewise, there is no significant difference between the education level of the subjects and their purchase intentions ($p > 0.05$). Lastly, observing personality traits, there is no significant difference between the education level of the subjects and the two personality traits – extraversion and openness to experience ($p > 0.05$).

Table 5. Test of Mean Differences Between Education and Variables

		Sum	of	df	Mean	F	Sig.
		Squares			Square		
Attitude Towards Color	Between Groups	0.499		2	0.249	0.35	0.705
	Within Groups	248.74		349	0.713		
	Total	249.239		351			
Color Attractiveness	Between Groups	0.769		2	0.385	0.539	0.584
	Within Groups	249.736		350	0.714		
	Total	250.505		352			
Normative Color	Between Groups	2.495		2	1.248	0.621	0.538
	Within Groups	702.646		350	2.008		
	Total	705.142		352			
Color Significance	Between Groups	4.051		2	2.026	1.15	0.318
	Within Groups	616.612		350	1.762		
	Total	620.664		352			
Color Self- efficacy	Between Groups	0.451		2	0.226	0.195	0.823
	Within Groups	405.876		350	1.16		
	Total	406.327		352			
Purchase Intentions	Between Groups	0.136		2	0.068	0.055	0.947
	Within Groups	432.506		350	1.236		
	Total	432.642		352			
Extraversion	Between Groups	1.636		2	0.818	0.962	0.383
	Within Groups	297.776		350	0.851		
	Total	299.412		352			
Openness	Between Groups	7.287		2	3.644	4.546	0.110
	Within Groups	279.703		349	0.801		
	Total	286.99		351			

Finally, the ANOVA test examined the mean differences between the income level of the respondents and the eight constructs. The results indicate that there is no significant difference between the income level of the participants and the five color dimensions ($p > 0.05$). Thus, there is no significant difference between the income

level of the participants and their views on their favorite color in terms of attitude towards color, color attractiveness, normative color, color significance, and color self-efficacy. Likewise, there is no significant difference between the subject's income and their purchase intentions of apparel ($p > 0.05$). Finally, there is no significant difference between the income level of the subjects and their personality traits of extraversion and openness to experience ($p > 0.05$).

Table 6. Test of Mean Differences Between Income and Variables

		Sum	of	df	Mean	F	Sig.
		Squares			Square		
Attitude Towards Color	Between Groups	5.713		4	1.428	2.036	0.089
	Within Groups	243.433		347	0.702		
	Total	249.146		351			
Color Attractiveness	Between Groups	2.231		4	0.558	0.77	0.545
	Within Groups	252.038		348	0.724		
	Total	254.269		352			
Normative Color	Between Groups	0.935		4	0.234	0.115	0.977
	Within Groups	704.801		348	2.025		
	Total	705.737		352			
Color Significance	Between Groups	6.64		4	1.66	0.936	0.443
	Within Groups	616.969		348	1.773		
	Total	623.609		352			
Color Self- efficacy	Between Groups	7.853		4	1.963	1.686	0.153
	Within Groups	405.183		348	1.164		
	Total	413.035		352			
Purchase Intentions	Between Groups	5.41		4	1.353	1.099	0.357
	Within Groups	428.365		348	1.231		
	Total	433.775		352			
Extraversion	Between Groups	2.789		4	0.697	0.82	0.513
	Within Groups	295.722		348	0.85		
	Total	298.511		352			

		Sum	of	df	Mean	F	Sig.
		Squares			Square		
Openness	Between Groups	10.563		4	2.641	3.304	0.111
	Within Groups	277.36		347	0.799		
	Total	287.923		351			

4.3 Validity Test

To ensure the accuracy of the measures in the study, three forms of validity are measured. Firstly, face validity involves the subjective assessment of the suitability of the items and the corresponding variables in the questionnaire on its surface (Hair, et al. 2010). Face validity of the items in the questionnaire was ensured by choosing appropriate measures of the constructs based on the researcher's and supervisor's judgement and understanding of the constructs. Next, construct validity refers to the degree to which the questionnaire measures the constructs it is supposed to be measuring (Hair, et al. 2010). Construct validity was ensured by using validated items that have been adapted from extant marketing and psychology literature in the questionnaire. Then, content validity considers if the items in the questionnaire represent the entire domain of the measured constructs (Hair, et al. 2010). In the study, content validity was ensured by conducting a pilot study and revising the measurement items accordingly based on the feedback received from experts in the field through the pilot exercise. Furthermore, the results of the exploratory factor analysis, where all the constructs have acceptable items loadings of 0.5 and above also ensure content validity. The next section presents the results of the exploratory factor analysis.

4.3 Exploratory Factor Analysis

Exploratory factor analysis was conducted to define the underlying structure among the examined constructs in the study (Hair, et al. 2010). The analysis groups the items that have more in common with each other and are highly intercorrelated together with other observed items under one factor (Bolt et al., 2016). These interrelated groups of items that are loaded under the same factor signify dimensions or constructs within the data (Hair, et al. 2010). Therefore, the test ensures that the construct is measuring what it is supposed to be measuring.

4.3.1 Kaiser-Meyer-Olkin (KMO) and Bartlett's Test

Kaiser-Meyer-Olkin (KMO) test measures how suitable the data is for factor analysis. KMO values range between 0 and 1. Values between 0.8 and 1 denote that the sampling is adequate (Kaiser, 1974). As seen from table 7, the KMO value is 0.897 meaning that the sampling is adequate and suitable for the exploratory factor analysis test to be conducted. Additionally, the Bartlett's Test of Sphericity has the significance level of less than .001, indicating that the data is suitable for factor analysis (Bartlett, 1951).

