Competent Blue and Exciting Red

Examining the Effect of Logo Colors on Consumers' Brand Attitudes in different Product Categories

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Abstract

Colors have inherent meaning and influence consumers' thoughts, feelings and behavior. Colors are fundamental to brand identity and convey the desired image, much like a carefully chosen brand name and logo. A brand logo can be considered a key element of a company's visual identity, which can affect consumers overall attitude towards a brand by conveying meanings and brand personalities. This study examines which logo colors are appropriate for certain product categories by assessing consumers overall brand attitude and behavioral intentions. Specifically, this effect is analyzed by means of a survey experiment with four studies, distinguishing between a blue and a red brand logo and between two product categories, namely the sports and the insurance industry, and examining differences between Danish and German consumers. The results show that when designing the brand logo, adherence to product category color standards leads to more positive attitudes toward the brand. Therefore, the results of our study contribute to the theoretical literature on logo design as we find empirical evidence that the color of a brand logo has a significant impact on consumers' perceptions and thus on their brand attitude and other behavioral outcomes, such as purchase intent. Specifically, our findings show that brand attitude has a strong mediating effect on the relationship between logo affect and purchase intent. Another interesting finding is that Danish consumers generally perceive the color blue more positively than German consumers. The results of this study provide brand managers with insights into the use of certain colors in brand logos in combination with specific product categories, enabling them to significantly improve consumer-brand relationships by designing their company's logo based on their brand personality.

Executive Summary

Colors have always played an important role in influencing moods, emotions, feelings, and perceptions. As a marketing tool, colors can contribute to the success of advertising campaigns. However, the meaning of colors is contextual and can vary from product category to product category, thus, the impact of colors on consumers' needs to be well understood by marketers.

This paper aims to contribute to a better understanding of how consumer attitudes towards a brand are influenced by the use of different colors in logos, depending on the brand's product category. To this end, we examined the influence of red and blue brand logos of a sports and insurance company on consumers' attitudes and behavioral intentions.

Overall, our study shows that consumers' attitudes are influenced by the color of the brand logo and its perceived congruence with the brand's product category.
First, we find evidence that the colors blue and red in brand logos are associated with certain brand personality dimensions of Aaker's (1997) BPS, namely *Competence* and *Excitement*, respectively. Brand managers can use this knowledge to appropriately adapt logo design to consumer perceptions in order to subconsciously provide customers with an initial image of the brand and its personality.

Second, we find that consumers consider a color more appropriate for a brand logo when the affective attributes of the color, the associated brand personality, and the affective attributes of the brand's product category are congruent. This is especially true for the combination of the color blue with the insurance brand and red with the sports brand, which we find positively influences consumers' brand attitudes.

Third, our research shows that the congruence of the above colors and product categories leads to consumers' more positive feelings as well as higher behavioral intentions, such as higher likelihood of WOM, higher perceived quality, and stronger purchase intention. We also find that the perceived price level for the insurance brand was positively affected by the use of a blue logo, while the sports brand logo was unaffected by the color used.

Fourth, we find that consumers' attitudes toward a brand have a significant mediating effect on the relationship between logo affect and purchase intention, suggesting that a positive logo affect itself does not directly lead to a higher purchase intent, but rather leads to more positive brand attitudes, which in turn lead to higher purchase intention.
In addition, we find that Danish consumers generally have a more positive feeling toward the color blue than German consumers, which is reflected in their higher brand attitude and purchase intention.

Our findings suggest that the use of certain colors in brand logos in combination with certain product categories can lead to a brand's success, as it has a positive impact on consumers' brand attitudes and purchase intentions. Our study provides brand managers with insights into how logo colors influence consumers' perceptions and enables them to design their company's logo to reflect their corporate identity and brand personality, ultimately leading to more positive attitudes towards their brand.

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1. Introduction

Advertising is everywhere and is omnipresent. Today's advertising density is so enormous that consumers are confronted with thousands of advertising and brand messages per day (Simpson, 2017). With more companies than ever before in today's market, it is becoming increasingly difficult, but at the same time important for companies to differentiate their own brand from their competitors (Keller & Richey, 2006). Against this background, the challenges facing effective marketing and branding become clear. Brand managers from all industries trying to vary their marketing tactics, in order to distinguish themselves from competition and to build consumer-brand relationships by engaging their customers emotionally.

Every marketing activity requires the use of so-called design tools. In marketing literature and in practice, color accounts as a very powerful and effective marketing tool. Colors are one of the most effective ways for brands to attract new customers, promote identification with their brand and to activate consumers and to convey emotions due to their inner meaning (Grossman & Wisenblit, 1999; Silayoi & Speece, 2007). The distinctive green label of Heineken, the red color of Coca-Cola, the yellow of Shell and the unique purple of Cadbury have different meanings for different customers and are direct impressions that people associate when they think of the respective brand (Singh, 2006).

Colors can have a decisive effect and influence on people as colors unconsciously generate feelings, evoke associations and arouse sympathies as well as antipathies. Thus, marketers need to consider the different meanings of colors that humans have learned, in part through associative and also evolutionary learning, before working on a company's visual identity, of which color is an important component (Labrecque & Milne, 2012). Colors therefore play a crucial role in a brand's visual identity and increase brand recognition, create a strong bond with a target market and help a brand position itself against the competition (Skorinko et al., 2006).

A study found out that most brand managers choose corporate branding colors according to their personal tastes and preference and are not aware of the great potential of branding colors and their psychological impact on consumers (Gorn et al., 1997). In fact, the choice of color for logo and branding can be crucial for the success and survival of a brand. Given the ease with which companies can digitally customize colors, color becomes an effective tool to influence brand perception.

Brands like McDonald's and Victoria's Secret made use of color as their centerpiece in their rebranding strategies for the creation of a particular brand personality, in order to reach and widen a specific target audience and to also distinguish themselves from other brands.

Every brand identity always includes visual aspects, such as shapes, symbols, numbers or logos. Recent literature indicates that "customers clearly judge a company's image by the design of its logo" (Hynes, 2009, p. 545). Since the logo and its design, among other things, can be considered a success factor for any company, brand managers should carefully consider the logo design, as it is one of the main components of any corporate identity. Thus, logos should not only establish a positive image of the organization, but also help companies to differentiate themselves from the competition (Melewar & Saunders, 2000; Park et al., 2013) and build a relationship with their customers even before marketing campaign is launched (Henderson & Cote, 1998; Machado et al., 2015).

By strictly linking logos with corporate identity management, the core values of a company should be expressed through the logo and be recognizable in the design of the logo. Therefore, the combination of colors and logo is an important aspect for brands to consider when designing their logo, as the color of the brand logo is one of the key elements that influence consumers' reactions to a brand. This is further emphasized by the fact that brand logos are the first thing consumers think of when they think of a company, and that a company's corporate identity color stays with customers the longest (Luffarelli et al., 2019).

Creating a likable and relatable brand personality is an additional effective way to differentiate from competitors, enhance consumer self-expression, and build a relationship between the brand and the consumer (Aaker, 1997; Keller & Richey, 2006). A brand personality that consumers can identify with is crucial as it strengthens brand attitude, can improve perceptions of product quality (Erdogmus & Büdeyri-Turan, 2012), and can even increase brand equity (Valette-Florence et al., 2011). To create and manage successful brands, it is therefore essential to understand how consumers assign brand personality traits to a brand. Even though brand logos can play an important role in the development of brand personality, there are only a few studies that examine this phenomenon (Grohmann et al., 2013; Watkins & Gonzenbach, 2013).
Undoubtedly, the understanding of color meanings can help to build relationships with consumers and visual brand identity.

Our study was inspired by the call to actions made by Labrecque and Milne (2012) to investigate the role of brand personality in different product categories. Current literature, both marketing and psychology research, has investigated the effect of different colors on human behavior and what moods and emotions colors evoke. Based on the review of existing literature about logo design and colors in marketing, we noticed that most studies on logo design are not taking the psychological perspective of colors and the importance of brand personality into their considerations. Although some literature about logo design exists, studying the effect of a logo's naturalness (Henderson & Cote, 1998) or the logo shape (Walsh et al., 2011), there is no study that examines the influence of brand logo colors on consumers brand attitude and other behavioral intentions within different product categories.

We therefore seek to address this identified research gap by combining the literature on color psychology, colors in marketing and brand personality to examine the effects of logo color on consumer brand attitudes within different product categories.
Thus, the purpose of this study is to investigate whether consumers exposed to a brand logo associate personality traits with the brand that are consistent with conventional color associations, as well as to analyze compatibility between colors and product categories and the influence this has on the consumers attitude towards a brand.

Therefore, the research question of this paper is:

How do logo colors affect consumers' brand attitudes in different product categories?

More specifically, we investigate blue and red brand logos within the sports and insurance industry and compare the color perceptions between German and Danish consumers.
To answer our research question, we will first review the existing literature on color psychology, color in marketing and brand personality, and introduce the theory of associative learning. Based on the literature review, we will then develop our hypotheses to be investigated. Subsequently, our methodological approach will be explained, which is followed by the testing of the hypotheses and the analysis of our obtained data. Afterwards we discuss our results and present our managerial and theoretical implications. Finally, we discuss the limitations of our work and give suggestions for future research.

2. Literature Review

In this section, we will first present the existing literature on color psychology, color in general and the influence of colors on human's psychological function. We will also discuss the role of colors in marketing and address brand personality in the context of colors, as well as the logo of a brand as part of corporate identity. This literature review forms the basis for the hypotheses we propose, based on which we can answer our research question and analyze our results.

2.1 Color Psychology

Color psychology is concerned with the study of colors that is one of the determinants of human behavior and cognitive decisions (Whitfield & Wiltshire, 1990). Colors are one of the determining factors of our moods, emotions and behaviors that are not readily apparent, and seem to offer a variety of possible interpretations rather than allowing only one view.
The four basic colors yellow, green, red and blue are in close relation with the body, the emotions and mind, and the balance between the body, emotions and mind correspondingly (Whitfield & Wiltshire, 1990). Colors therefore influence human's behavior depending on age, culture and gender (ibid.).

In the following sections, the phenomenon of color will be explained in more detail. In order to understand the concept of color, it is necessary to show the history and development of evolutionary color biology therefore understand its origins and characteristics. In the further course it will be explained how colors are perceived and which impact colors have on cognition, affect and conation based on several studies.

2.1.1 Color Defined

The question of what color is or what colors are sounds simple, yet it is not easy to answer. Since ancient times, researchers and practitioners from a wide variety of disciplines have been concerned with the subject of color. To this day, the subject has not been exhaustively dealt with, nor is there a uniform picture of color from a scientific point of view (Elliot & Maier, 2014). Colors are used by consumers in their daily life to interpret information. Light and wavelengths determine the color of objects, whereas wavelengths of colors define the hue of a color. Shorter wavelengths create cool

colors such as blue and green, whereas longer wavelengths create warm colors like red and yellow (Babin et al., 2003; S. Lee & Srinivasan, 2010).

Mahnke and Mahnke (1987) and Burnham, Hanes, and Bartleson (1963) describe color as a concept that can or must be approached as different perspectives and scientific disciplines. Color as a psychological phenomenon always has something to do with the person who perceives the color. The perception of color is thus subjective and relative, i.e., it is primarily dependent on the individual itself and the moment in which it is perceived. Therefore, understanding color as a concept reflects that there is no simple, unambiguous meaning of it.

The scientific study of colors requires consideration of the fact that colors vary in several attributes. Previous experimental studies have mostly examined the most important of these attributes, namely hue, saturation and lightness (Fairchild, 2005; Labrecque & Milne, 2012). These three attributes are the most important characteristics for humans in color perception and have an influence on psychological functioning, and therefore on human behavior and cognition (Camgöz et al., 2004).
Hue means the classification of the hue-like wavelength or mixture of a color such as red, green or blue and its relationship to the brightest point of light. When most people hear the word *color*, they think of hue (Elliot & Maier, 2014). Saturation is understood as the color intensity or vividness of the color, for example dull versus rich blue (Labrecque et al., 2013). Lightness or brightness is about distances and is also about the relation between the color sensation and the non-color sensation, i.e., the distance between dark and light or black and white (ibid.).

Human emotions and behaviors can be influenced by colors naturally or socially. Social learning causes the social influences of colors on cognitions and emotions, which means that learned associations with colors develop from the repeated association of colors with certain messages, concepts, or experiences (Wang et al., 2014). On the other hand, there are the biologically based tendencies, the natural influences on human behavior, which refer to the brain's spontaneous and biological responses to colors (ibid.), which will be discussed in more detail below.

2.1.2 Evolutionary Biology Explanation

According to evolutionary biology, color associations arise from genetically anchored responses to color stimuli that are relevant to fitness in an individual's environment (Mollon, 1989). One example

is the color red, which has always been associated with many dangerous phenomena, such as fire or blood (Changizi et al., 2006). In addition, red on the skin indicates anger in humans and serves as a testosterone-based indicator of aggression (Archer, 2006). This association of red and danger may be due to the fact that early societies did not avoid dangerous phenomena in red because their genes were not passed on (ibid.). As a result of such default evolutionary processes, people in contemporary society may have a genetic predisposition to associate red with alertness. In other words, psychologists describe red as a color associated with avoidance behavior.

Red is associated with danger in nonhuman species at least partly due to genetic mechanisms. Studying rhesus monkeys in particular, Khan et al. (2011) found that rhesus monkeys were sensitive to the colors blue, green and red. In their experimental setup with two human experimenters from whom the monkeys could steal food, the monkeys avoided the red-clad experimenter, regardless of the experimenter's gender. This 'market situation' therefore shows that monkeys avoid the color red, which strengthens the argument that avoiding red is a result of humans' evolutionary adaptation. Thus, it appears that the aversion to red has evolutionary roots and thus cannot be explained as a cultural trait.

Color stimuli cause automatic evaluation processes to be triggered in the human visual system. In fact, however, different color calculations are already made at an earlier stage of the visual system. This basic process of evaluation is also found in many animals (Schneirla, 1959). This means that color stimuli are evaluated and activated and then lead to human behavior without being consciously aware of it. In physiological terms and from a psychological point of view, the release of hormones is influenced by colors. Color cognition is associated with neurological functions in which personal experiences are coupled with objectively analyzed facts to elicit neural responses (Kuehni, 2012). In addition, color stimulates the neural pathways in the hypothalamus, pituitary gland and pineal gland, which are responsible for controlling the entire endocrine system (Mahnke, 1996). Through these automatic evaluation processes, different behaviors can be triggered depending on a color's respective communication value.

2.1.3 Color Perception

Every day, humans interact with the colorfulness of the world. Constantly, human visual senses are drawn to competing visual stimuli from surrounding objects (Macpherson, 2012). According to

perception researchers, humans decode at least 40 percent of visual information in everyday life via colors (DiCarlo et al., 2012).