Table 7. Kaiser-Meyer-Olkin and Bartlett's test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin		0.897
Bartlett's Test of Sphericity	Approx. Chi-Square	6537.114
	df	325
	Sig.	.000

Table 8. Exploratory Factor Analysis

Items	Factors						Communalities	Variables
	1	2	3	4	5	6		
For me personally, this color is meaningful	0.620						0.627	Color Significance
For me personally, this color is a relevant part of my life	0.649						0.753	
This color is significant to me	0.687						0.837	
For me personally, this color is important	0.694						0.823	
This color has a dominant presence in my life	0.696						0.666	
I am interested in this color	0.622						0.636	
This color means a lot to me	0.634						0.785	
For me, choosing apparel in this color is: Extremely bad- Extremely good		0.575					0.600	Attitudes toward color
For me, choosing apparel in this color is: Extremely undesirable- Extremely desirable		0.618					0.618	
For me, choosing apparel in this color is: Extremely unpleasant- Extremely pleasant		0.702					0.757	
For me, choosing apparel in this color is: Extremely foolish- Extremely wise		0.554					0.472	
For me, choosing apparel in this color is: Extremely unfavorable- Extremely favorable		0.678					0.668	

Items	Factors						Communalities	Variables
	1	2	3	4	5	6		
For me, choosing apparel in this color is: Extremely Unenjoyable-Extremely enjoyable		0.681					0.675	
For me, choosing apparel in this color is: Extremely negative- Extremely positive		0.644					0.712	
Most others who are important to me think I should purchase apparel in this color.			0.615				0.681	Normative Color
Most people whose opinions I care about think I should purchase apparel in this color.			0.613				0.718	
I know how to use the color to achieve the desired look				0.623			0.772	Color Self Efficacy
I have confidence in my ability to use the color to achieve the desired look				0.57			0.783	
This color is attractive.					0.491		0.516	Color Attractiveness
This color is classy.					0.538		0.820	
This color is beautiful.					0.544		0.496	
This color is elegant.					0.53		0.802	
This color is appealing.					0.586		0.627	
I am willing to purchase apparel in this color						0.731	0.735	Purchase Intentions
I plan to purchase apparel in this color						0.716	0.727	
I will make an effort to purchase apparel in this color						0.692	0.618	

The exploratory factor analysis was conducted on the constructs that have been adapted from the pre-existing items to fit the current research objectives. As seen from table 8, all of the items for these variables loaded on one factor with strong loadings greater than 0.5. Further, the variables' communalities - which denote the amount of each variable's variance accounted for by the factors - are examined. Higher communality values signify that a greater proportion of variance in the variable is extracted by the factor solution. Variables with communality values greater than 0.5 are regarded to have acceptable levels of explanation (Hair, et al. 2010). The examined items in this research all have high communality values of .600 or above meaning that variables are well represented by the extracted components. Therefore, no one of the items from the dimensions were dropped. The obtained results well align with the previous literature from which the validated items have been adapted.

4.4 Reliability and Validity tests

To assess the variables for reliability, the Cronbach's α (coefficient α) measure of internal consistency was used. Cronbach's α is the most widely used measure of reliability. Moreover, the values of Cronbach's α range from 0 to 1 with the minimum threshold considered to be 0.70 (Hair, et al. 2010). As seen from table 9, the following reliability estimates (Cronbach's α) were obtained: attitude towards color (0.89), color attractiveness (0.77), normative color (0.93), color significance (0.94), extraversion (0.82), purchase intentions (0.88), openness to experience (0.73), and color self-efficacy (0.91). For color self-efficacy one item, 'I feel comfortable with my ability to use the color to achieve the desired look', was excluded for reasons of low reliability. Furthermore, for openness to experience two items were excluded, 'I tend to vote for the liberal political candidates' as well as 'I tend to vote for the conservative political candidates'. These items were excluded for reasons of low reliability and

irrelevance to the Croatia context. Finally, all of the measures have acceptable alpha values exceeding the minimum threshold (Hair, et al. 2010), as such internal consistency is assured.

Table 9. Cronbach's Alpha Coefficient

Dimensions	Cronbach's Alpha	Number of Items	Analysis
Purchase Intentions	0.88	3	Highly Reliable
Color Significance	0.94	7	Highly Reliable
Attitude towards Color	0.89	7	Highly Reliable
Color Attractiveness	0.77	5	Acceptable
Normative Color	0.93	2	Highly Reliable
Color Self-Efficacy	0.91	2	Highly Reliable
Extraversion	0.82	10	Highly Reliable
Openness to Experience	0.73	8	Acceptable

4.5 Pearson's Correlation Test

Pearson's correlation coefficient measures the strength and direction of the association between continuous variables. Correlation coefficient values are expressed in a range between +1 and -1. A value of +1 denotes a total positive relationship between two variables where a positive increase in the value of one variable means there is a positive increase in the value of the other variable. Meanwhile, a value of -1 denotes a total negative relationship between two variables where a positive increase in the value of one variable means there is a negative increase in the value of the other variable. Lastly, a value of 0 denotes there is no relationship between the two variables. For the correlation to be considered significant, the level of significance of the p-value should be less than 0.05.

As seen from table 10, all of the color dimensions (attitude towards color, normative color, color self-efficacy, color attractiveness, and color significance) are

positively correlated at the p-value of $p < 0.01$. Attitude towards color and color attractiveness have the strongest positive correlation of $r=0.478$ at $p < 0.01$. Then, examining the correlation between the color dimensions and purchase intentions, it is evident that the five color dimensions are all significantly positively correlated with purchase intentions at the p-value of $p < 0.01$. The strongest correlation is between attitude towards color and purchase intentions with $r=0.621$ at $p < 0.01$. Proceeding to personality traits, extraversion and openness to experience are positively correlated with $r=0.237$ at $p < 0.01$. Moreover, extraversion is positively correlated with color attractiveness, color self-efficacy, and purchase intentions. While openness to experience is positively correlated with color attractiveness and purchase intentions.

Table 10. Pearson's Correlation

		Attitude Towards Color	Color Attractiveness	Normative Color	Color Significance	Color Self- efficacy	Purchase Intentions	Extraversion	Openness
Attitude Towards Color	Pearson Correlation	1	.478**	.448**	.430**	.469**	.621**	0.064	0.023
	Sig. (2- tailed)		0.000	0.000	0.000	0.000	0.000	0.232	0.674
Color Attractiveness	Pearson Correlation	.478**	1	.401**	.312**	.344**	.490**	.184**	.121*
	Sig. (2- tailed)	0.000		0.000	0.000	0.000	0.000	0.000	0.023
Normative Color	Pearson Correlation	.448**	.401**	1	.400**	.415**	.468**	0.094	-0.045
	Sig. (2- tailed)	0.000	0.000		0.000	0.000	0.000	0.079	0.397
Color Significance	Pearson Correlation	.430**	.312**	.400**	1	.367**	.517**	0.027	0.074
	Sig. (2- tailed)	0.000	0.000	0.000		0.000	0.000	0.608	0.167
Color Self- efficacy	Pearson Correlation	.469**	.344**	.415**	.367**	1	.497**	.223**	0.045
	Sig. (2- tailed)	0.000	0.000	0.000	0.000		0.000	0.000	0.397

		Attitude Towards Color	Color Attractiveness	Normative Color	Color Significance	Color Self- efficacy	Purchase Intentions	Extraversion	Openness s
Purchase Intentions	Pearson Correlation	.621**	.490**	.468**	.517**	.497**	1	.129*	.134*
	Sig. (2- tailed)	0.000	0.000	0.000	0.000	0.000		0.015	0.012
Extraversion	Pearson Correlation	0.064	.184**	0.094	0.027	.223**	.129*	1	.237**
	Sig. (2- tailed)	0.232	0.000	0.079	0.608	0.000	0.015		0.000
Openness	Pearson Correlation	0.023	.121*	-0.045	0.074	0.045	.134*	.237**	1
	Sig. (2- tailed)	0.674	0.023	0.397	0.167	0.397	0.012	0.000	.134*
** Correlation is significant at the 0.01 level (2-tailed).									
* Correlation is significant at the 0.05 level (2-tailed).									

4.6 Regression Analysis

The sections below refer to two tests multicollinearity and hierarchical multiple regression, to examine the relationships between the variables. The multicollinearity test examines the degree to which an explanatory variable measured in the study can be explained by the other variables from the study (Hair, et al. 2010). Lastly, with hierarchical multiple regression, the hypothesized direct and moderating relationships between the variables are examined.

4.6.1 Collinearity tests

Multicollinearity test examines the degree to which an explanatory variable measured in the study can be explained by the other variables from the study (Hair, et al. 2010). The multicollinearity test was conducted to ensure that each of the five color dimensions have a unique contribution in explaining the dependent variable. Multicollinearity can be measured with the tolerance and variance inflation factor (VIF) values. The tolerance value is measured by subtracting 1 from the amount of the construct's variance explained by the other constructs in the model. Tolerance values close to 0 imply high multicollinearity, while higher tolerance values imply low collinearity (Hair, et al. 2010). From table 11, it is evident that all tolerance values are higher than 0.6 indicating little collinearity. Further, VIF values being the reciprocal of tolerance, are calculated by dividing 1 by the tolerance value. Consequently, smaller VIF values under 10 are considered as an indicator of low correlation between variables and low multicollinearity. The VIF values for the examined constructs are low, ranging from 1.34 to 1.66, indicating a lack of multicollinearity.

Table 11. Multicollinearity Test

Construct	Tolerance	VIF
Attitude Towards Color	0.602	1.662
Color Attractiveness	0.717	1.394
Normative Color	0.676	1.479
Color Significance	0.746	1.34
Color Self-Efficacy	0.707	1.414

4.6.2 Regression test

To test the hypothesized relationships between the variables, data analysis was conducted using the hierarchical multiple regression technique. Multiple regression technique refers to a multivariate analysis that explains the effect or contribution of multiple independent predictor variables on one dependent variable. Compared to multiple regression, hierarchical multiple regression tests the effect of the independent predictor variables on the dependent variable in a sequential way. This way of examining the hypothesized relationships allows researchers to assess the relative significance of predictor variables as researchers observe the change in the contribution to the dependent variable sequentially (Petrocelli, 2003). Thus, the current study first examined the contribution of the direct effect of color dimensions on purchase intention. Then, the moderating effect of personality traits (extraversion and openness to experience) on the relationship between the five color dimensions and purchase intentions was calculated using a four-tier multiple regression as in line Jaccard, Turrisi, and Wan, (1990) and more recently Ndubisi, (2011). The regression has the following equations:

$$Y = b_0 + b_1X_1 + E \text{ ----- (1)}$$

$$Y = b_0 + b_1X_1 + b_2X_2 + E \text{ ----- (2)}$$

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_1X_2 + E \text{ ----- (3)}$$

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_1X_2 + b_4X_3 + E \text{ ----- (4)}$$

Where Y represents purchase intentions

b_0 = constant

b_1 = strength of the independent variables

X_1 = independent variables

b_2 = strength of the moderators

X_2 = moderators

b_3 = strength of the interaction terms X_1X_2 interaction terms

X_1X_2 = interaction terms

B_4 = strength of confounding factors

X_3 = confounding factors (age and education)

E = error term

4.6.3 Direct effects

The relationship between the five color dimensions and purchase intentions was examined. The results in Table 12 indicate that the five color dimensions attitude towards color, color attractiveness, color significance, normative color, and color self-efficacy contribute significantly ($F = 81.388$; $p\text{-value} < .001$) and predict 54% of the variations in purchase intentions. There is a direct significant association between color significance ($\beta = .23$; $p\text{-value} = .000$), attitude towards color ($\beta = .32$; $p\text{-value} = .000$), normative color ($\beta = .12$; $p\text{-value} = .015$), color self-efficacy ($\beta = .16$; $p\text{-value} = .000$), color attractiveness ($\beta = .18$; $p\text{-value} = .000$), and purchase intentions. These results provide support for hypotheses H1, H2, H3, H4, H5.

Table 12. Association of Color Dimensions with Purchase Intentions

Predictor Variables	Purchase Intentions	
Variables	t-value	B (p value)
Constant	-1.223	-0.414(.222)
Attitude Towards Color	6.924	0.324 (.000)
Color Attractiveness	4.139	0.177 (.000)
Normative Color	2.434	0.107 (.015)
Color Significance	5.47	0.231 (.000)
Color Self-Efficacy	3.636	0.158 (.000)
R		0.735
R ²		0.540
AR ²		0.534
F(sig)		81.388 (.000)

4.6.4 Moderating effects

In the following regression analysis, the hierarchical regression model (Ndubisi, 2011, Ndubisi, Gupta & Ndubisi, 2005) was used to test the moderating effects of personality traits (extraversion and openness to experience) in the relationship between the five color dimensions and purchase intentions. A four-tier linear regression was used to measure these effects (Ndubisi et al., 2005), where tier 1 includes the five independent variables, tier 2 includes the main effect of the two moderators, tier 3 introduces the interaction term, while the last tier includes the control variables. The results show that the interaction of personality traits with the color dimensions contribute significantly ($F = 23.138$; $p\text{-value} < .001$) and explain 57% of the variations in purchase intentions (Table 13). Meanwhile, extraversion and openness to experience moderating some of the relationships providing partial support for hypotheses H6 and H7. Precisely, extraversion significantly moderates the relationship between color attractiveness ($\beta = .95$; $p\text{-value} = .026$) and purchase intentions as well as color self-efficacy ($\beta = 1.06$; $p\text{-value} = .003$) and purchase

intentions. Openness to experience significantly moderates the relationship between attitude towards color ($\beta = -1.23$; $p\text{-value} = .010$) and purchase intentions. These results provide support for hypotheses H6d, H6e, and H7b.