Perception is the attitude that individuals have towards other people and the immediate environment (R. J. Hill et al., 1977). It involves the ability to select, order, and process information in order to incorporate it into ideas about the environment or other people. Colors play a central role in what is ultimately remembered in the flood and inundation of visual stimuli. Colors are usually perceived first, followed by images and only lastly word signs (Elliot, 2015)

Colors have an influence on human's psychological functioning and therefore impact cognition (thinking), affect (feelings) and conation (intentions). In social psychology, cognition is broadly understood to include all processes of thought and consciousness, perception, attention, problem solving and decision making, creativity, memory, and knowledge representation (Elliot & Maier, 2007). The term affect is not used consistently in the literature and is often used as an umbrella term for mental states that include both emotions and moods (Bagozzi et al., 1999). Conation encompasses all practical actions that result from desires, volitions, and intentions (Dröge, 1989; Hilgard, 1980).

The information contained in the colors controls and affects the entire thinking, feeling and acting and therefore have a strong influence on humans. Various psychological factors such as past experiences, education, assumptions and expectations, age, gender, or the effect of first impressions, have a strong influence on the individual's perception (Zadra & Clore, 2011). Colors can evoke different feelings and associations depending on how they are perceived. Associations are mostly ideas and memories of previously perceived things and depend mainly on subjective sensation as well as personal taste (Elliot, 2015). Color perceptions are therefore subjective and relative and dependent on the individual's experiences.

The perceptual process is an unconscious process that involves taking in sensory data from the environment and using the information by the individual to build their own personal reality. Conscious and unconscious reactions are then evoked by the colors. In this context, colors evoke psychological responses such as aggression, happiness, competence, relaxation, excitement, and serenity (Courtis, 2004). Two types of information processing networks influence the emotional reactions in humans, namely the cognitive and affective processing systems (Jung et al., 2014) While the first system involves a conscious process that involves analyzing sensory information to influence

and inhibit the system for processing affective information, the affective system functions unconsciously and reactively. This means that a number of psychophysiological processes are automatically triggered when sensory information is received.

Furthermore, the color combination and the environment in which a color is seen also plays a role and can in turn decisively change the effect of the color (Duyan & Rengin, 2016). Elliot, Maier, Moller & Friedman (2007) state that color effects and meanings are context specific (Elliot et al., 2007). This means that a particular color has different effects on feelings, thoughts, and behaviors in various contexts like performance or relationship context. In the United States, for example, black may be linked with evil and death and leads to aggression in zero-sum competitive contexts, but black may also be associated with eroticism and enhance arousal in sexual contexts (ibid.).

2.1.4 Psychological Effects of Color

The topic of color has fascinated many scientists for decades (Elliot & Maier, 2007). Scientific research on colors and psychology can be traced back to 1810, when the German poet Johann Wolfgang von Goethe published his 'Theory of Colors' (Elliot & Maier, 2014). Goethe (1810) pointed out that colors are a reliable means of communication that can be used to impact physiological reactions, to prompt action, and has an influence on a person's mood by linking color types to particular emotional responses. In his study Goethe (1810) found that colors such as red and yellow evoke positive feelings such as vibrancy and warmth in people. Additionally, Goethe (1810) found that colors such as blue evoke negative feelings such as coldness and anxiousness. Psychiatrist Kurt Goldstein (1942) conducted his own research and observed the relationship between color perceptions and physiological relations (Elliot & Maier, 2014). Goldstein (1942) further elaborated on Goethe's postulates by suggesting that certain colors, e.g., red and green, signal human physiological responses that are reflected in emotional experiences, like negative imaginings, cognitive tendencies, and overt actions. In his research, Goldstein found that the colors red and yellow elicit forceful behavior like anger and aggression, whereas blue and green are closely related to relaxation, calmness and stability (Elliot & Maier, 2014).

Following Goldstein's intuitions and explicitly considering the wavelength of colors, later theorists and researchers claim that colors with longer wavelengths convey a feeling of excitement and warmth, while colors with short wavelengths like green and blue have a calming and cooling effect (Crowley,

1993; Nakshian, 1964). Nevertheless, scientists have shown that colors have an influence on human behavior. These early studies indicate that colors evoke specific responses in the human brain that have an influence on cognition and trigger certain psychological and physiological responses correspondingly to these emotions. Elliot and Maier (2014) supported these findings and found that human cognition is influenced by colors, with red having the highest influence. Other theories on the impact of colors on psychology have focused on human's general associations with colors and how these associations affect cognition, affect, and behavior. The color black is for example connected with aggression and evokes hostile conduct in this context (Frank & Gilovich, 1988; Soldat et al., 1997). Soldat et al. (1997) also posit that blue is associated with sadness and red with happiness, and therefore result in certain cognitive behaviors corresponding to these emotions.

Colors can therefore evoke different associations in people. The following table now shows some common color associations found in research (Table 1). However, it should be noted that color perception is subjective and can be perceived differently from culture to culture.

Most previous studies on color and subjective experience are based on theories rather than experiments focused on solving research questions, e.g., which wall color triggers productivity and alertness in workers (Elliot, 2015). Nevertheless, the above theorists have further shaped the understanding between color and psychological functions.

Color	*Association*	*Literature*
Yellow	*Happy, Cheerful, Optimistic, Pleasant, Friendly, Arousing, Exciting, Joyful*	(Cimbalo et al., 1978; Clarke & Costall, 2008; Collier, 1996; Jacobs et al., 1991; Levy; 1984; Murray & Deabler, 1957; Odbert et al., 1942; Wexner, 1954)
White	*Clean, Pure, Virgin, Simple, Easy, Hygienical, Peaceful, Happy*	(Fraser& Banks 2004; Mahnke 1996; Wright 1988)
Red	*Active, Arousing, Exciting, Stimulating, Attractive, Strong, Dominant, Love, Lust, Angry, Warm, Dynamic, Aggressive, Intense, Passionate, Vital, Lively*	(Adams & Osgood, 1973; Aslam, 2006; Bellizzi & Hite, 1992; Cimbalo et al., 1978; Crowley, 1993; Elliot & Maier, 2014; Gorn et al. 1997; Mandel & Johnson, o. J.; Walters et al., 1982; Wexner, 1954; Wilson, 1966)
Purple	*Luxurious, Authentic, Elegant, Dignified, Stately, Feminine, Authority, Powerful, Anger, Expensive*	(Aslam, 2006; Fraser & Banks, 2004; Jacobs et al., 1991; Labrecque & Milne, 2012; Mahnke, 1996; Mehta & Zhu, 2009; Wright, 1988)
Pink	*Feminine, Warm, Caring, Soft, Romantic, Sensible, Calming , Innocent*	(Clarke & Costall 2007; Fraser & Banks 2004; Mahnke, 1996)
Orange	*Arousing, Exciting, Lively, Extroverted, Sociable, Energetic, Cheap, Disturbing*	(Lane, 1991; Mahnke, 1996; Wexner, 1954)
Grey	*Strong, Exclusive, Success, Luxurious, Lonely, Dependable*	(Jacobs et al., 1991; Labrecque et al., 2013; Lane, 1991)
Green	*Calming, Healthy, Natural, Refreshing, Environment, Happy, Relaxing*	(Aslam, 2006; Clarke & Costall, 2008; Elliot & Maier, 2014; Kaya & Epps, 2004)
Brown	*Serious, Reliable, Supportive, Earthy, Natural, Protective,*	(Clarke & Costall, 2008; Fraser & Banks, 2004; Madden et al., 2000; Mahnke, 1996; Wright, 1988)
Blue	*Cold, Wise, Dependable, High Quality, Intelligent, Trustful, Efficient, Logical, Secure, Wealthy, Secure, Relaxing, Competent, Confrontable, Stable, Protective*	(Bellizzi & Hite, 1992; Clarke & Costall, 2008; Elliot & Maier, 2014; Hynes, 2009; Jacobs et al., 1991; Labrecque et al., 2013; Mahnke, 1996; Murray & Deabler, 1957; Wexner, 1954, Wright, 1988)
Black	*Sophisticated, Glamourous, Powerful, Stately, Dignified, Strong, Masterful, Sad*	(Cimbalo et al., 1978; Fraser & Banks, 2004; Jacobs et al., 1991; Madden et al., 2000; Mahnke, 1996; Odbert et al., 1942; Wexner, 19

Table 1: Color Associations (own depiction)

2.1.5 Colors and Psychological Functioning

The influence of color on psychological function is usually exerted automatically, that is, until a reaction is triggered unconsciously. Since the influence of color is usually unconscious, color effects tend to persist even when they are harmful. Several studies indicate that the emotional state of people has an influence on their psychological function (Jung et al., 2014).

Emotion is a rather complex psychological condition that includes three elements: a personal experience, a physiological response, and a behavioral reaction that is expressed (Mauss & Robinson, 2009). Regardless of the dominant culture, age or gender, emotion expression is largely subjective. Researchers have sought to find universal human emotions across time which include among others the following: anger, amusement, excitement, embarrassment, fear, disgust, happiness, pride, sadness, satisfaction and shame. After the emotions are expressed, a psychological reaction occurs and is followed by a response, specifically the affect or behavior (Jung et al., 2014).

Increasingly, studies indicate that colors influence human behavior differently depending on the prevailing situational conditions and have studied the effects colors have on human cognition, affect and conation. The following shows some studies that have investigated the influence of color on psychological functioning.

Color stimuli can trigger an evaluation process that leads to motivated behavior (Elliot et al., 2007). This can lead to either a positive or a negative behavior, i.e., it can cause an approach reaction or an avoidance reaction. Therefore, positive and negative effects affect the emotional system. Whereas creativity is enhanced due to positive effects, negative effects can limit creative thinking and performance (Aspinwall & Tedeschi, 2010). Results show that pleasurable experiences improve people's ability to work and efficiency.

For example, in performance situations, the color red triggers avoidance motivation, which can affect test performance. In potential mating situations, however, this color has an opposite function in that it increases approach motivation by activating sexual attractiveness (Gnambs et al., 2010). Other studies found evidence that viewing blue or green is a particular benefit for creative performance and that yellow is detrimental for specific types of demanding cognitive tasks (Lichtenfeld et al., 2012; Mehta & Zhu, 2009). In this context, (Akers et al., 2012) discovered that viewing green, compared to viewing gray or red, during a cycling task resulted in lower perceived effort.

Study results increasingly suggest that even inconspicuous color cues have a significant impact on people's behavior in many situations and environments. In this context, the impact of the color red on risk behavior is also exciting, as it is often associated with danger or prohibition. Experimental studies have demonstrated an implicit relationship between red and danger (Elliot et al., 2007). Based on these findings, Bazley et al. (2017) addressed the influence of the color red on individuals' risk behavior in financial decisions and found that the color red reduces individuals' risk behavior.

Viewing red in a performance setting, according to Elliot et al. (2007), may hinder performance on demanding tasks that involve mental manipulation and flexibility. The researchers hypothesized that the color red is linked to failure and danger, and in such contexts elicits an avoidance motivation that impedes achievement. Participants of their experimental studies, who viewed red before or during challenging tasks like completing mathematical problems tended to perform worse than those who viewed other control colors like green (ibid). Other research supports these findings and has also observed this red effect in additional color controls and other types of demanding cognitive tasks such as language skills, creativity, or even attentional interference (Gnambs et al., 2010; Ilie et al., 2008; Lichtenfeld et al., 2009).

Hill & Barton (2005) sought to test whether the color red functions as a dominance marker in competitions and thus enhances performance, which involves various martial arts. The results of the study showed that participants who wore red were more likely to win the competition compared to the competitors who wore blue. The study by Ilie et al. (2008) supported these findings and extended and conducted a study with online video competitions and found out that the teams wearing red were more likely to win virtual matches compared to the blue teams. Several studies like Allen & Jones (2013) support these findings with red enhancing the performance due to a person’s dominance, aggression as well as testosterone.

Thus, wearing red in a sporting context has an influence on an athlete's behavior. However, several studies have also found that only viewing red on opponents can have an influence on behavior and therefore show that there is an ambiguous distinction between wearing and viewing red (Elliot & Maier, 2014).These indicate that target presented in red exhibit are perceived as having a higher degree of dominance, courage, competition, and are also perceived as winning a contest (Furley et al., 2012; Little & Hill, 2007; Sorokowski & Szmajke, 2011) or show a general relationship between

red and anger or aggression (Bagchi & Cheema, 2013; Guéguen et al., 2012). In their studies Ten Velden et al. (2012) examined the interaction of colors in poker. Here they found that players playing with red chips felt a higher sense of dominance and this thus led to higher betting behavior in contrast to participants with blue chips. Players whose opponents played with red chips were found to have the opposite perception and behavior.

In addition to the studies already mentioned in sports, there are also some studies from other fields that investigate the mechanism responsible for the red effect on cognitive performance (Mehta & Zhu, 2009; Moller et al., 2009; Rutchick et al., 2010). Rutchick et al. (2010) were able to show that the color red is cognitively strongly linked to the occurrence of errors. These also find that red is implicitly associated with failure and danger, i.e., negative feelings, in performance situations. Rutchick et al. (2010) showed that a word to be completed that is missing a letter is more likely to result in a negative connotation outcome if it is completed with a red rather than a black pen (fai- as "fail" instead of "fair"). Dukes and Albanesi (2013) found in their study that teachers who grade with a red pen are rated as more negative by students than teachers who use a blue pen. Furthermore, studies show that the hue of the walls in classrooms affects the students' attention, with purple being positively associated with the highest level of attention, followed by blue, green, yellow, and lastly red (Duyan & Rengin, 2016). The study conducted by Stone & English (1998) to determine students' reading behavior found that students' reading mood and behavior is influenced by the color of their environment. The results of the study showed that a blue-colored reading environment produced positive reading behavior and mood and performance in comparison to a red-colored environment.

Additionally, many studies deal with the attractiveness-enhancing effect of red. The color red is thought to have an aphrodisiac effect because it conveys sexuality and romance in the context of heterosexual interactions (Elliot & Niesta, 2008). Studies on color associations showed that people associate the color red with passion, lust, and romantic love, among other things (Kaya & Epps, 2004). For example, Kaya and Epps (2004) reported subjects who associated the color red with Valentine's Day, as well as the shape of a heart or think of underwear.
In their study published, Elliot and Niesta (2008) reported five experiments conducted, which were designed to investigate whether red, compared to other colors, causes men to perceive women as more attractive and appealing. The first experiment showed a significant main effect of the color red. The perceived attractiveness of the moderately attractive woman presented against a red background was

significantly higher than that of the woman presented against a white background. However, this effect was only seen in male participants, as could be shown in a second experiment. In the following experiments, both the brightness and the color tones were varied. There were always significant main effects of the color red for perceived attractiveness, sexual attraction, and desired sexual behavior. In contrast, the assessment of general likability did not yield a significant effect. The woman in the red condition was not rated as friendlier or more intelligent, but she was rated as more attractive and sexually attractive. In addition, men were more likely to desire sexual interaction with this woman. Finally, blue was used as a control color in the last experiment. This time, the color presentation was on a T-shirt. Again, a significant effect in favor of the red condition was found for the variables used in experiment three, as well as for dating intentions.