Table 13. Moderating Effects of Extraversion and Openness to Experience Controlling for Age and Education

Predictor Variables	Purchase Intentions	
Variables	t-value	B (p value)
Constant	-1.326	-2.970 (.186)
Attitude Towards Color	4.586	1.5 (.000)
Color Attractiveness	-1.805	-0.513 (.072)
Normative Color	2.108	0.641 (.036)
Color Significance	0.861	0.267 (.390)
Color Self-Efficacy	-1.514	-0.471 (.131)
Extraversion	-1.016	-0.321 (.310)
Openness	2.305	0.72 (.022)
Attitude Towards Color @ Extraversion	-1.587	-0.654 (.113)
Color Attractiveness @ Extraversion	2.230	0.95 (.026)
Normative Color @ Extraversion	-1.845	-0.569 (.066)
Color Significance @ Extraversion	-1.598	-0.469 (.111)
Color Self-Efficacy @ Extraversion	2.987	1.064 (.003)
Attitude Towards Color @ Openness	-2.587	-1.225 (.010)
Color Attractiveness @ Openness	0.638	0.248 (.524)
Normative Color @ Openness	-0.263	-0.086 (.792)
Color Significance @ Openness	1.133	0.367 (.258)
Color Self-Efficacy @ Openness	-0.159	-0.059 (.874)
Age	-0.338	-0.012 (.736)
Education	0.051	0.002 (.959)
R		0.755
R ²		0.570
AR ²		0.546
F(sig)		23.138 (.000)

4.7 Discussion

As seen from the descriptive statistics, Croatian females have a preference for the blue color, contrary to the long-held view of females' preference for pink. The results demonstrate that the stereotypically feminine pink color does not score high on the list of women's preferred colors. Evidently, females are not limiting their preferences to colors that are considered gender-specific which debunks the blue vs. pink myth. Thus, marketing managers should consider developing packaging and advertisements that are not linked to traditional gender color stereotypes.

As seen from the regression analysis examining the direct effects of the five independent color dimensions on purchase intention, all of the five hypothesized relationships are proved to be significant. Firstly, color meaning has a significant positive effect on purchase intentions (H1). The finding demonstrates that the meaning attached to a particular color can be a reason to purchase an apparel in that color. Given the strong impact of color meaning on consumers' purchase intentions of apparel in that color, apparel marketers can capitalize on the positive meaning of colors in their promotional efforts. The second hypothesized relationship between attitude towards color and purchase intentions (H2) is significant as well. Thus, positive attitudes towards a particular color lead to increased purchase intentions. The next hypothesis is about the relationship between normative color and purchase intentions (H3), which is also significant. The outcome of the study establishes a positive link between the normative influence on color and purchase intentions. This relationship demonstrates that consumers are influenced by social norms when choosing among apparel in different colors and have higher purchase intentions for colors that they deem will be accepted by their peers, friends and family. Further, the study finds that there is a significant positive relationship between color self-efficacy

and purchase intentions (H4). Hence, consumers are more likely to purchase apparel in a color they believe will help them to achieve their desired look. Lastly, a significant positive relationship is established between color attractiveness and purchase intentions (H5). As such, there is empirical evidence to support the notion that consumers are more likely to purchase apparel in a color they find to attractive.

Regarding the effect of moderating role of personality, some of the hypothesized moderating effects were confirmed but others were not. With regards to extraversion and openness to experience moderating some of the relationships, there is only a partial support for hypotheses H6 and H7. The results in Table 13 show that extraversion significantly moderates the relationship between two color dimensions, namely color attractiveness and color self-efficacy, and purchase intentions. Since the impact of color attractiveness on purchase intentions is statistically higher for extraverted female consumers they are more likely to purchase apparel in a color they find attractive. Moreover, extraversion significantly moderates the relationship between color self-efficacy and purchase intentions. Since the impact of color self-efficacy on purchase intentions is statistically higher for extraverted consumers they are more likely to purchase apparel in a color they perceived as easy to use to achieve their desired look.

Openness to experience significantly moderates the relationship between attitude towards color and purchase intentions. The results show that respondents who score low on openness to experience tend to purchase apparel in a color towards which they have positive attitudes. Thus, a more positive attitude is required in order to boost the purchase intentions of consumers who are less open to experience, compared to their counterparts who are high in openness to experience. Indeed, for respondents who are low on openness to experience (put differently, more closed-up individuals),

personal attitude is a more compelling driver of purchase intentions than the more open individuals. For the latter group, who are more apt to explore things and engage with others, they may not rely on their attitude towards color as much when choosing apparel color. More discussions on the implications of these findings are presented in the next chapter of the thesis.

CHAPTER 5: CONCLUSIONS, LIMITATIONS, IMPLICATIONS AND FUTURE RESEARCH

5.1 Introduction

In chapter five, the theoretical and managerial implications of the findings of the study are outlined. Then, the conclusions of the thesis based on the results are presented. Lastly, the chapter discusses the research limitations and concludes with future research suggestions.

5.2 Theoretical and Managerial Implications

This study makes significant theoretical and managerial contributions. Researchers have determined that the area of color in marketing is essential for the advancement of marketing theory (Labrecque, Patrick & Milne, 2013). By examining color-related variables that have gained limited or no attention at all in existing literature, the current study expands on the existing knowledge regarding the understudied interface of color and marketing. Moreover, the study's findings provide managerial implications by providing insights into how the psychological and personality factors influence the application of color in consumer decision-making processes and purchase intentions.

5.2.1 Theoretical implications

Numerous researchers have pointed out the lack of research on color in the marketing literature and emphasized the necessity of more studies in this area for the advancement of marketing theory (Funk and Ndubisi, 2006; Labrecque and Milne, 2011; 2013). The present research fills an important research gap in the interface of color and marketing. By building a conceptual model with variables that combine psychological and personality aspects with color, the thesis expands the understanding of how color interacts with these psychological and personality factors to shape

market place behaviors. The color-related variables that are examined in the current research have either gained limited or no attention at all from the existing scholarship (Lovric & Ndubisi, 2020).

The construct of color significance or meaning has mostly been studied across countries and cultures. Precisely, research has focused on comparing the varying meanings for the same colors between different countries (Jacobs et al., 1991; Madden et al., 2000). However, scholarship examining how color significance impacts the purchase behavior of consumers is limited. This study contributes to literature by demonstrating that the understudied construct of color significance has a significant and positive effect on consumer apparel purchase intentions. Moreover, color significance has a constant effect on purchase intentions regardless of the consumers' personality traits. Thus, the current study corroborates the findings that colors carry meanings (Jacobs et al., 1991; Madden et al., 2000).

Regarding consumer's attitudes towards color, the effect of this color-variable on purchase intentions has mostly been examined in the context of store atmospherics (Bellizzi et al., 1983; Bellizzi & Hite, 1992; Crowley, 1993). The literature examining the effect of attitude towards color and purchase intentions of a particular product is limited. This research extends existing knowledge on the construct by establishing a positive link between attitudes towards color and purchase behavior of consumers. By examining the construct in the context of color in marketing, the findings corroborate and extend previous literature that has found a link between brand attitudes and purchase intentions (Voester, Ivens, & Leischnig, 2016) as well as attitudes and their effect on intentions through of theory of planned behavior (Chen & Tung, 2014). The current research also extends literature by finding that the consumer's openness to experience moderates the relationship between attitude towards color and purchase

intentions. Thus, the study demonstrates that personality factors can have a significant moderating effect on the relationship between attitudes and intentions through the theory of planned behavior (Ajzen, 1991).

Further, normative color considers the normative influences that play a role in consumer color choice. While one study has established a significant relationship between normative color and consumers' automobile color choice (Funk & Ndubisi, 2006), the construct has gained no further attention from existing literature. This research proves that reference groups in the consumer's life play a significant role in their apparel color choice and purchase intentions. Precisely, the construct is equally significant even for consumers with different personality traits. In accordance with previous research examining the powerful effects of normative social influence (Pronin, Berger & Molouki, 2007; Baron & Branscombe, 2012), this study shows that the effect of normative influence on color choice in apparel is equally powerful for all consumers' intentions to purchase apparel in that color.

Additionally, the current study examines color self-efficacy, a color-related variable that has not been examined at all in the context of color in marketing. The construct has shown to affect consumer purchase behavior in the context of the online marketplace (Hill & Beatty, 2011). However, the current study extends knowledge by studying the link between the self-efficacy construct and color. The findings of the study determined that there is a significant positive relationship between color self-efficacy and consumer apparel purchase intentions showcasing that the construct is relevant in the context of color in marketing research. Extraversion was found to significantly moderate the relationship between color self-efficacy and apparel purchase intentions. Proving that personality traits can be a significant moderating

effect in the relationship between self-efficacy and intentions through of theory of planned behavior (Ajzen, 1991).

Lastly, the study considers the effect of color attractiveness on consumer purchase behavior. In marketing literature, attractiveness has mostly been researched on the preface of the aesthetic appeal of a product (Bloch, 1995; Creusen & Schoormans, 2005). Color attractiveness and its effect on consumer purchase behavior have received limited attention from marketing scholars (Funk & Ndubisi, 2006). By establishing a positive link between color attractiveness and apparel purchase intentions, this study confirms that this color construct is relevant in the context of consumer purchase behavior. Furthermore, the study finds that for extraverted consumers the impact of color attractiveness on purchase intentions is statistically greater. This finding is in line with previous research that has shown that extraverted individuals have a greater liking for modern paintings with lively colors (Eysenck, 1941) as well as a stronger preference for more intense colors (Pazda & Thorstenson, 2018). The current study corroborates these findings from previous literature. Therefore, the conceptual model developed in the current study can be replicated by future researchers, expanded on further, and applied it to different contexts within the realm of color in marketing.

The study is theory-driven and connects color with established and relevant theories such as the gender schema theory, trait personality, and the planned behavior theories. In this way, the current research contributes to and advances these established theories. The study focuses on female consumers (a less researched yet very important segment when it comes to shopping), and its findings contribute to the gender schema theory. Shopping has been associated with the female role and thus perceived as a feminine activity (Lunt & Livingstone, 1992). Female consumers also

express themselves through clothing (Millan & Tiu Wright, 2018) as womenswear is more ornamented and varied in an assortment of colors and styles (Baumeister & Sommer, 1997). The study corroborates these theoretical findings indicating the relevant psychological and personality aspects of color that play a role in female consumers' apparel shopping behavior. When expressing themselves using color in apparel, the female consumers' color choice is based on the five color dimensions examined in the study and their interactions with the consumers' personality traits.

The study also contributes to the theory of planned behavior (TPB). The TPB argues that attitudes towards the behavior, subjective norms and perceived behavioral control are determinants of behavioral intentions, which influence actual behavior (Ajzen, 1991). The five color dimensions investigated in this study are underpinned by the theory of planned behavior. The findings show that these five color dimensions, namely attitude towards color, normative color, color self-efficacy, color attractiveness, and color significance or meaning are statistically related to the purchase intentions of the respondents. Thus, the TPB is an applicable and relevant theory in the context of apparel choice and color research, a fitting theoretical lens for understanding the role of color in apparel buying behaviors of female consumers, as well as for informing marketing strategy decisions by apparel marketers.

Furthermore, the study contributes to personality trait theories. The findings show that personality traits from the Big Five Personality Model (McCrae & John, 1992; McCrae & Sutin, 2007; Coon & Mitterer, 2014), namely openness to experience and extraversion moderate the relationship between certain color dimensions and purchase intentions. Therefore, the research proves that the renowned Five Factor model is relevant in the context of color in marketing and consumer choice. Specifically, this exploratory study shows that certain personality traits are more

susceptible to the use of color in (apparel) marketing. The current study offers a plausible explanation for the role of color in consumer purchase behaviors by incorporating psychological and personality factors, and their interactions with color dimensions. The results support the notion of integrating contingent factors in marketing/management research models as earlier suggested by Ginsberg and Venkataraman in 1985, which is now gaining more traction. Marketers need more empirical evidence, as such, more studies are called for in other contextual settings especially outside of Eastern Europe where the current study was conducted to enhance the generalizability of findings. Although marketing managers have been using colors for numerous reasons such as building brand associations (Steigrad, 2011), crafting brand personalities (Labrecque & Milne, 2011) extending their line of products or pursuing mass customization strategies (Burns, 2020), and rebranding (Negroni, 2018), it is time to escalate scientific research in the color-marketing interface to strengthen the linking between marketing theory and practice.