2.2 Colors in Marketing

Color is omnipresent and serves as a source of information. It is known to have a powerful psychological impact on people's behavior and decisions, and this knowledge is very well utilized by designers and marketers alike. As brain researchers in collaboration with marketing sociologists found out, up to 95 percent of purchasing decisions are controlled by the unconscious mind (Zaltman, 2003).

Marketers tend to use color for advertisements, product and package design and brand logos (Bottomley & Doyle, 2006; Garber et al., 2000; Gorn et al., 1997; Lohse & Rosen, 200; Moreau & Herd, 2010) in order to attract customers' attention, provide information about product characteristics, and differentiate brands from competitors (Grossman & Wisenblit, 1999; Labrecque et al., 2013).

Color causes consumers to perceive advertisement content as more appealing, interesting, and powerful, draws viewers' attention, and promotes favorable attitudes (Fernandez & Rosen, 2000; Gronhaug et al., 1991; Meyers-Levy & Peracchio; 1995). Thus, by increasing the value of perception and memory, color-designed advertising is read 42 percent more often than comparable advertising in black and white (White, 1997).

Additionally, the attraction of attention happens through different contrasts of the colors. Researchers discovered that advertisements with high saturation create emotions of excitement, while ads with high value colors induced feelings of relaxation, both of which positively affected attitude toward the

advertisement (Gorn et al., 1997). High value also produced greater liking for the brand (ibid.). Effective use of color has been shown to increase brand recognition by 38% and ultimately increase consumers' positive attitudes toward the product by 22% (Embry, 1984; Johnson, 1992).

Colors alone account for about 62-90 percent of peoples' evaluation (Singh, 2006) and colors influence emotions and feelings, both positive and negative, and consequently attitudes towards a product. Colors should not simply be chosen arbitrarily in the design process (Gorn et al., 1997).
Therefore, a proper and diligent color selection is extremely important for brands, as it otherwise may cause undesirable opposite effects, just like in the case of Crystal Pepsi, an experiment where the drink was clear and not colored brown like the regular Pepsi drink. This poor color decision resulted in a failed brand strategy as consumers' learned associations were challenged (Garber & Hyatt, 2003). Thus, the choice of a suitable color can contribute significantly to success, while a color not as thoughtfully chosen, can have the opposite effect.

2.2.1 Corporate Visual Identity

Corporate visual identity (CVI) is the graphic design that serves as the foundation for a company's identity and provides recognizability (van den Bosch et al., 2005).
CVI helps to build and maintain its corporate image, in which the color and design of the company logo play a central role (ibid.). In addition to enabling customers to identify a brand and distinguish it from another (Park et al. 2013), CVI serves as a powerful tool for conveying associations between the brand and its essence (Walsh et al., 2010). Further, it is of strategic importance for differentiating companies and helps to build customer loyalty (Hynes, 2009).
CVI encompasses all of the company's visual components, including buildings, merchandise, employee uniforms, documentation, and the company logo, among others. The shape, image, style, and size of the corporate logo, as well as the colors utilized, are all crucial design factors to consider and account to the design level of CVI (Bosch et al., 2005; Hynes, 2009). The logo is the key element of a corporate graphic design system, which, unlike a name, can be skillfully adapted as a company's identity evolves (Gray & Balmer, 1998).

2.2.2 Brand Logo

In today's rapidly changing environment, logos are a critical component for any company to stand out from the competition (Melewar & Saunders, 2000), but also to develop an emotional link with their customers even before a commercial action is carried out (Bresciani & Del Ponte, 2017).

Schechter (1993) defines a logo as the “official visual representation of a corporate or brand name” (Schechter, 1993, p. 33). Brand logos therefore act as a key component of brand identity and are an essential element of CVI (Hynes, 2009; Kohli & Suri, 2002), as they provide instant brand recognition being the primary visual representation of a brand's meaning (Henderson & Cote, 1998). The logo further serves as a differentiator and as a mark of quality. It can be a means of enhancing a company's reputation, as well as simplify the task of formal corporate communications (Hynes, 2009).

From packaging to promotional materials and advertising, logos adorn most direct and indirect forms of a company's communication (Henderson and Cote, 1998; Walsh et al., 2010).
A logo refers to the visual design used by businesses to identify themselves and their products (Imbe & Toffler, 2000). A corporate logo comprises design components such as image, size, and color and is typically a set of visuals, colors, and fonts (Hynes, 2009; Pittard et al., 2007) and can represent the brand name alone or be accompanied by unique visual symbols (Park et al., 2013). Since there are no explicit rules for logo design, the design of a logo can vary greatly from industry to industry.

2.2.1.1 Functions of Brand Logos

According to recent experimental research, "customers make unambiguous judgements about a company's image based on its logo design" (Hynes 2009, p. 545). This effect can transfer from the logo to the company or product (Pittard et al., 2007). As a result, logos can shape customer attitudes, purchase intentions, and brand reputation (Baker & Balmer, 1997; Jun et al., 2008; Müller et al., 2013; van den Bosch et al., 2005).
However, in order to be effective, the logo must act as a signature of the company in that its shape, design, or color clearly associates it with the organization and the values it represents (Hynes, 2009). Therefore, the logo not only serves as an essential identification symbol for companies, products, and organizations (Buttle & Westoby, 2006), but can also evoke positive brand associations in the target audience through the visual and verbal stimulus components (Henderson & Cote, 1998; van Riel & van den Ban, 2001).

Logos create value by enabling stakeholders to recognize and remember the brand and are therefore a factor influencing brand recognition (Hynes, 2009). Hynes (2009) confirms that colors have a great communication value in conveying CVI, with certain attributes clearly being related to specific logo colors and corporate missions. Kohli and Suri (2002) also identify the importance of logos as they

are a means of communicating brand identity and brand image to the audience. Moreover, Gray & Balmer (1998) acknowledge that a logo symbolizes the purpose of the company, and managers must ensure that this is communicated in a consistent manner as it connects the organization to the market. Van den Bosch et al. (2005) further suggest that a company logo or symbol can clarify the characteristics and qualities of a company and can also be associated with the roots of the organization. Coca-Cola and red, Chanel and black, and McDonalds red and yellow are just a few examples of brands with distinctive logo colors that are closely associated with a particular color.

2.2.1.2 Logo Design

Previously, in the study of logo design, scholars mainly examined the roundness (Walsh et al., 2011; Zhang et al., 2006), proportions (Pittard et al., 2007), naturalness and color of icon design (Hynes, 2009; Machado et al., 2015).

Walsh et al. (2010), for instance, discovered that roundness of a logo plays a significant role in consumers' perception. As it can be associated with harmony and naturalness, it creates familiar meanings in consumers' minds that result in more positive evaluations (Henderson & Cote, 1998; Kohli & Suri, 2002). Additionally, studies by Pittard et al. (2007) particularly investigated the extent to which affinity for a certain design feature of the logo, namely proportion, is universal. Goldman (2005) proposes that brands with greater aesthetic appeal are also more likely to promote the formation of emotional bonds between a company and its customers. Studies by Salgado-Montejo et al. (2014) examined the congruence of brand components, namely the font and logo symbol, of well-known logos (e.g., Coca-Cola) and found that congruent design elements in well-known brand logos can lead to higher emotional engagement.

Furthermore, by assessing logos in conjunction with corporate philosophy statements, Hynes (2009) investigated the triadic link - design, color, and evoked meaning. The results indicated that consumers clearly evaluate the firm’s image based on the logo design and have a clear view on which colors are appropriate for different company images.

Grohmann et al. (2013) discovered that font characteristics, such as the font color of a business name used in a logo or on a website, have an influence on the perception of brand personality. As a result, it is critical that the brand logo design reflects the required attributes of the brand personality. Tractinsky and Lowengart (2007) discovered a positive relationship between corporate credibility and design appeal, suggesting another reason for companies to pay attention to how their design choices affect sales in the long run.

2.2.3 Consumer Attitude

Corporate visual identity design elements, like a brand's logo, are critical in developing the perception of a company or brand among consumers, as design has the ability to evoke strong associations and attitudes.

An attitude towards an object is usually defined by psychologists as a "summary evaluation" (Ajzen 2001, p. 28), which means that multiple cognitions and affects combine to produce an overall evaluation "with some degree of favor or disfavor" (Eagly & Chaiken, 1998, p.1). In attitude research, a distinction is made between cognitions and affects**,** as well as between descriptive and mental states (Kock et al., 2016). These are considered in a hierarchically structured network, which can determine in a simplified way how interactions between mental states occur (ibid.). Using these findings from attitude research as a foundation, Kock et al. (2016) developed a destination content model, which conceptualizes and outlines the mental representations consumers have about a destination. The framework consists of a multidimensional cognitive component and an affective component that lead to an overall evaluative cognitive component that coexist, interplay, and influence behavior. The cognitive component includes all associations made with a particular destination, whereas the affective component refers to the overall affect a person has of a particular destination. This does not refer to complex emotions related to a destination, but to a dominant positive and negative affect, i.e., good or bad feelings. Based on the theory of feelings as information, individuals infer attitudes and preferences through heuristics on the basis of the valence of their feelings (Tuan Pham, 2004). In general, this means that consumers use their prevailing positive or negative affect to influence their judgment about, for, in the case our study, a brand logo. The destination affect is also based on appraisal theory (Smith & Ellsworth, 1985), which states that a person's affective reaction towards an object depends on how they cognitively understand it, thus providing a clear link to cognitive components (Kock et al., 2016).

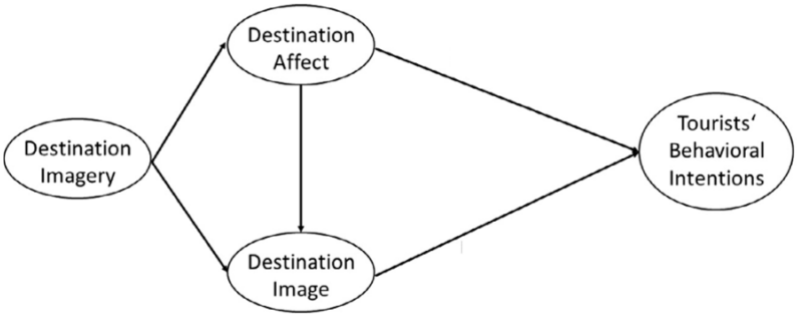

Figure 1: Destination Content Model (Kock et al., 2016)

Therefore, following attitudinal research and Kock et al.'s (2016) destination-content model, we can assume that consumer attitudes towards a brand or a logo are composed of cognitive and affective components, both of which contribute to determining and influencing the consumer's overall attitude towards the brand.

Furthermore, studies have shown that consumers' attitude toward the brand is recognized as an essential element of the customer-brand relationship (Augusto & Torres, 2018; Bartsch et al., 2016) and plays the most important role in forming positive consumer behavior (Ajzen, 1991).

2.2.4 Logo Affect

Brand affect can be used as a generic term for all mental processes such as feelings, attitudes and moods (Bagozzi et al., 1999). Emotions are mental states of readiness that arise from a cognitive evaluation of thoughts or events such as a smile. Attitudes can be defined as evaluative judgments, i.e., good-bad reactions, rather than specific states of emotion such as sad or happy (ibid.). According to Kumar Mishra et al. (2016) brand affect refers to consumers' positive or negative feelings toward a brand. Affect is influenced by the individual's cognitive understanding of the object. If consumers have a good feeling and impression regarding a brand, this results in a positive brand affect. However, if consumers are dissatisfied with a brand, it results in a negative brand affect which consequently leads to a lower brand evaluation (Kumar Mishra et al., 2016). Thus, the experienced affect towards a brand is crucial for the evaluation of the brand.

As the objects of our study are brand logos, we therefore adopt the concept of brand affect and speak of logo affect, i.e., the either positive or negative attitude consumers have towards a brand logo.

2.2.5 Brands Associations

A brand's visual identity serves as a powerful tool for conveying associations between the brand and its essence (Walsh et al., 2010). Visual attributes, such as colors and its meanings become significant to a brand's identity and help facilitate the depiction of carefully crafted brand associations centered around brand personality (Simonsen & Schmitt, 1997).

Keller (1993) defined brand associations as information in memory related to the center of a brand and stated that purchase choices and the establishment of brand preferences are only feasible when consumers form favorable, strong, and distinctive connections (Jeon & Baeck, 2016). Building an

image that evokes emotions in customers to differentiate a brand from its competitors contributes to good brand association and also has the advantage of building brand loyalty among consumers.
Previous research has shown that colors assist people in identifying items in their environment (Nitse et al., 2004; Singh, 2006). In particular, consumers tend to build brand associations triggered by the referential meaning of the color in their memory (Labrecque & Milne, 2012). The brand's color identity, including a symbolic color or logo, symbol, and font, thus creates an emotional brand experience and a positive brand attitude (Jin et al., 2019).
Furthermore, there is growing evidence that brand assessments are derived not only from objective judgments, but also from affective reactions to the brand, such as feelings and emotions encountered during exposure to brand communication and triggered by the aesthetic qualities of the brand product or the brand's identity markers (Machado et al., 2015; Pham et al., 2001).

When consumers are required to make an assessment of an object before receiving detailed information about it, studies have discovered that the object's appearance, including the logo, is likely to lead to the creation of an initial affective reaction (Yeung & Wyer, 2004). This affective reaction might consequently be used as a basis for further evaluations of the consumer, regardless of the criteria they may use (ibid.). Thus, emotional response is one way in which the logo helps to distinguish the brand from others (Pittard et al, 2007).
Conversely, affective reactions to a logo are crucial as they can be conveyed from identity features to the product or company without the need for processing (Henderson & Cote, 1998; Schechter, 1993).

2.2.4.1 Associative Learning Theory

Color associations have been studied extensively in the psychological literature (Bellizzi & Hite, 1992), and recent work has provided support for the idea that the creation and activation of color associations can be explained by models of semantic memory, such as the associative learning theory (Bower, 1981; Elliot et al., 2007; Elliot & Niesta, 2008).

According to this theory, the association between two items is generated via repeated combinations, leading to a development of color preference for a product based on previous experiences with it (Labrecque et al., 2013; Mehta & Zhu, 2009). For example, people have a tendency to choose consistent color-emotion pairings, such as yellow and happy (Collier, 1996; Levy, 1984).

Individuals retain semantic information in a complex network made up of conceptual nodes and links; the nodes represent concepts, while the links indicate the strength of their relationships (Anderson, 1983). When information is delivered, related nodes are engaged, and this activation spreads across the network's linkages to other nodes (Collins & Loftus, 1975). Each encounter either creates a relationship or reinforces existing ones (Labrecque & Milne, 2013). Individuals' network associations are developed and modified throughout the course of their life as they come across color pairings with particularly relevant messages, thoughts, objects, and events. As a result, a brand logo's color should elicit associated color associations, such as trustful and competent that add to the perception of the brand personality, such as competence.
According to Labrecque and Milne (2012), when a consumer is then exposed to a brand element such as a logo for a familiar brand, these two signals, the color and brand, are triggered in memory and impact brand perception simultaneously. Color can therefore be used as a retrieval technique as it helps the brain recall previously taught connections (Bottomley & Doyle, 2006).

Consumer color associations for product categories may well be shaped by marketing activities in many instances. Food taste expectations are shaped by marketers who add brown to cola drinks and green to mint-flavored items. Green has also been embraced as a marketing strategy for ecologically responsible consumerism (Labrecque & Milne, 2012). Light pink has taken on a special importance as the iconic hue of the Susan G. Komen for the Cure Breast Cancer Research Foundation (ibid.).

Colors are frequently connected with certain brands and products in a consumer's memory network due to strong links between items and a category. Brands in the same product category become associated and have comparable color features, strengthening the color-product-category linkage (Bottomley & Doyle, 2006). Brands that share color features allow consumers to process information more quickly and ease the identification of belonging to the same product category (Garaus & Halkias, 2020). Processing fluency has been shown to have a beneficial impact on consideration set membership (Nedungadi, 1990). As a result, Labrecque and Milne (2013) have argued that brands sharing visual characteristics, such as logo color, should simplify processing and category membership identification.

2.2.4.2 Anthropomorphism

The theory of anthropomorphism aims at understanding how consumers view brands as having a personality (Freling & Forbes, 2005). Anthropomorphizing is known as the process of applying human attributes to inanimate objects (Aaker, 1997; Fournier, 1998). Humans have a long history of humanizing inanimate objects, intuitively assigning human-like traits to objects for various reasons (Freling & Forbes, 2005). Aggarwal & McGill (2007) examine the importance of anthropomorphism in three varied ways. First of all, it allows consumers to develop a relationship with the brand. Secondly, anthropomorphism helps consumers make sense of their world and finally, it serves as a way to see everything in their world as human-like. Marketers urge customers to give brands human characteristics because when individuals assign brands a form of personality traits, they start building relationships with the brands (ibid.).

2.3 Brand Personality

Through colors and the emotions and associations associated with colors, a brand attributes characteristics and values to itself. Therefore, when deciding on the choice of colors, careful attention should be paid to what is indirectly communicated by the chosen colors, as a clearly defined appearance also contributes to identification with the company or brand (Labrecque & Milne, 2013). Creating a likable and relatable brand personality is an additional effective way to differentiate from competitors, enhance consumer self-expression, and build a relationship between the consumer and the brand (Olsen & Allen, 1995).

The idea that brands have personalities, i.e., attributing human attributes to them in the same way that people do, was first proposed by Gilmore in his 'Theory of Animism' at the turn of the twentieth century (Gilmore, 1919). According to this hypothesis, humans have a natural desire to imbue items with human characteristics and so animate them, as this simplifies contact with the objects. Aggarwal and McGill (2007) have explored the importance of animism as it allows consumers to develop a relationship with the brand and serves as a way to view everything in their world as human-like. As a result, the brand personality emerges in the minds of consumers and serves as a metaphor for the brand's construction (Labrecque &Milne, 2013).

The early research of the symbolic aspect of brands eventually led to the concept of 'Brand Personality' (Aaker, 1997; Plummer, 1984). Brand personality is defined as "the attribution of human

characteristics to brands" (Aaker, 1997, p. 347). According to early studies, by using certain personalities of brands, consumers cannot only express themselves, but also an individual's ideal self (Malhotra, 1988). As a result, advertisers frequently employ brand personality to develop an effective approach for their target audience, as it further enhances brand loyalty, can improve customers perceptions of product quality and appearance (Erdoğmuş & Büdeyri-Turan, 2012) and can even strengthen brand equity (Valette-Florence et al., 2011).

The establishment of a theoretical framework for brand personality (Aaker, 1997) has enabled advertising researchers to investigate the symbolic meaning and function of brands in customer behavior in a new way.

Aaker (1997, p. 347) proposes a Brand Personality Scale (BPS) based on the Big Five human personality traits *Sincerity, Enthusiasm, Competency, Sophistication,* and *Ruggedness,* defined in terms of using 42 personality traits (see Appendix 1).

Sincerity denotes a brand that is honest, cheerful, wholesome and down-to-earth. Excitement characterizes a spirited, imaginative and daring brand, whereas *Competence* represents a reliable and dependable brand (Aaker, 1997). Sophistication and Ruggedness have a vaguer description, yet they may be described by traits like femininity and elegance, and masculinity and toughness, respectively (Aaker, 1997).

According to research, every direct or indirect interaction a consumer has with a brand has an impact on brand personality perception and creates and shapes its own personality (Aaker, 2005; Plummer, 1985; Shank & Langmeyer, 1994). Direct influences come from the personality features of the people affiliated with the brand, whilst indirect influences come from product-related attributes (Aaker 1997). For example, possible direct determinants of brand personality include a brand's country of origin or typical users, whereas brand personality can arise indirectly among others through the brand name and logo, product quality, and price level or communication style (Kim et al., 2001).

In the US for instance, the beverage brand Coca-Cola is perceived as "cool, all-American and real", whereas the competing brand Pepsi is characterized as "being young, exciting, and hip" (Aaker 1997, 348).

Advertising, which expresses the brand's meanings and claim, may aid in the development of a brand's personality and the communication of meanings to customers (Batra et al., 1993).

Brand personalities can further ease the interaction between the consumer and the supplier, and signal certain value attitudes to the buyer, which on the one hand, form the foundation for a relationship between the consumer and the brand and on the other hand, enable the buyer to stand out from his surroundings (Davies & Chun, 2003; Fournier, 1998). As a result, it's reasonable to infer that advertising and its components play an important part in establishing and preserving brand personality (Batra et al., 1993). To create and manage successful brands, it is therefore crucial to understand how consumers assign brand personality traits to a brand. By presenting their products and services to consumers, marketers attempt to build a brand personality through the different brand elements such as packaging and logo (Batra et al, 1993). These brand elements are in turn interpreted by consumers through their own experiences, perceptions, and associations (Plummer, 1984).

3. Hypotheses Development

In this section, we will present our theoretically derived hypotheses. The purpose of this section is to use our literature review on color psychology, brand personality, associative learning theory, consumer attitudes, and logo design to address our research question.

3.1 Logo Colors and Brand Personality Traits

To show how color influences consumer perceptions of brands, we have transferred findings from previous work on color associations to the elements of the brand personality scale (Aaker, 1997) and developed hypotheses for the dimensions. As most research in color psychology has examined the colors red and blue and the emotions they elicit, the present study focuses on these two colors. Furthermore, these colors have opposite effects. As previously described, red is counted among the warm colors that convey aggression, excitement, and warmth, among others. Blue is counted among the cold colors and is associated, among other things, with calm, peace, familiarity and security (Elliot, 2015; Labrecque & Milne, 2012). Both colors are among the primary colors and are the most familiar to Western society, as they are the most commonly used colors in a business context (Duarte, 2008).

Since previous research has shown that there is often confusion between hue, lightness, and saturation in an experiment (Elliot et al., 2015), varying only one attribute at a time is crucial. For this reason, we decided to vary only the 'hue' attribute.

3.1.1 Blue Logo and Personality Traits

According to the theory of associative learning, exposure to certain colors evokes certain associations in memory (Baxter et al., 2018). The association between the color and its meanings is then activated, leading consumers to connect the color blue with the associated personality trait.

The color blue is frequently connected with competence and evokes feelings of relaxation and comfort (Labrecque & Milne, 2013). It has calm, peaceful, and soothing emotional connotations (Clarke & Costall, 2008) and is further associated with strength (Karp & Karp, 1988).

Various studies have demonstrated a connection between blue and intelligence, trust, efficiency, duty, and logic (Fraser & Banks 2004; Mahnke, 1996; Wright, 1996). It is also seen as a secure and wise color (Fraser & Banks, 2004; Labrecque & Milne, 2013).

According to Bottomley and Doyle (2006), the blue color is associated with functional associations of a company and its products. Specifically, Labrecque and Milne (2012) and Ridgway and Myers (2014) found the color blue to be most strongly associated with the competence personality dimension on Aaker's (1997) BPS. Blue was associated with eight of Aaker's brand personality traits in the *Competence* dimension, including the following: reliable, hardworking, secure, intelligent, corporate, successful, leader and confident (Labrecque & Milne, 2012). This further reinforces Bottomley and Doyle's (2006) classification of blue as a functional color related with functional advantages such as competence, durability, and dependability. In addition, studies by Hynes (2009) have demonstrated an association of blue in logos with the meanings of "protective" and "stable" (Hynes, 2009).

We extend this view and assume that the blue brand logos evokes similar associations. These elicited color associations, such as e.g., blue and trustworthy, in turn contribute to the perception of the brand personality. In particular, we assume that the associations with the color blue in a brand logo are linked to the brand personality dimension *Competence.* As outlined in the literature review, this dimension of brand personality is itself multi-dimensional. Thus, we will measure H1 indirectly through testing the following four personality traits.

More specifically, we hypothesize:

H1: A blue logo is associated with the BPS dimension *Competence.*

H1a: A blue logo is perceived as more competent than a red logo.

H1b: A blue logo is perceived as more trustworthy than a red logo.

H1c: A blue logo is perceived as more dependable than a red logo.

H1d: A blue logo is perceived as more secure than a red logo.

3.1.2 Red Logo and Personality Traits

Warm hues, such as red, orange, and yellow, have many associations. They have been shown to elicit active emotions on a variety of occasions (Clarke & Costall 2008, Levy 1984). In particular red, known symbolically as a dominant and vibrant color, is frequently regarded as the most active color and creates an exciting and stimulating color effect (Bottomley & Doyle, 2006; Clarke & Costall, 2008; Labrecque & Milne, 2013).

Red has both positive and negative connotations such as active, strong, passionate and warm on the one hand (Kargere, 1979; Karp & Karp, 1988; Labrecque & Milne, 2012), as well as aggressive, bloody, angry and intense on the other hand (Clarke & Costall, 2008; Labrecque & Milne, 2012; Mahnke, 1996). Based thereon, Labrecque & Milne (2012) also found a positive relationship between red and the brand personality dimension *Excitement* in their research.

Studies by Hamid and Newport (1989) for instance found that children's hand strength was dependent on room color, with stronger hand strength in a red room and lower hand strength in a blue room. These findings support the notion that cool colors like blue are calming whereas warm colors are stimulating. Thus, according to their findings, reds make people more active, and people are calmed by blues.

Human physiology, such as heart rate and blood pressure appear to be also affected by color. Abbas et al. (2005) investigated the impact of color and light on physiological states and discovered that red causes an increase in heart rate, implying that red is distressing. Whereas, under the blue conditions, the participants' heart rates decreased slightly, so blue can be considered calming.

In general, warmer colors are associated with feelings of arousal and elation, while cool colors have the opposite effect, evoking feelings of relaxation (Lee & Rao, 2010).

Based on the theory of associative learning and several studies investigating the effect of red on human's cognition and behavior (Elliot, 2015), we therefore hypothesize that when consumers are confronted with a red brand logo, associations between red and its meanings are evoked in memory. More specifically, we therefore expect that a red-colored brand logo evokes brand personality associations related to the brand personality dimension "excitement". Again, this dimension of brand personality is itself multi-dimensional, so we measure H3 indirectly by testing the following four personality traits.

Thus, we hypothesize:

H2: A red logo is associated with the BPS dimension *Excitement*.

H2a: A red logo is perceived as more energetic than a blue logo.

H2b: A red logo is perceived as more aggressive than a blue logo.

H2c: A red logo is perceived as warmer than a blue logo.

H2d: A red logo is perceived as more exciting than a blue logo.

3.2 Congruence of Color and Product Category

A previous study has shown that when the color of a logo fits the product type, consumers perceive the brand more positively and are more likely to respond favorably (Bottomley & Doyle, 2006). Built upon social psychology, the concept of congruence is often used in marketing and advertising to imply perceptions of similarities (Osgood & Tannenbaum, 1955). According to Bottomley and Doyle (2006), products and colors have connotative meanings, and the more similar the connotative meanings are, the more suitable a certain color choice for a product is. The effect of congruence is connected to individuals' need for structure, since incongruence is a type of uncertainty that occurs when the connoted meanings do not fit (Van Rompay et al., 2010). Moreover, incongruence may have a detrimental impact on customer responses, since consumers are less willing to investigate the product further (Bottomley & Doyle, 2006).

From the consumers' viewpoint, visual cues have a great influence on the image. As a result, they emphasize the significance of coherence between visual aspects linked to verbal information that is provided (Yuwei et al., 2016). A high level of visual congruence in a product's visual appearance favorably affects customers' responses to a product (Bottomley and Doyle, 2006; Veryzer, 1993) and leads to a favorable influence on consumers' attitudes about products (Bottomley & Doyle, 2006; Van Rompay et al., 2010; Walsh et al., 2011). Furthermore, visual stimuli have an influence on the consumer's buying behavior, which is crucial in a purchase decision (Clement, 2007), since it has been demonstrated that customers are ready to spend more for products where visual features are congruent (van Rompay & Pruyn, 2011).

The study by Bottomley & Doyle (2006) has examined the appropriateness of colors and brand logos from the perspective that brands belong to two categories: functional brands and sensory-social brands. Functional brands solve consumers' utilitarian problems and needs, whereas sensory-social brands comprise the fulfillment for sensory pleasure needs (ibid.). The researchers hypothesized that the color blue, associated with trustworthiness and reliability, is more appropriate for functional brands, while the color red, associated with excitement, power, and joy, is more appropriate for sensory-social brands (Bottomley & Doyle, 2006). Their results showed increased positive affective response when the logo's hue was congruent with product type (ibid.).

Based on the assumption that color appropriateness differs as a function of product category, research by Hanss et al. (2012) has investigated which colors are perceived to be appropriate for different car types. They hypothesized that consumers associate different colors with different affective qualities

and that the appropriateness of a color for a product depends on whether the color's affective qualities match those of the product. Their results confirmed their assumptions and showed that color appropriateness varied according to car type, namely depending on how congruent affective qualities of colors were with affective qualities of the car type (Hanss et al., 2012).

Ruth (2001) also discovered that emotion-category congruence, i.e., the degree to which a brand's value proposition reflects the emotions associated with product usage, enhances brand evaluation and leads to favorable consumer attitudes toward the brand. Lee and Labroo (2003) differentiated between perceptual and conceptual fluency, which they identified as "the ease with which the target appears in consumers' minds and relates to the processing of meaning" (Lee & Labroo, 2003, p. 151). Like perceptual fluency, conceptual fluency leads to more favorable brand attitudes.
Thus, based on existing literature, we believe that the logo design of brands in different product categories plays a crucial role in consumer's overall evaluation and attitude towards a brand. As a result of this, we may deduce that congruent color-product groupings are processed more quickly, and hence are preferred and regarded as more suitable than incongruent combinations (Lewis & Walker, 1989).
In particular, our hypotheses investigate whether consumers view a color as more appropriate for a logo when brand personality, color associations and product category are congruent.