5.2.2 Managerial implications

Marketers desire to increase demand and sales for their brands. Consequently, they pursue color strategies to achieve their goals. Thus, it is imperative for the managers of these brands to make informed decisions when choosing among different colors. Yet, marketing practitioners are left with limited theoretical guidance when dealing with these issues. The majority of literature on color dimensions focused on the hue, value, and saturation. This study shows that managers can control the use of color in marketing on more dimensions than just hue, value, and saturation. The findings make important contributions to marketing practice by determining the extent to which color dimensions play a role in customers' purchase intentions. The study builds a model for managers that identifies relevant psychological and personality aspects of color to

consider when developing color strategies. These aspects of color that managers should take into consideration include attitude towards a color, normative influence on color, significance or meaning of a color, a color's attractiveness and color self-efficacy on purchase intentions of their target customers.

The study reveals that consumers choose apparel in colors that they find meaningful and consider a relevant part of their life. Thus, managers must understand what the color means to their target market when developing and implementing color strategies.

Secondly, the attitude customers have towards a color has a significant impact on their purchase intentions. Understanding what attitudes the target market holds towards a particular color is essential for managers, as these attitudes will affect their customers' intentions to purchase their offering. If a company is producing apparel in a color towards which their target market does not have positive attitudes, it will negatively affect the sales of that product.

Managers should also consider the influence of the consumer's peers on their choice of apparel in a specific color. As seen from the findings, social norms are present and influential on people's choice of color in attire. Consumers do adhere to social norms when choosing among colors in apparel. A consumer may have a favorable attitude towards a particular color and the color may even have a positive meaning in their mind, yet if they fear potential negative feedback or receive negative feedback from their reference group, it will affect their willingness to purchase apparel in that color. For instance, due to normative social influence, university students and business professionals might purchase different colors in apparel. Hence, it is crucial to consider the target markets' potential reference groups.

Additionally, the findings indicate that consumers' purchase intentions depend on how confident they feel in their ability to use the color to consummate their desired look or appearance. Consumers are more likely to purchase products in a color that they are comfortable with, and one they can use to achieve the look they are trying to achieve. Thus, color self-efficacy is another variable that managers should consider when deciding among colors for their products. Consumers will not readily experiment with different colors if they feel like they do not know how to use them or combine them to achieve the desired look of glamor.

Furthermore, managers should research which colors their target market considers attractive. Manipulating color (un)attractiveness to influence sales has already been done in practice with cigarette packaging (McNeil Jr., 2016; Forster, 2016; Pollak, 2018). This study confirms the effect in theory by proving that color attractiveness has a significantly positive relationship with consumers' apparel purchase intentions.

Taken together, all of these color dimensions have important implications for marketing practice. Careful consideration of all of the significant color dimensions will allow managers to gain a profound understanding of consumers, their perceptions of colors, and the influences of these perceptions on their choice of apparel. Equipped with this knowledge, marketers will be more able to identify the right colors that would increase the consumers' intentions to purchase the product and subsequently lead to more sales.

The current study also takes into consideration the potential role of personality traits as moderators of the relationship between color dimensions and purchase intentions. Studying customers' personality traits is a part of psychographic market segmentation (Hoyer, & MacInnis, 2008). Customers who score low on openness to

experience are more likely to purchase apparel in a color towards which they have positive attitudes, as this study shows. Managers of apparel brands should seek to understand their customers' attitudes toward different colors through market research based on the latter's degree of openness to experience.

Regarding extraversion, customers who are more extraverted are more likely to purchase apparel in a color they find attractive. Furthermore, the impact of color self-efficacy on purchase intentions is statistically greater for extraverted consumers. Hence, extraverted consumers are more likely to purchase apparel in a color they feel confident they can use to achieve their desired look. These findings enable marketers to use personality traits to identify customer segments for their offerings and to select the target market and marketing strategy accordingly. For instance, marketing managers whose target market consists of extraverted consumers can manufacture products in more attractive colors as these consumers will be more likely to purchase products in these colors.

5.3 Research Conclusions

This thesis has examined what roles color dimensions play on apparel purchase intentions of female consumers and considered the moderating effects of consumer personality. The examined color dimensions include color significance/meaning, attitudes towards color, normative color, color self-efficacy, and color attractiveness. Moreover, the moderating effects of two personality traits: extraversion and openness to experience in the relationship were tested as well. Based on three established theories, namely the gender schema theory, the theory of planned behavior and trait personality theory, the conceptual model and related hypotheses were developed.

The findings indicate that all of the hypothesized direct effects play a key role in female consumer's purchase intentions of apparel. Precisely, the female consumer's

favorable evaluations of color, measured by their attitude towards the color, lead to increased purchase intentions. The research also found that important people in the life of the consumer, such as peers, friends, and family, have a significant influence on the consumer's color choice and purchase intentions. Color self-efficacy or the perceived ability of using the color to achieve the desired look was also found to have a significant influence on the purchase intentions of colored apparel. Further, the attractiveness of a color has a positive influence on the purchase intentions of apparel in that color. Finally, color meaning or the significance the color hold for the consumer was also found to positively affect purchase intentions of apparel.

Regarding the moderating effects of personality traits, the findings of the study are mixed. For extraverted consumers, the impact of color attractiveness on purchase intentions is statistically higher. Meaning that extraverted consumers have a higher likelihood of purchasing apparel in a color that they find attractive. Extraversion was also found to significantly moderate the relationship between color self-efficacy and purchase intentions. This outcome points to the fact that extraverted consumers are more likely to purchase apparel in a color they perceive as easy to use to achieve their desired look. Another significant moderating effect unveiled by the study is that of openness to experience, which moderates the relationship between attitude towards color and purchase intentions. Consumers who are less open to experience are more prone to purchasing apparel in a color towards which they have positive attitudes. Interestingly, more close-minded individuals rely more on their attitudes when choosing among colors of apparel.

By considering the moderating effects that were found to be not significant, additional conclusions can be drawn. For instance, neither extraversion nor openness moderate the relationship between color significance and purchase intentions.