Thus, we hypothesize:

H3: Congruence between color and product category affects consumers' attitude towards the brand.

3.2.1 Brand Attitude

Following attitudinal research and Kock et al.'s (2016) destination content model, we can also assume that consumer attitudes toward a brand are composed of cognitive and affective components, both of which contribute to determining and influencing the consumer's overall attitude towards the brand.

Furthermore, studies have shown that consumers' attitude toward the brand is recognized as an essential element of the customer-brand relationship (Augusto & Torres, 2018; Bartsch et al., 2016) and plays the most important role in forming positive consumer behavior (Ajzen, 1991).

Existing research has well documented a positive relationship between attitude and behavior in advertising (Ajzen & Fishbein, 2005; Mackenzie et al., 1986; Muehling, 1987). Attitudes toward a single ad can influence attitudes toward brands and purchase intentions, which ultimately influence product sales. CVI and advertising are both symbolic representations of a brand and its products. Numerous studies have examined and confirmed the relationships between attitudes about advertisements and attitudes about brands and certain behavioral outcomes (Muehling, 1987; Shimp, 1981)**.**

Jun et al2008) show that the affect towards the logo has an influence on the attitude towards the logo and subsequently the attitude towards the company and the purchase intention. When new brands, however, are developed, i.e., when a new firm is founded, there is a lack of brand equity. As a result, the logo becomes a critical component of the brand strategy for creating affect and trust (Machado et al., 2015).

Insurance Industry

As research has shown, the insurance industry, more than any other financial industry, is based on trust (Guiso 2012; Lee & Labroo, 2003; Schanz; 2019). Without trust, it is very unlikely that individuals would decide to purchase an insurance service (Guiso, 2012; Sapienza, & Zingales, 2008). While the importance of insurance is widely recognized (ibid.), surprisingly very little has been documented about what exactly promotes trust in insurance. Considering the importance for the understanding of trust in insurance, an appropriate choice of color of the logo is therefore a beginning factor that could have an influence.

Based on prior studies on colors and its associations (Fraser & Banks, 2004; Hynes, 2009; Mahnke, 1996) we assume that due to the conceptual fluency of the congruent color-product matching of the insurance industry and the color blue, the company’s brand logo has an effect on the brand attitude. In particular, given the congruence of affective qualities of blue and affective qualities of an insurance company, a blue-colored insurance brand logo will lead to a more favorable brand attitude.

We therefore hypothesize:

H3.1: Effect of Color and Product Congruence on Brand Attitude of Insurance Brand

H3.1a: The blue insurance logo has a higher brand attitude than the red insurance logo.

H3.1b: The blue insurance logo has a higher brand attitude than the blue sports logo.

Sports Industry

Several studies have already established a link between the color red and sports and performance. Research by Attrill et al. (2008) has investigated the effect of the color of sportswear on the long-term performance of various combat sports. They found that red-wearing teams had the best home record in their home league table, confirming that wearing red enhances performance in a variety of competitive contexts.

Studies of Hill & Barton's (2005) suggest that wearing red may also provide an advantage in team sports. They investigated the influence of color on the outcome of physical contests and showed that, across a range of sports, wearing red is consistently associated with a higher probability of winning (ibid.)

In nature, red represents dominance and testosterone in animals, and in humans this is reinforced by cultural symbols such as warning signs and stop signals. This warm and positive color is associated with our need to survive and signifies strong and powerful energy. Hence, it motivates and helps the wearer to act and win, qualities that lead to success. It has been found that red subconsciously boosts the player's confidence and also affects his opponents (Pryke, 2009; Setchell et al., 2005). Results of several studies have proven the importance of the color and its connection with success in sports (Elliot & Maier, 2014;. Hill & Barton, 2005).

Based on the above findings, and the correspondence of affective qualities of the color red, such as stimulating and energetic, with the affective qualities of the sports industry, we extend this line of reasoning and propose that a red-colored brand logo of a sports brand leads to a more favorable brand attitude.

Thus, we hypothesize:

H3.2: Effect of Color and Product Congruence on Brand Attitude of Sports Brand

H3.2a The red sports logo has a higher brand attitude than the blue sports logo.

H3.2b The red sports logo has higher brand attitude than the red insurance logo.

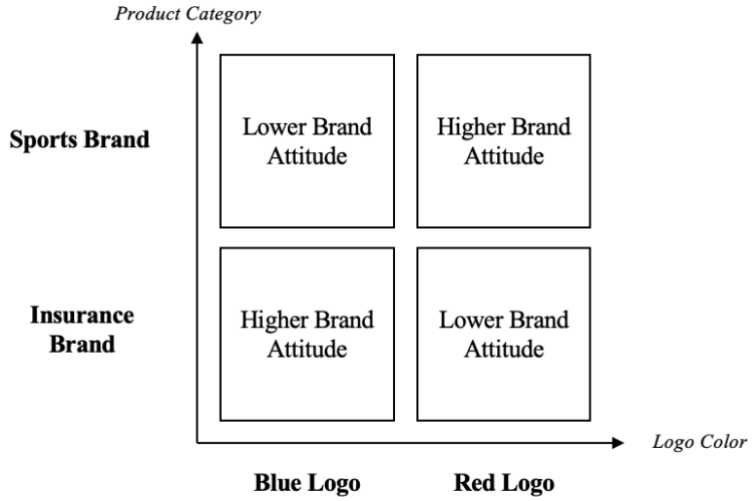

Figure 2: 2 x 2 Matrix of Brand Attitude (own depiction)

3.2.2 Logo Affect

As previous studies have shown, there is a relationship between the characteristics of a product and the affective reactions or symbolic meanings associated with a particular color (Huang & Lu, 2016). Chaudhuri & Holbrook (2001) define affect towards a brand as the potential of a brand to evoke a positive emotional response in consumers as a result of its use, whereas this emotional experience builds a relationship between brand and consumer. This relationship develops through a strong connection based on the evaluation of attributes of the brand (ibid.). As our object of analysis is a brand's logo, we therefore speak about logo affect.

While we acknowledge that cognition takes place when consumers evaluate how they are feeling about a brand, we would like to highlight the particular importance of logo affect in this context. Current research focuses on how affective states influence our behavior and decision making (Kock et al., 2016). Additionally, Evans (2008) and Kumar Mishra et al. (2016) also emphasizes the

importance of emotion in consumers' decision making and feelings about a brand, which are considered of relevance in understanding how the color of brand logos used by various product categories affect consumer attitudes.
In our study and research, we are focusing on logo affect, as colors in a brand logo can already be seen as a critical factor in the overall assessment of a customer about a brand.

In addition, studies by Bottomley and Doyle (2006) have shown that both colors and products have connotative meanings, i.e., a set of associations and overtones, and the stronger their similarity, the more appropriate a color is for a product or brand. A precursor to the investigation of Bottomley & Doyle (2006) is the work of Walker et al. (1986), who examined why some fonts are better suited to particular goods than others. They discovered that a font's suitability is influenced by how closely it shares fundamental qualities with the concept it symbolizes.

A study by Van Rompay and Pruyn (2011) has explained the positive effect of congruence on consumer evaluations by brand credibility. When consumers perceive congruence among the various marketing mix elements, they consider the brand or product more credible (Reber & Schwarz, 1999), which improves their evaluation of the product (Erdem & Swait, 2004). Since congruent color-product combinations are processed more fluently, they are more favored and evaluated as more appropriate than incongruent combinations.
Based on these considerations, we assume that a congruent combination of brand logo color and product category leads to a more fluent processing and thus to higher likability and more appropriate evaluation.

We therefore hypothesize:

H4.1: Effect of Color and Product Congruence on Logo Affect of Insurance Brand
H4.1a: The red insurance logo has a higher logo affect than the red insurance logo.
H4.1b: The blue insurance logo has a higher logo affect than the blue sports logo.
H4.2: Effect of Color and Product Congruence on Logo Affect of Sports Brand
H4.2a The red sports logo has a higher logo affect than the blue sports logo.
H4.2b The red sports logo has a higher logo affect than the red insurance logo.

3.2.3 Perceived Quality

Perceived quality is defined as the consumer's judgment about a product's overall excellence or superiority (Aaker & Jacobson, 1994; Zeithaml, 1988). It can be rather conceptualized as a higher-level perceptual abstraction, rather than a concrete attribute (Zeithaml, 1988).

According to Aaker & Biel (1993), perceived quality may impact brand image directly or indirectly through the construct of perceived value or brand attitude. Although brand attitude and perceived quality are often confounded due to similar measures, brand attitude is considered a more complex construct than perceived quality because it contains both affective and cognitive elements. For example, emotions evoked by an advertisement may influence brand attitude, but probably not perceived quality (ibid.).

Sethuraman and Cole (1997), for example, discovered that perceived quality accounts for a significant amount of the price premium consumers are willing to pay for national brands. The idea that strong brands add value to customers' purchase evaluations is based on the perceived quality of items and services. Studies by Jacobs et al. (1991) on colors and their meanings have demonstrated a relationship between black and perceptions of expensive and powerful and blue, among others, of high quality.

According to Jacoby et al. (1971) consumers may employ informational cues, such as intrinsic and extrinsic cues, that signal quality and to construct descriptive ideas about items. Whereas intrinsic characteristics cannot be altered without changing the nature of the product itself, such as color or texture of the product, extrinsic attributes are product-related but not part of the physical product itself and include examples such as price and brand name (ibid.). These beliefs, in turn, may influence evaluation and decision-making.

In this context, Aaker & Biel (1993) consider the brand name as a subordinate extrinsic attribute. A company's brand name contains specific information about the product for the consumer and thus serves as an extrinsic attribute for a set of intrinsic attributes. Building on this, we extend this argument to propose that the color of the brand logo and further, the congruence of color, associated brand personality traits, and product category act as a similar extrinsic signal. Since it contains specific information about the product for consumers, which in turn influences their individual perception of this brand, we believe that a greater congruence of logo color and product category leads to a higher perceived quality.

Thus, we hypothesize:

H5.1: Effect of Color and Product Congruence on Perceived Quality of Insurance Brand

H5.1a: The blue insurance logo has a higher perceived quality than the red insurance logo.

H5.1b: The blue insurance logo has a higher perceived quality than the blue sports logo.

H5.2: Effect of Color and Product Congruence on Perceived Quality of Sports Brand

H5.2a: The red sports logo has a higher perceived quality than the blue sports logo.

H5.2b: The red sports logo has a higher perceived quality than the red insurance logo.

3.2.4 WOM Behavior

Word of mouth is the "informal communication with other consumers about the ownership, use, or characteristics of particular goods and services and/or their sellers" (Gremler et al., 2001, p. 44). Oftentimes, consumers tend to rely on WOM to acquire information about consumption, develop attitudes toward brands, or make purchase decisions (Sundaram & Webster 1999).

The importance of word of mouth in the marketplace as affecting customer attitudes and purchasing behavior has increasingly been recognized (Bickart & Schindler 2002; Herr et al., 1991). Lorenz (2009) refers to brand personality being a determinant of the consumer-brand relationship and confirms that the strength of brand personality has a decisive impact on consumer purchase and recommendation behavior, satisfaction, and devotion. Furthermore, the strength of brand personality also increases the interdependence between consumer and brand (ibid.). In addition to that, according to Aaker (1997), consumers' brand attitude is influenced by different items, such as brand characteristics, brand attachment and congruence. In order to foster consumer commitment to a brand, it is important to achieve a positive attitude and strong brand loyalty. Razak et al. (2019) point out that repurchase intention and word-of-mouth are impacted by brand awareness, with brand attitude having a moderating effect.

In addition to that, since stimulus congruence has a positive effect on consumers' attitudes, congruence among brands' products and its visual element are essential, as logo colors should be associated with the brand's values (Van Rompay et al., 2010).

Based on these results, we extend this line of reasoning and propose that logo color and product category congruence, which has a positive effect on consumer attitudes, leads to a higher likelihood of WOM than incongruent brand logos.

Thus, we hypothesize:

H6.1: Effect of Color and Product Congruence on WOM of Insurance Brand

H6.1a: The blue insurance logo leads to a higher WOM behavior than the red insurance logo.

H6.1b: The blue insurance logo leads to a higher WOM behavior than the blue sports logo.

H6.2: Effect of Color and Product Congruence on WOM of Sports Brand

H6.2a: The red sports logo leads to a higher WOM behavior than the blue sports logo.

H6.2b: The red sports logo leads to a higher WOM behavior than the red insurance logo.

3.2.5 Perceived Price

Price is an important market cue, being present in every market transaction (Lichtenstein et al., 1997), and researchers argue that it should move into a strategic tool capable of changing customer behavior (Piercy et al., 2010).

Studies have investigated the role of selected price perceptions, finding them to be related to certain consumer behaviors such as brand loyalty (Garretson & Burton, 2003; Manzur et al., 2011). Thus, price perceptions seem to constitute an important determinant of consumer behavior.

Huber and McCann (1982) found effects consistent with the hypothesis of reciprocal inferences regarding price and taste quality. To avoid dissonance, cars perceived as high quality are thus expected to cost more and vice versa. In addition to that, Erickson and Johansson (1985) have investigated the role of price in product evaluations. It was found that due to the existing consonance, price beliefs both positively influence and are influenced by beliefs about a brand's quality, so price can serve well as a proxy for perceived quality and is positively related to attitude through this relationship.

Based on these findings, we extend our hypothesis and believe that congruence and consonance between brand logo color and product category will act in a similar manner by positively impacting consumer's brand attitude. More specifically, we hypothesize:

H7.1: Effect of Color and Product Congruence on Perceived Price of Insurance Brand

H7.1a: The blue insurance logo has a higher price perception than the red insurance logo.

H7.1b: The blue insurance logo has a higher price perception than the blue sports logo.

H7.2: Effect of Color and Product Congruence on Perceived Price of Insurance Brand

H7.2a: The red sports logo has a higher price perception than the blue sports logo.

H7.2b: The red sports logo has a higher price perception than the red insurance logo.

3.2.6 Purchase Intent

Purchase intentions are personal action tendencies relating to the brand (Bagozzi et al., 1979). While attitudes are summary evaluations, intentions describe "the person's motivation in the sense of his or her conscious plan to exert effort to carry out a behavior" (Eagly & Chaiken 1993, p. 168). Therefore, purchase intentions may be defined as an individual's conscious plan to make an effort to purchase a brand.

Previous research has examined the correlation between an individual's attitude and purchase intentions in various dimensions, such as advertiser attitude, advertising and brand attitude (MacKenzie et al., 1986). Both advertising and the brand logo offer symbolic representations of a brand or its products. This study extends the discussion of brand attitude and buying behavior toward advertising to include attitude toward a brand as a function of logo color and product categories.

Since the relationships between attitudes toward an advertisement and attitudes toward brands and purchase intentions have already been analyzed and confirmed in various studies (ibid.) and as consumer product selections are influenced by attitudes formed by indicators such as logos and product features (Dawar & Lei, 2009), we believe that the consistency of logos and products, will lead to a higher purchase intent.

Therefore, the following two hypotheses can be postulated:

H8.1: Effect of Color and Product Congruence on Purchase Intent of Insurance Brand

H8.1a: The blue insurance logo leads to a higher purchase intent than the red insurance logo.

H8.1b: The blue insurance logo leads to a higher purchase intent than the blue sports logo.

H8.2: Effect of Color and Product Congruence on Purchase Intent of Sports Brand

H8.2a: The red sports logo leads to a higher purchase intent than the blue sports logo.

H8.2b: The red sports logo leads to a higher purchase intent than the red insurance logo.

3.3 Nationalities

Color preferences have been studied across cultural boundaries (Philbrick, 1976; Trueman, 1979). The findings revealed that people from various cultures had varied color preferences, as well as different color meanings and connections. Madden et al. (2000) have explored the extent to which consumers in different countries like various colors, the meanings they associate with colors, and how they would match colors for a logo. The findings of this study demonstrate that merely transferring the color(s), as of a brand logo, from one market to another should not be tried without first learning how colors and color combinations are viewed in each place.

Blue, green, and white seem to be appealing in many nations and have comparable connotations, according to their research. Black and red, on the other hand, scored strong likability rankings, although their connotations are often extremely different. For example, whereas red in Germany is perceived as unlucky and negative in Germany, it is perceived as lucky and positive in Denmark (Neal et al., 2006; Schmitt, 1995).

Despite most literature distinguishing between Eastern and Western cultures, the model of cultural dimensions by Hofstede shows that Denmark and Germany also differ significantly in their masculinity, long-term orientation, indulgence and uncertainty avoidance dimension (see Appendix 2).

Based on the evidence of different color perceptions in different countries, as well as the difference in cultural dimension between Denmark and Germany, we assume that there is a difference in color perception between Denmark and Germany.
Since we measured color perception as an independent variable for behavioral intentions, including brand attitude, logo affect, and purchase intention, we believe that, based on the difference in color perception, there is a difference in the following behavioral intentions between the two nationalities.

Thus, we hypothesize:

H9: Brand Attitude and Nationalities

H9.1: There is a difference in the brand attitude between Danes and Germans when exposed to a blue logo.

H9.2: There is a difference in the brand attitude between Danes and Germans when exposed to a red logo.

H10: Logo Affect and Nationalities

H10.1: There is a difference in the logo affect between Danes and Germans when exposed to a blue logo.

H10.2: There is a difference in the logo affect between Danes and Germans when exposed to a red logo.

H11: Purchase Intent and Nationalities

H11.1: There is a difference in the purchase intent between Danes and Germans when exposed to a blue logo.

H11.2: There is a difference in the purchase intent between Danes and Germans when exposed to a red logo.

3.4 Effect of Logo Affect on Brand Attitude and Purchase Intent

Studies have shown the positive effect of congruence on consumer evaluations, i.e., brand attitude (van Rompay & Pruyn, 2011), as well as the positive effect of brand attitude on purchase intentions (MacKenzie et al., 1986). Furthermore, Aaker & Biel (1993) have specified the brand name as an attribute influencing consumer's perceived quality. More specifically, we suggested earlier that the congruence of logo color and product category leads to a higher perceived quality.

Since our research model suggests that the congruence between brand logo color, the associated brand personality and product category leads to a higher logo affect, we seek to understand the relation between logo affect and purchase intention.
Based on the previous hypotheses and the underlying studies, we assume that the logo affect has an influence on brand attitude. Additionally, we assume that brand attitude has a positive influence on purchase intention.

Thus, we hypothesize:

H12: Logo Affect has a positive effect on Brand Attitude.
H13: Brand Attitude has a positive effect on Purchase Intent.

In addition, we believe that attitude toward the brand affects perceived quality, which in turn has a positive impact on purchase intention. The role of perceived quality in influencing consumer purchase decision has been well supported in the context of store brands, being considered as one of the most relevant factors in explaining proneness to certain brands and purchase intention (Bao et al., 2011). In addition, researchers have also highlighted the relationship between perceived quality (cognitive phase) and purchase intention (conative phase), which is mediated by consumer attitude and satisfaction, the affective phase (Everard & Galletta, 2005; Yuan Jang, 2008). Furthermore, some researchers have found indirect or direct effects of perceived quality on behavioral intention (Boulding et al., 1993; Sweeney et al., 1999).
Considering that brands' perceived quality has been demonstrated to affect consumers' purchase intention (Everard & Galletta, 2005) and that consumers attitude has a mediating effect on the relationship between perceived quality and purchase intention, we believe that the perceived quality has a mediating effect on the relationship between brand attitude and consumers purchase intention.

More specifically, we hypothesize:

H14: Perceived Quality mediates the relationship between Brand Attitude and Purchase intent.

Studies have shown that positive emotional reactions are important for the success of a logo (Henderson & Cote, 1998). This is because the emotions generated by logos are transferred from the consumer to the products or companies. Subsequent to purchasing a particular product, consumers associate their perception of the product with the logo when they see it, which consequently influences their purchasing behavior (ibid.)
We extend this reasoning and argue that the logo affect, which results from the congruence of brand logo color and product category, has an influence on purchase intention.

More specifically, the following hypothesis can be postulated:

H15: Logo Affect has a positive impact on Purchase Intent.

4. Method

In the following section, we will outline our methodological considerations and approach, which we will use to test our proposed hypotheses. We will begin by explaining our philosophical approach and will then outline our research approach and justify our chosen research design. We will also outline our survey development and present and justify our testing instruments and analysis techniques.

4.1 Philosophy of Science

The philosophy of science underlies any kind of research and informs how a researcher views the world and interprets truth and knowledge (Saunders et al., 2019). In other words, it encompasses the process of developing knowledge and understanding it. According to Van (2007), "it is better to choose a philosophy of science than to inherit one by default" as a philosophy of science will inform about the research strategy and methods chosen for a study (Saunders et al, 2016, p. 36). Our research philosophy guides us in the development and construction of our data collection and analysis.

In the literature, there are two main approaches to research philosophy, namely ontology and epistemology. Ontology is the study of the nature of reality and deals with the question of whether the social world is seen as external to social actors (the objectivism view) or if it is derived from their perceptions and actions (the subjectivism view). The concept of epistemology involves asking what constitutes accepted knowledge and whether the social world can and should be studied using the same methods and principles as in the natural sciences (Saunders et al., 2009; Bryman & Bell, 2011). There are four primary paradigms that vary in terms of their ontological and epistemological perspectives, namely positivism, relativism or interpretivism, pragmatism, and realism (Bryman & Bell, 2011; Saunders et al., 2016; Van, 2007). This study is focusing on consumer's color perception of brands and their logos and can therefore account to the broad discipline of social sciences. Our research has its starting point in positivism, as we want to work with an observable social reality to create generalizations about it (ibid.). Positivism is an epistemological position that argues for utilizing the methods of natural sciences for exploring social existence and reality (Bryman & Bell, 2011).

Positivism's ontology is based on universalism, which means that a single true understanding of social reality can be derived. In order to explain causal relationships and to make predictions, epistemology concentrates on what is observable and measurable to make generalizations (Saunders et al., 2016).

The positivist researcher should be completely neutral and independent in their research to ensure an objective attitude and to enhance the universalism of the results (Saunders et al., 2016). We recognize that complete objectivity is not possible. But we as researchers must be transparent about how we develop our method and analysis approach in order to enhance the validity of this work. However, we recognize that as researchers we have an influence on what we research, which can only be reinforced in future research that leads to similar results.

Positivist research tends to use rigorous experimental procedures or quantitative methods that undergo empirical testing and statistical analysis, as well as reduction or elimination of threats to validity (Saunders et al, 2009; Van, 2007).

4.2 Research Design

The research design provides the outline for collecting, measuring, and analyzing data and reflects decisions about the components to be incorporated into our study to answer the research questions (Bryman & Bell, 2011). Now that the choice of research philosophy has been made, the next step is to introduce our research approach and strategy, as well as the data collection method and technique that make up a research design.

4.2.1 Research Approach and Theory Development

The question of how different colors in the marketing of products and services affect consumer attitudes and consumer-brand relationships is a vast and growing topic. Since we want to provide more clarity on the color design of logos from different product categories and their effects on consumer attitudes, it is appropriate that we take our starting point in the existing literature. Therefore, our theory development is deductive, which means that we test research streams within the existing literature to hypothesize about our testing area to see if similar results are found in our research or if new theories should be developed (Saunders et al., 2016). Additionally, the deductive research approach tends to be attributed to positivism. However, not all hypotheses need to be developed from an existing theory. Hypotheses can also be developed from an examination of the world in which the data were collected, as well as from observations and reflections made before hypotheses are formulated. Therefore, some of our hypotheses are also based on reflections and observations to open up the possibility of developing new theories (ibid.).

4.2.2 Strategy

Consistent with our philosophy of science and our approach to theory development, our data collection strategy is quantitative. A quantitative approach allows us to statistically test and generalize a large sample size. The goal is to observe and describe behavior, social reality in terms of models, correlations, and numerical data, and to make them predictive. Compared to the qualitative approach, which works mainly with text and language, in the quantitative approach the numbers are the main medium. Generalization allows us to validate the relationships between characteristics, i.e., variables, which allows us to test our hypotheses.

Using quantitative data usually yields the most factual results, which increases reliability because the results and methods can be duplicated in other studies. Because our data collection is numerical, our study does not suffer directly from researcher bias and interpretations. We transparently disclose how we developed our measurement instrument and how we analyzed our data to enhance the validity of our research.

In quantitative research, attitudes, actions, orientation patterns, and structures are collected in a standardized way, usually in larger random samples, and then translated into statistically processable numbers. The results of quantitative research can be contrasted and compared in numerical values, percentages, tables, and so on. In doing so, quantitative research primarily tests hypotheses about relationships between different characteristics, variables, against reality.

Since at the beginning of the research process theories or models about the object of research are usually already available, on the basis of which the hypotheses to be tested are formed, quantitative methods are mostly used in connection with the deductive gain of knowledge.

4.3 Survey Development

The purpose of this section is to present our survey and our four different studies that we conducted. We will also present how we developed our survey and the different studies and how the distribution of our survey proceeded. The strategy of a survey was chosen to answer the purpose and research question of the study and is "most frequently used to answer questions about who, what, where, and how much" (Saunders et al., 2016, p. 144). Our study is a cross-sectional study because it examines phenomena at a specific point in time. Surveys can be utilized for explanatory, descriptive and exploratory research, which depends on the survey design. In principle, survey strategies include

questionnaires, structured observations, and interviews (Saunders et al., 2016). For our study, we chose self-administered online questionnaires as our data collection technique. Advantages associated with this technique are that this is very well suited for explanatory research of its own since this determines the relationship between variables and examines cause-effect relationships. Furthermore, this technique allows a large amount of data to be collected in a relatively short period of time and the results to be generalized, insofar as the sample can be considered representative (Saunders et al., 2016). Additionally, it is considered as highly cost effective as it does not require trained staff of interviewers and supervisors, as e.g., interviews and focus groups do. Moreover, due to the absence of this staff, respondents are not only provided with greater anonymity, but it also gives them the convenience of devoting total time on the survey, allowing them more time to deal with difficult questions and thus may help to answer more correctly (ibid.).

4.3.1 Survey

We chose a survey as our research design because it allows for structured questions that can capture a large sample size and test for statistically significant differences between means. Surveys are easy to disseminate because they can be shared online, which means respondents from different geographic areas can answer. This further strengthens external validity, as we get a more representative sample of both the German and Danish society, rather than just from one geographic area, age group, gender, etc. Additionally, we also had the opportunity to get a sample from other nationalities such as Swedes and Italians, as these nationalities were also among the respondents and could also gain insights into their color perceptions. As we are not directly observing other nationalities than Denmark and Germany, these nationalities could be a starting point for further research.

First and foremost, it was important to design the survey to achieve a high response rate. According to Hague et al. (2016), a high response rate in surveys is attributed to respondents' interest in the topic. Additionally, an introducing message plays an important role in encouraging the respondents to participate in a survey (Saunders et al., 2009). Our introduction aimed to encourage respondents to answer the questions in our survey with their first thought in order to avoid rationalizing or critically evaluating each question. This was intended to enhance the capture of respondents' first feelings, which for us represent respondents' immediate reaction to their environment with minimal cognitive input, implying that they rely predominantly on heuristics (Chaiken, 1980).

We designed a questionnaire that includes a total of 14 questions, which were divided into four broad sections (see Appendix 3). The first section briefly presented a description of a company along with a colored brand logo to give respondents a product category associated with a colored logo right at the beginning. Here, four different manipulations were used that differed in the brand description and logo color, which were randomly assigned to respondents.

The second section of the survey contained 12 different adjectives, brand personality traits, tested in existing literature related to colors and brand personalities. Here, study participants were asked by using a 5-point Likert scale, to what extent the brand description in combination with the colored logo presented could be described using each adjective. Thus, the cognitive reactions of the respondents regarding color and brand logo were investigated. This was followed by an examination on the logo affect by using a smiley scale. After that, respondents were asked about their overall brand attitude, word-of-mouth behavior, perceived price and quality, and lastly, the purchase intent.

The final section covered general demographics of respondents, including gender, age, and nationality. Finally, in order to ensure that the survey was completed entirely by the respondents, we opted for a "forced response" approach that required respondents to provide an answer for each question before proceeding.

4.3.2 Pretest of the Survey

Surveys, especially self-completion surveys, should be pre-tested prior to administration to a study sample, taking into account practitioner recommendations. This preliminary analysis can prevent problems related to the validity and reliability of the questions and allows to assess the appropriateness of the question (Bryman & Bell, 2011; Saunders et al., 2016). Hague et al. (2016) recommend testing a questionnaire on six to twelve persons, whereas Saunders et al. (2016) suggest at least ten persons for most student surveys. In our study, ten persons completed the pre-test and provided their feedback via a supporting 'mini-questionnaire' (Saunders et al., 2016, p. 394). They were asked to give feedback on the pilot survey, regarding the time spent taking the survey, the clearness and appropriateness/easiness of instructions and questions, on the general structure and layout of questions and to give any additional feedback they had.

4.3.3 The Four Studies

In this section, we explain how we developed our four different studies. To investigate the impact of logo colors in different product categories on consumer attitudes, we developed four different studies. Respondents were each presented with a colored logo, either red or blue, in combination with a brand description, either sports or insurance brand. The goal was to examine the extent to which combining a colored logo, either in red or blue, with a brand, either sports or insurance brand, influences the consumer overall brand attitudes. These four studies were randomly distributed to respondents so that one respondent would only see one study at a time.

To facilitate the overview of our studies, the following graphic will give an overview about the four different manipulations.