Signifying that, regardless of the consumers personality traits, the meaning of color has a constant effect on purchase intentions. Consumers with different personality traits equally find the meaning attached to a particular color to be an powerful reason for purchasing apparel in that color. The same is the case for the relationship between normative color and purchase intentions. Irrespective of their personality traits, consumers have higher purchase intentions for apparel in colors that they believe will be accepted by their peers, friends and family. This finding proves that normative social influence is an influential force that affects the decisions and behavior even of people with different personality traits. The finding is in line with previous research that has shown that people can be unaware or underestimate the influence of conformity on their own actions (Pronin, Berger & Molouki, 2007), but still most of the time behave in agreement with social norms (Baron & Branscombe, 2012). Further, both introverts and extroverts consider their attitudes towards color when deciding to purchase apparel in said color. For both of these personality traits, positive attitudes towards a particular color play an equally strong role in increasing purchase intentions. Lastly, openness to experience does not moderate the relationship between two color dimensions - color self-efficacy and color attractiveness - and purchase intentions. Denoting that, both more open and closed to experience individuals, have an equal likelihood of purchasing apparel in a color based on their ability to use the color to achieve the desired look and on the attractiveness of a color. The insignificant moderating effects show that certain color dimensions have a constant effect on purchase intentions regardless of the consumers personality. Thus, by taking these direct and moderating effects together into account, the findings of the current study offer a more advanced understanding of the role of color in the buyer decision-making process.

5.4 Limitations

One of the limitations of the study is that it does not take into consideration color trends. For instance, each season the Pantone Color Institute announces the most important color trends which are featured by fashion designers in their collections (Pressman, 2019). Moreover, fashion magazines often report on the trendy colors of the season or year (Randone, 2020) (Buro 247, 2020). These effects may be affecting the consumer's choice of color in apparel. Since these colors are deemed as fashionable, these color trends may influence the color choice in apparel. Therefore, while consumers may not deem a trendy color as attractive and meaningful or have particularly favorable attitudes towards it, they may purchase apparel in that color based on it being currently trendy and fashionable.

Likewise, seasonal or festive colors were not taken into consideration in this study. Consumers may be purchasing clothing according to the season of the year and certain colors may be more popular during a certain festive period. For example, during the Christmas season, consumers' could perceive red and green colors as more favorable or attractive. Moreover, these colors could have a significant meaning to the customers by signifying the holiday spirit and consequently leading to an increased willingness to purchase sweaters in these colors. Thus, seasonality effects could moderate the relationship between color dimensions and purchase intentions.

Another limitation is that the majority of the respondents are millennials. Since the majority belongs to this age group, there could be a potential demographic misrepresentation. Yet, this limitation may be a consequence of the purely voluntary nature of the study, in keeping with the strict ethical standards of the research process. Clearly, millennials were more willing to participate in the survey than the older generations. Because of the non-mandatory nature of the survey approach, it was

difficult for the enumerator to increase the participation of the older generation without encroaching on their freedom of choice to participate and liberty to withdraw from the study at any point. Nonetheless, future research should try to overcome this constraint and enroll older participants by presenting the research topic in ways that would resonate more with them and increase their interest in turn.

The current study focuses on apparel products. Therefore, this study may be limited in terms of generalizability to other product categories. Meanwhile, apparel is not the only product category where customers consider the color of the product alongside other factors such as price, brand, functionality, etc. Likewise, apparel is not the only product category where managers are using color to raise customer demand. Consequently, future research should consider applying the current conceptual model to examine consumer purchase intentions of other product categories.

5.5 Future Research Suggestions

As aforementioned, the current research did not consider color trends and seasonal colors. Future research could include these factors as moderating variables in the conceptual model. These color trends may influence the choice of apparel and increase purchase intentions by interacting with the five color dimensions. Besides, their potential moderating effects, future research could also consider these variables as direct drivers of purchase intentions. By so modeling, future research can provide a more robust model.

Since the current study's sample consists of a majority of millennials, future research should attempt to achieve a more representative sample in terms of age. In this way, the research would be more representative of the population as a whole.

Additionally, the current research focuses solely on female consumers. Future research should extend the study to both genders and then compare the outcomes between male and female apparel consumers. In this way, it would be possible to see if the findings are generic or gender-based, which can, in turn, inform the extent of color standardization or adaptation that marketers could apply.

Moreover, future research could observe if other moderation variables, such as culture, other demographic factors, psychographic factors, and personality traits will significantly moderate the relationship between the color dimensions and intention to purchase. For instance, other personality traits from the big five personality model, such as agreeableness or conscientiousness, could be examined as moderators. If the speculations of previous research hold (e.g. Funk & Ndubisi, 2006), it can be expected that some of these potential moderators may significantly impact color dimensions link with purchase intentions.

Future research could also focus on a different product category where color plays a significant role in consumer-product choice. As mentioned in the introduction, even technology companies, such as Apple, Dell, and GE, are now offering consumers a broad range of color choices for their products (Labrecque, Patrick & Milne, 2013; Apple Newsroom, 2020). Other products of interest in color marketing research include cars (Funk & Ndubisi, 2006). Therefore, future research could focus on how color dimensions affect the purchase intentions of other product categories such as electronics and cars, to mention a few.

Lastly, future research could test if there is a difference in the association of color dimensions with purchase intentions between high and low involvement purchases. Since high involvement purchases are characterized by greater social and financial risk than low involvement purchases and require longer decision process and

time, it is expected that the level of purchase involvement will produce differential impacts of color dimensions on purchase intentions.

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APPENDIX

Appendix A: Questionnaire

Section 1

Are you 18 and above: (question included only in the electronic format of the survey)

- Yes (please continue) No (the survey stops, thank you)

Do you have a favorite color:

- Yes No

What is your favorite color? _____

Please indicate your views on each of the following statements pertaining to your favorite color:

Section 2 Attitude towards color (Han, Hsu & Sheu, 2010)	Extremely bad (1)	Bad (2)	Somehow Bad (3)	Neutral (4)	Somehow good (5)	Good (6)	Extremely good (7)
For me, choosing apparel in this color is.....							
	Extremely Undesirable (1)	Undesirable (2)	Somehow Undesirable (3)	Neutral (4)	Somehow Desirable (5)	Desirable (6)	Extremely Desirable (7)
For me, choosing apparel in this color is.....							