Table 2: Overview of the four studies

Study	*Combination*
Study 1	Blue Logo + Insurance Brand
Study 2	Red Logo + Sports Brand
Study 3	Red Logo + Insurance Brand
Study 4	Blue Logo + Sports Brand

In particular, we chose two different product categories for our study, namely the sports and insurance industries, as there is already a lot of literature on these two industries, but not examining the impact of brand personality traits and also not the influence of the sports and insurance logo and its affect on the overall perceived brand attitude. Since in the literature the sports industry is associated with the color red and the insurance industry with the color blue, we colored a logo once in blue and once in red. The different studies are presented below.

4.3.3.1 Study 1: Insurance brand and blue logo

In the first study, the respondents were exposed to the blue logo in combination with the description of the insurance brand ‘Halo Insurance’.

Halo Insurance is an insurance company that provides a high-quality insurance experience for its customers. It strives to make insurance experiences simple, personal and affordable. Halo Insurance serves consumers across multiple service lines, like car or cell phone insurance, in various markets and offers a number of specialized and customized plans.

4.3.3.2 Study 2: Sports brand and red logo

In the second study, the respondents were exposed to the red logo in combination with the description of the sports brand ‘Strava Sports’.

Strava Sports is a sports tech company that enables athletes all around the globe to connect. The company allows the community to interact with other athletes and to share their running and fitness experience and activity. An activity's recorded information may include a route summary, speed and timing.

4.3.3.3 Study 3: Insurance brand and red logo

In the third study, the respondents were exposed to the red logo in combination with the description of the insurance brand ‘Halo Insurance’.

Halo Insurance is an insurance company that provides a high-quality insurance experience for its customers. It strives to make insurance experiences simple, personal and affordable. Halo Insurance serves consumers across multiple service lines, like car or cell phone insurance, in various markets and offers a number of specialized and customized plans.

4.3.3.4 Study 4: Sports brand and blue logo

In the fourth study, the respondents were exposed to the blue logo in combination with the description of the sports brand ‘Strava Sports’.

Strava Sports is a sports tech company that enables athletes all around the globe to connect. The company allows the community to interact with other athletes and to share their running and fitness experience and activity. An activity's recorded information may include a route summary, speed and timing.

4.3.4 Free choice of Logo and Brand Description

Since it was of utmost importance to the study that none of the respondents knew the actual purpose of the survey, we started our survey by simply telling them that we were going to ask them about a fictitious company. Unknown stimuli were selected to investigate the effects of logo design on consumer reactions to rule out the influences of brand attitude (Henderson & Cote, 1998). A logo familiar to the respondents would have influenced their perception and they would have been able to draw conclusions about the quality, price, etc. from previous experiences with the brand, which was prevented by the unknown logo and thus no one was biased. Therefore, we chose a logo that from our point of view nobody could know, because it is a logo of a startup from 2021 originating from the USA. We found a brand's logo that fit well with both the sports and insurance industries from the objective point of view of the researchers. Since previous research has shown that there is often confusion between hue, lightness, and saturation in an experiment (Elliot et al., 2015), varying only one attribute at a time is crucial. For this reason, we decided to vary only the 'hue' attribute. Using Adobe Photoshop, we were able to colorize the logo in our chosen colors, namely red and blue.

To give respondents a brief overview of the brand, we came up with a description about each company. For both the sports and insurance brand descriptions, we tried to use the same length and a similar description of the brands, so that all exposed customers would have a similar description and information about the company.

4.4 Distribution

For our research, we used a non-probability sampling method, meaning that we as researchers selected samples on the basis of our subjective judgment. On the one hand, our non-probability sampling methods included convenient sampling, which allows us to have the sample drawn from a group of people we can easily contact or reach through Facebook. However, it should be noted here that random sampling can suffer from biases and influences that we cannot control. This is partly due to the fact that respondents in the sample may include people who are interested enough in the topic to participate in the survey and may have used the survey while on the various channels (Saunders et al., 2016).

On the other hand, the non-probability sampling techniques include what is known as snowballing. Snowballing is a chain referral process, for example, when our survey is re-shared by friends on social

networks. In snowballing, participants are not selected but voluntarily participate in the survey. A risk associated with this sampling technique is that respondents are probably identifying other potential respondents who are similar to them, resulting in a homogeneous sample (ibid.).
In order to reach as many as many people from our network as possible, the survey was distributed several times through different Facebook groups and our personal social media profiles and work environment. Through an anonymous link the respondents got access to our survey and were also asked to share it with their environment. To achieve a high representativeness of our study, sharing of the link in different social media channels helped us to cover different age groups and different regions from Germany and Denmark.
In the survey introduction, we made it clear that the sole purpose of the study was to contribute to science and that no profit would be made from the results. This was to ensure that respondents knew that our research was not to any other benefit of any particular company, to avoid response coercion and respondent bias.

4.5 Analysis Techniques

We analyzed our quantitative data using the software IBM SPSS to uncover support for or reject our hypothesis.
The mean is the most widely used measures of central tendency, describing the arithmetic average of the values in a data sample. Standard deviation (SD) is a measure of how widely distributed each number is. More specifically, it indicates how far, on average, each measurement is from the expected value, namely the mean. A large standard deviation denotes a distribution in which individual values are dispersed and distant from the mean (Hair et al., 2017, p. 313).

Our method of analysis is to test whether the selected variables are significant, with the null hypothesis (H0) stating that there is no difference between the means of two variables. It implies that the results are due to chance and are not significant in terms of supporting the concept being investigated. The alternative hypothesis (H1) indicates that the independent variable has an influence on the dependent variable and the results are significant to support the hypothesis under study.
The statistical significance level is expressed by a p-value between 0 and 1, which is used to decide whether to retain or reject the null hypothesis. If the p-value is less than the specified significance

level of 0.05, the null hypothesis can be rejected, and the alternative hypothesis (H1) will be accepted since it constitutes strong evidence against the null hypothesis. Thus, the smaller the p-value, the stronger the evidence against the null hypothesis.

A p-value < 0.05 means that the probability that the null hypothesis is valid is less than 5%. Since statistically significant results cannot prove that a research hypothesis is correct, only support for or evidence of hypotheses can be provided (Sullivan & Feinn, 2012).

In order to test our hypotheses, we employed independent samples t-test to compare the means of two independents groups to assess whether there is statistical evidence that the corresponding population means are significantly different

T-tests are typically used when subjects are divided into two independent groups, with one group treated with A and the other group treated with B (Kim, 2015). In our study, we have categorized the subjects into two independent groups based on color. The t-value (t) is the t-statistic whose numerical value is proportional to the probability that the difference between the means is statistically significant. The larger the t-value, the more likely the difference between the means is significant (Livingston, 2003). As we had four manipulations in our study, we transformed the data and recoded it into two variables. This allowed us to analyze the mean differences between the two groups.

Further, we used a structural equation modeling approach, using AMOS 24 in order to test and evaluate multivariate causal relationships.

Structural equation modeling (SEM) is a powerful multivariate technique that differs from other modeling approaches, as they test direct and indirect effects on previously hypothesized causal relationships (Fan et al., 2016). In contrast to other statistical techniques, such as multiple regression or ANOVA, where regression coefficients are derived by minimizing the sum of squared differences between the predicted and observed dependent variables, SEM focuses on the covariance structure rather than individual observations or variables.

The strength of the relationship, measured by the path coefficient, represents the response of the dependent variable to a unit change in an explanatory variable, holding all other variables in the model constant (Bollen, 1989). The path coefficients of a structural equation model are comparable to correlation or regression coefficients and are interpreted as follows: A positive (negative) coefficient indicates that a one unit increase in the activity measure a structure result in a direct increase (decrease) in the activity measure of the structures it projects to, proportional to the magnitude of the coefficient (McIntosh & Gonzalez-Lima, 1994).

Path coefficient values are standardized on a range from -1 to +1, with coefficients closer to +1 representing strong positive relationships and coefficients closer to -1 indicating strong negative relationships (Hair et al., 2017).
As for the t-test, the statistical significance level is also expressed by a p-value, allowing us to reject the null- and accept the alternative hypothesis if the p-value is < 0.05.

4.5.1 Measurements

The following section presents the measurements used and outlines the dependent and independent variables.

4.5.1.1 Personality traits

To measure the personality traits associated with the colored brand logo, consumers were asked, using a five-point Likert scale, to what extent the brand description combined with the color logo shown best described the 12 adjectives.
These 12 chosen attributes included the five brand personality dimensions introduced by Aaker (1997), namely *sincere, competent, rugged, sophisticated,* and *exciting*. In addition to that, we chose to include seven other attributes that were most often associated with the colors red and blue in previous research. The *traits trustful, dependable,* and *secure* have been shown to be associated with the color blue (Fraser & Banks 2004; Mahnke, 1996; Labrecque & Milne, 2013). Additionally, the traits *warm, energetic, and aggressive* have shown to be connected with the color red by several studies (Attrill et al., 2008; Hill & Barton, 2005). The trait *sustainable* was chosen to be included as this trait is strongly connected to the color green (Paivo Neto et al., 2020; Sundar & Kellaris, 2017). Therefore, we wanted to find out whether there were also associations between *sustainable* and the color blue and, in contrast to the results of Sundar and Kellaris (2017) mentioned above, the color red.
As the dimension of brand personality is itself multi-dimensional, as has been outlined in the literature review, it will be measured through certain personality traits as sub-hypotheses. In particular, we will measure the dimension *Competence* indirectly by testing the four items competent, trustful, dependable and secure, and the brand personality dimension *Excitement* indirectly by testing the four items exciting, warm, energetic and aggressive.

4.5.1.2 Logo affect

Research has shown that there are various ways to measure emotions, namely phycological and neuroscience measures, direct elicitation and lastly, indirect techniques such as metaphors and emoticons. According to Toet and van Erp (2019), emoticons appear to be a useful graphical self-report instrument for the assessment of evoked and perceived emotions.

As emojis are non-verbal, they enable consumers to express emotions that otherwise cannot be expressed with words or would be expressed differently (Roberts et al., 2015*)*. This approach overcomes the problems of forced verbalization and allows for expressing affect more intuitively. To assess the impact of logos on the overall brand perception of the respondents, we decided to employ emotion., as smileys allow us to exactly measure emotions, therefore affective emotions. Using an animated "smiley scale", respondents observe varying levels of emotion when they move the cursor from left to right.

On a 5-point smiley scale, with 1 being the lowest, 3 being neutral, and 5 being the highest, respondents were able to rate their affinity for the shown brand logo by simply selecting the emotion that best conveyed their feeling towards the brand logo. This meant that measuring their reaction to a series of frames necessitated a minimum amount of cognitive effort on their part, depending mostly on their effect to guide judgment.

We tested logo affect for all four manipulations, varying in brand logo color and product category: 'How do you feel about this logo?'.

Figure 3: Smiley Scale used in survey

4.5.1.3 Behavioral constructs. Measurement of dependent variables

In order to measure behavioral constructs towards the brand, we have included four different constructs, namely perceived quality, word of mouth behavior, price perception, and purchase intent. Each of them has been measured using a five-point ordinal Likert scale, with 1 being the lowest and 5 being the highest.

Perceived Quality: "I expect the quality of … to be ..." was given as an open statement where respondents had to rate the perceived quality ranging from 1= Very bad to 5= Very high.

Word-of-mouth: "How likely is it that you would recommend … to your friend?" was asked where respondents had to rate the likelihood of potential word-of-mouth ranging from 1= Extremely unlikely to 5= Extremely likely.

Perceived Price: "I expect the price level of … to be…" was given as an open statement where respondents had to rate the perceived price level of the brand ranging from 1= Very low to 5= Very high.

Purchase Intent: "I would become a customer of 'Halo Insurance'." has been used as a statement in order to rate respondents' likelihood of purchasing ranging from 1= Extremely unlikely to 5= Extremely likely.

4.5.1.4 Overall Brand Attitude

The overall brand attitude measures how the respondents perceive the brand logo and the brand fits to their perception of the brand on a 5-point Likert type scale. This was measured through the question "What is your overall perceived brand attitude of 'Halo Insurance'?", enabling respondents to rate their brand attitude from 1= Very negative to 5= Very positive. This question was intentionally placed at the end, as respondents were asked to assess their overall brand perception after the previous questions on brand personality, logo affect, as well as behavioral constructs.

5. Description of Data Sample

In this part, we provide an overview over our collected data sample. Looking at gender, age, and nationality will give insights into the demographics of respondents.
From April 3rd through April 17th, 2022, the survey was available online. In total, 976 respondents opened the survey link, through various channels such as Instagram, WhatsApp and Facebook. After eliminating all respondents who did not fully complete the survey, 459 respondents remained, indicating that 517 respondents were excluded. This can be explained by the fact that the software Qualtrics recorded all respondents who opened the link, regardless of whether they did not fill out the survey at all, partially or completely. The four manipulations were approximately evenly distributed among the 459 responses. 106 respondents received the blue-colored logo in combination with the insurance brand, 124 received the red-colored logo and the sports brand, 104 received the red-colored logo and the insurance brand and 122 received the blue-colored logo and the sports brand (see Appendix 4).

In total, the data sample consisted of 148 males (32.2%) and 281 females (61.2%), and 27 non-binary (5.9%), which resulted in a skewed distribution. The majority (42.5%) of the respondents were between 25-34 years of age, followed by respondents ranging from 18-24 years old (32.9%). 6.3% were between 35-44 years old, and 7.0% were between 45-54 years old, 6.5% were between 55-64 years old, and 1.7% were older than 65 years.

In regard to nationality, 53.2% of respondents are from Germany and 37% from Denmark. 9.2% of the respondents answered with "other" which can be divided into several further nationalities ranging from Austrian to Italian to Switzerland. However, due to the scope of this paper and our main interest in the difference of brand color perception between Danish and German nationals, we will not go into further by analyzing the other nationalities.

In summary, it can be concluded that the sample cannot be considered representative, which is a common characteristic, when non-probability samples are used. Therefore, the results from these data are not suitable for generalization to the entire German and Danish population (Saunders et al., 2016; Bryman & Bell, 2011). Nevertheless, the data obtained can be statistically tested and analyzed, as will be explained in the following chapter, which focuses on statistical analysis.

6. Analysis

In the following sections we will conduct an analysis of our data sample to either reject or accept our hypotheses which were presented in the hypotheses section. We start by analyzing the first two hypotheses, and thus the associations of the two colors in question, namely red and blue, with the particular brand personality traits and see if the respondents actually perceive correlations between these two variables.

The second section, hypotheses 3-11 will then investigate consumer's perceived congruence of the logo colors and the product category, namely sports and insurance companies.

Here, consumers brand attitude as well as certain behavioral concepts, including logo affect, WOM-behavior and perceived price and quality will be tested. Furthermore, we will investigate whether there is a difference in brand attitude, logo affect and purchase intent between Danish and German consumers based on the color perception of red and blue.