	Extremely Unpleasant (1)	Unpleasant (2)	Somehow Unpleasant (3)	Neutral (4)	Somehow Pleasant (5)	Pleasant (6)	Extremely Pleasant (7)
For me, choosing apparel in this color is.....							
	Extremely Foolish (1)	Foolish (2)	Somehow Foolish (3)	Neutral (4)	Somehow Wise (5)	Wise (6)	Extremely Wise (7)
For me, choosing apparel in this color is.....							
	Extremely Unfavorable (1)	Unfavorable (2)	Somehow Unfavorable (3)	Neutral (4)	Somehow Favorable (5)	Favorable (6)	Extremely Favorable (7)
For me, choosing apparel in this color is.....							
	Extremely Unenjoyable (1)	Unenjoyable (2)	Somehow Unenjoyable (3)	Neutral (4)	Somehow Enjoyable (5)	Enjoyable (6)	Extremely Enjoyable (7)
For me, choosing apparel in this color is.....							
	Extremely Negative (1)	Negative (2)	Somehow Negative (3)	Neutral (4)	Somehow Positive (5)	Positive (6)	Extremely Positive (7)
For me, choosing apparel in this color is.....							

Please indicate your agreement or disagreement with each of the following statements pertaining to your favorite color:

Section 3 Color attractiveness (Ohanian, 1990)	Strongly Disagree (1)	Disagree (2)	Somehow Disagree (3)	Neutral (4)	Somehow Agree (5)	Agree (6)	Strongly Agree (7)
This color is attractive.							
This color is classy.							
This color is beautiful.							
This color is elegant.							
This color is appealing.							
Section 4 Normative color (Hsu, Chang & Yansritakul, 2017)							
Most others who are important to me think I should purchase apparel in this color.							
Most people whose opinions I care about think I should purchase apparel in this color.							
Section 5 Color significance (Funk & Ndubisi 2006; Miller & O’Cass, 2006)							
For me personally, this color is meaningful							

	Strongly Disagree (1)	Disagree (2)	Somehow Disagree (3)	Neutral (4)	Somehow Agree (5)	Agree (6)	Strongly Agree (7)
For me personally, this color is a relevant part of my life							
This color is significant to me							
For me personally, this color is important							
This color has a dominant presence in my life							
I am interested in this color							
This color means a lot to me							
Section 6 Color self-efficacy (Thakur, 2018)							
I feel comfortable with my ability to use the color to achieve the desired look							
I know how to use the color to achieve the desired look							
I have confidence in my ability to use the color to achieve the desired look							

Section 8 Intention to purchase (Han, Hsu & Sheu, 2010)	Strongly Disagree (1)	Disagree (2)	Somehow Disagree (3)	Neutral (4)	Somehow Agree (5)	Agree (6)	Strongly Agree (7)
I am willing to purchase apparel in this color							
I plan to purchase apparel in this color							
I will make an effort to purchase apparel in this color							
Section 9 Extraversion (International Personality Item Pool, 2007) (Goldberg, 1999).							
I feel comfortable around people							
I make friends easily							
I am skilled in handling social situations							
I am the life of the party							
I know how to captivate people							
I have little to say R							
I keep in the background R							

	Strongly Disagree (1)	Disagree (2)	Somehow Disagree (3)	Neutral (4)	Somehow Agree (5)	Agree (6)	Strongly Agree (7)
I would describe my experiences as somewhat dull R							
I don't like to draw attention to myself R							
I don't talk a lot R							
Section 10 Openness to experience (International Personality Item Pool, 2007) (Goldberg, 1999)							
I believe in the importance of art							
I have a vivid imagination							
I tend to vote for the liberal political candidates							
I carry the conversation to a higher level							
I enjoy hearing new ideas							
I am not interested in abstract ideas R							
I do not like art R							

I avoid philosophical discussions R							
I do not enjoy going to the museum R							
I tend to vote for the conservative political candidates R							

Please provide the following information about yourself.

Age:

- 16 to 19 years
 20 to 39 years
 40 to 64 years
 Over 65 years

Highest educational qualification:

- High School
 University/Professional Degree
 Postgraduate

Monthly income (KN):

- 0-2,500
 2,501-5,000
 5,001-10,000
 10,001 – 20,000
 20,001+

Thank you again for your participation and sparing your valuable time to help us filling this questionnaire.

Appendix B: Institutional Review Board Ethics Approval



Qatar University Institutional Review Board QU-IRB

QU-IRB Registration: MOPH-QU-010, QU-IRB, Assurance: IRB-A-QU-2019-0009

January 8th, 2020

Dr. Nelson Olunna Ndubisi
College Business and Economics
Qatar University
Phone: 4403 7148
Email: ndubisi@qu.edu.qa

Dear Dr. Nelson Olunna Ndubisi,

Sub.: Research Ethics Review Exemption
Ref.: Student, Marija Lovric / e-mail: m11804439@student.qu.edu.qa
Project Title: " Color Roles in Apparel Purchase Intentions of Female Consumers and the Moderating Effect of Buyer Personality"

We would like to inform you that your application along with the supporting documents provided for the above student project, has been reviewed by the QU-IRB, and having met all the requirements, has been granted research ethics **Exemption** based on the following category(ies) listed in the Policies, Regulations and Guidelines provided by MoPH for Research Involving Human Subjects:

Exemption Category 2: Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified; and (ii) any disclosure of the human subjects' responses outside the research could reasonably, place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Documents reviewed: QU-IRB Application, QU-IRB Checklist, Research Proposal, Consent form, survey questions, QU-IRB Review Forms, responses to IRB queries and updated documents.

Please note that exempted projects do not require renewal; however, any changes/modifications to the original submitted protocol should be reported to the committee to seek approval prior to continuation.

Note: This approval is subject to ethical regulations in Croatia. QU-IRB will not be responsible for any non-compliance or violation of such regulations by the investigator(s).

Your Research Ethics Approval Number is: **QU-IRB 1203-E/20**. Kindly refer to this number in all your future correspondence pertaining to this project. In addition, please submit a closure report to QU-IRB upon completion of the project.

Best wishes,
Dr. Ahmed Awaisu

Chairperson, QU-IRB



Qatar University-Institutional Review Board (QU-IRB), P.O. Box 2713 Doha, Qatar
Tel +974 4403-5307 (GMT +3hrs) email: QU-IRB@qu.edu.qa