Next, in section 3, we will analyze the relation between logo affect and purchase intention. Specifically, we test whether brand attitude and perceived quality have a mediating effect on the purchase intention. Each section will then conclude with a brief discussion of the results and then, finally, a summary of the findings of our analysis.

Throughout our data analysis, we made use of the independent samples t-test for all of our hypotheses in order to compare the mean of our two independent groups. Here, we distinguished between the two colors, which were grouped as CONDCOLOR 1= Blue, 2= Red, each group encompassing the two brands. Additionally, we differentiated between the four manipulations, named as the variable CONDITION 1= Insurance Blue, 2= Sports Red, 3= Insurance Red, 4= Sports Blue. Moreover, it is important to emphasize that our data met all requirements for the independent samples t-test, meaning data values were independent, randomly samples from two normal populations and the two independent groups had equal variances (Hair et al., 2013).

Appendix 3 contains a list of all the survey questions. The survey's SPSS coding may be found in Appendix 5.

6.1 Consumers' Association of Color and Personality Traits

The first section of the study, H1 and H2, examines the association consumers have of a colored brand logo with certain personality traits. Specifically, we test the perception of the color blue in a brand logo for certain personality traits (H1a-H1d) of Aaker's (1997) BPS *Competence* and further the perception of the color red for personality traits of *Excitement* (H2a-H2d), measured on a scale from 1 to 5. In order to perform the following tests properly, we first transformed the data of the four manipulations and recoded them into the same variables (CONDCOLOR), ultimately ending up with two values 1 and 2, representing the color blue and red respectively 1=blue and 2=red.

However, as we have outlined in the literature review, the dimension of the two brand personalities *Competence* and *Excitement* are itself multi-dimensional and each measured through four personality trait items. Hence, the hypotheses H1 and H2 will also be measured indirectly by testing these particular items of the respective dimensions *Competence* and *Excitement* through sub-hypotheses.

H1: A blue logo is associated with the BPS dimension *Competence.*

Our independent samples t-test revealed a significant difference of the perceived competence of the two colors p= 0.00, t= 5.555. The mean of the color blue shows a value mean= 3.32 SD= 1.190 compared to the mean of the color red with mean= 2.72 SD= 1.119. With a p-value of < 0.05, we can conclude that the color blue was perceived as significantly more competent than the color red, finding support for H1a.

Furthermore, the t-test revealed a significant difference between the perceived trustworthiness of consumers on the color blue and red, $p < 0.05$ t= 5.476, blue group mean=3.09 SD= 1.193 and red group mean= 2.50 SD= 1.132, meaning that the color blue was perceived significantly more trustful by the consumers than the color red, finding support for H1b.

Support was further found for the higher perceived dependability of a blue-colored logo compared to a red-colored logo, $p < 0.05$, t= 4.623. The color blue group mean= 3.04 SD= 1.216 compared to color red group mean= 2.54 SD= 1.112. This reveals that consumers perceive a blue-colored logo as more dependable than a red-colored logo, thus accepting H1c.

Moreover, a significant difference was also found in the perceived secureness of consumers on the two colors, $p < 0.05$, t= 4.422. The color blue group mean= 3.07 SD= 1.204 and the color red group

mean= 2.59 and SD= 1.125. This evinces that consumers rate the perceived secureness of a blue-colored logo as significantly higher than the red-colored logo.

Furthermore, we have also tested whether there is a difference in the perceived "sustainability" between a red and a blue-colored brand logo p= .578 t= -.557. The color blue group mean= 2.07 SD= 1.266 and the color red group mean= 2.13 SD= 1.256. These results show that there is no significant difference in the perceived sustainability of consumers, rating a red and a blue logo the same in terms of sustainability.

In summary, all sub-hypotheses of H1 (H1a-H1d) are supported, that is, all personality traits relating to *Competence* show a higher association with the color blue than with the color red, enabling us to accept H1. We can therefore conclude that the color blue is associated with the personality trait *Competence* of Aaker's (1997) BPS.

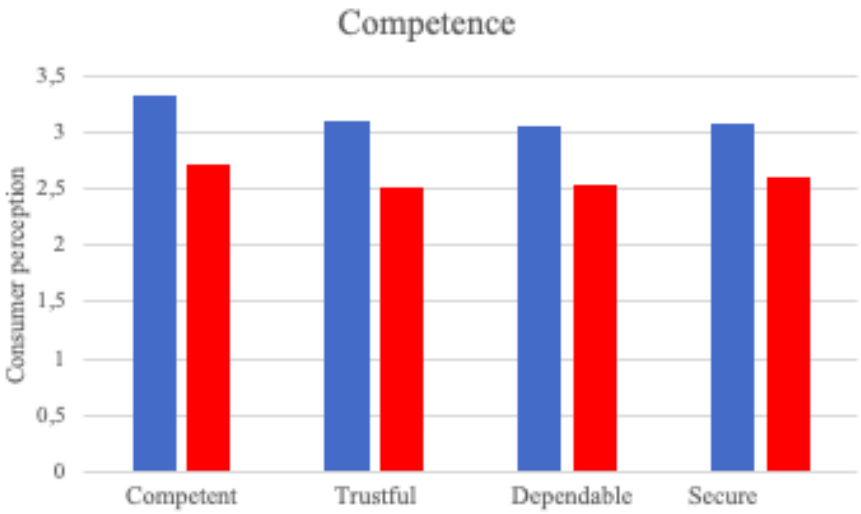

Figure 4: Perceived Competence of Brand Logo

H2: A red logo is associated with the BPS dimension *Excitement.*

We then tested whether consumers associate red-colored brand logos with personality traits related to the brand personality trait *Excitement* of Aaker's (1997) BPS. Our independent samples t-test revealed a significant difference in the perception of "energetic" and the two colors p= 0.00, t= -4.129. The mean of the color red shows a value mean= 3.32 SD= 1.247 compared to the mean of the

color blue with mean= 2.83 SD= 1.270. With a p-value of < 0.05, we can accept our hypothesis and conclude that the color red was perceived as significantly more energetic than the color blue.
Moreover, support was also found for the higher perceived aggressiveness of a red-colored logo compared to a blue-colored logo, $p < 0.01$, t= -4.305. The color red group mean= 2.13 SD= 1.235 compared to color blue group mean= 1.66 SD= 1.089. Despite both colors demonstrating a comparatively low evaluation of the trait "aggressive", consumers perceive a red-colored logo as more aggressive than a blue-colored logo, thus, accepting H2b.

In addition to that, the independent samples t-test uncovered a significant difference in the perception of consumers of the personality trait "warm" and the two colors red and blue, mean=2.88 SD= 1.092 and mean= 2.21 SD= 1.226 respectively, $p < 0.01$, indicating that the color red was perceived significantly more warm by the consumers than the color blue, finding support for H2c.

We then tested the perceived excitement of consumers on the two colors, $p < 0.05$, t= -5.090, yielding a significant difference. The color red group mean= 3.20 SD= 1.206 and the color blue group mean= 2.60 and SD= 1.295. This demonstrates that consumers rate the perceived excitement of a red-colored logo as significantly higher than the blue-colored logo. Therefore, with also accepting H2d, our analysis reveals support for all hypotheses of H2, indicating an association of a red-colored logo with the BPS trait *Excitement*.

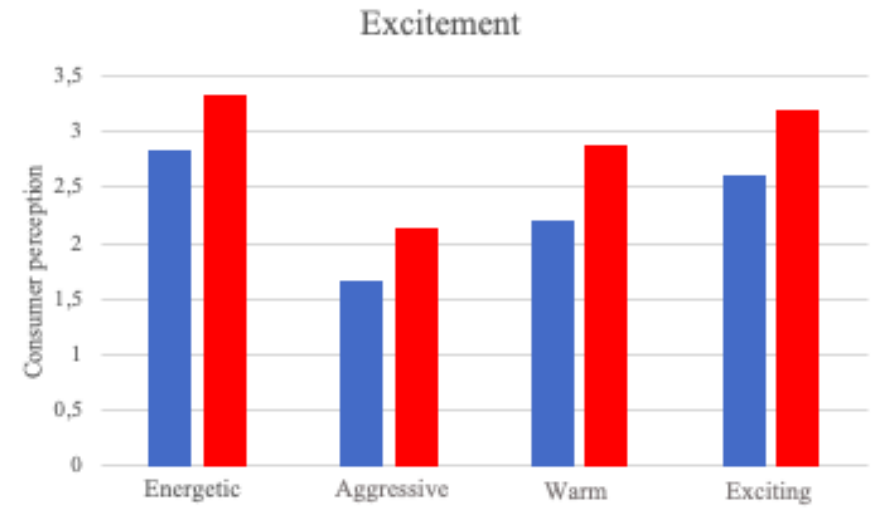

Figure 5: Perceived Excitement of Brand Logo

6.1.1 Sub-Conclusion

The first analysis section investigated consumers' association of colored brand logos with certain personality traits. More specifically, we have analyzed whether the color red and the color blue are associated with personality traits related to the brand personalities *Competence* and *Excitement* of Aaker's (1997) BPS.

Key learnings from this section are that consumers do apply conventional color associations to colors that were used within a logo.

In specific, the blue-colored logo was perceived as more competent, trustful, dependable and secure than the red-colored logo. Therefore, we have concluded that a blue logo is associated with the BPS trait *Competence* and that the perceived competence of a brand is positively affected by a blue logo.

In line with this, we have further uncovered that the red-colored logo was perceived as more energetic, aggressive, warm, as well as exciting than the blue-colored brand logo. Thus, we have inferred that a red logo is associated with the BPS trait *Excitement* and that the perceived excitement of a brand is positively affected by the presence of red in the logo. In addition, we tested whether there is a difference in the perception of a red and a blue logo in relation to the personality trait *sustainable*. However, no significant difference was found, indicating that a red and a blue logo are rated the same in terms of *Sustainability.*

In short, our results reveal that there is a relationship between colors in brand logos, specifically the color blue and red, and certain brand personality traits.

6.2 Effect of Color and Product Congruence on Brand Attitude

After having tested the association of the color red and blue with brand personality traits, we now analyze this effect within product categories, thus measuring consumer's brand attitude.

Compared to the first part of the analysis, this part includes the variable CONDITION, which comprises all four manipulations of our study. Depending on the product category that is being tested, the groups 1 and 2 are defined, which vary in color, namely red and blue.

Thus, in the following we will analyze the perceived congruency of the logo color and product category and its effect on consumer's brand attitude.

H3: Effect of Color and Product Congruence on Brand Attitude

H3.1: Brand Attitude and Insurance Brand

We will start by testing the effect of the two colors red and blue on the brand attitude for the insurance brand 'Halo', given the congruence of the affective qualities of blue, namely competence with the affective qualities of an insurance company.

Here, we again used the independent samples t-test, along with the grouping variable CONDITION in order to compare the means of the two color groups red and blue within the product category of the insurance brand. Brand attitude was measured on a scale from 1 to 5. Condition 1 and Condition 3 are related to the insurance brand, thus Group 1= 1 and Group 2= 3 within this t-test.

Our independent samples t-test revealed a significant difference in the brand attitude of the insurance brand between the two colors $p < 0.05$, $t= 6.592$. The color blue group mean= 3.75 SD= 1.094 compared to color red group mean= 2.84 SD= .915. These results reveal that consumers have a significantly higher brand attitude for an insurance brand logo colored in blue than in red.

In addition to that, we performed an additional test comparing the mean scores of the two product categories within the blue color group to analyze whether the blue insurance logo had a more positive brand attitude than the blue sports logo.

Here, we determined whether there was a significant difference from the previously conducted test and more specifically, between the two product categories and the color blue.

Our results again showed significant differences between the two product categories within the same color group, namely blue, $p < 0.05$, $t= 3.057$, mean of blue insurance group= 3.75 SD= 1.094 and mean of blue sports group= 3.34 SD= .934. Thus, we can accept both hypotheses H3.1a and H3.1b, concluding that the color blue in a brand logo of an insurance company results in a more positive brand attitude, and that a blue logo leads to a more positive brand attitude when employed by an insurance company rather than a sports brand.

H3.2 Brand Attitude and Sports Brand

Next, we analyzed the effect of the two colors red and blue on the brand attitude for the sports brand 'Strava', given the support of congruence of affective qualities of the color red, namely excitement, with affective qualities of a sports company. Again, we used the variable CONDITION, where

Condition 2 and Condition 4 were related to the sports brand, thus Group 1= 2 and Group 2= 4 within this t-test.

Here, our independent samples t-test revealed a significant difference in the brand attitude of the sports brand between the two colors $p < 0.05$, $t=4.293$. The color red group mean= 3.85 SD= .902 compared to color blue group mean= 3.34 SD= .934. These results reveal that consumers have a higher brand attitude for a sports brand logo colored in red than in blue.

Our additional t-test compared the mean scores of the two product categories within the red color group to analyze whether the red sports logo had a more positive brand attitude than the blue sports logo. The results showed significant differences between the two product categories within the red color group, $p= 0.00$, $t= 8.368$, mean of red sports group= 3.85 SD= .902 and mean of red insurance group= 2.84 SD= .915.

Therefore, we can accept both hypotheses H3.2a and H3.2b and conclude that the presence of the color blue in an insurance company's brand logo leads to a more positive brand attitude, and that a blue logo leads to a more positive brand attitude when used by a sports company rather than an insurance brand.

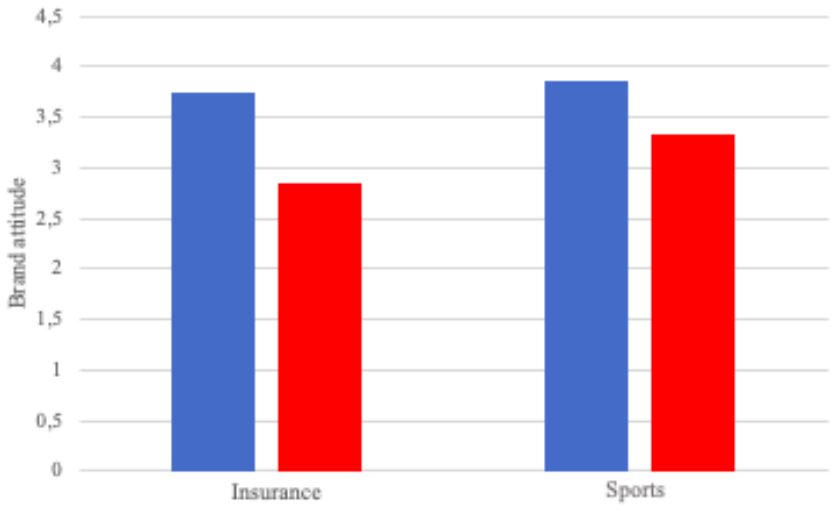

Figure 6: Logo Color and Product Congruence on Brand Attitude

H4: Effect of Color and Product Congruence on Logo Affect

H4.1: Logo Affect and Insurance Brand

We then tested the effect of the two colors red and blue on the logo affect for the two product categories, starting with the insurance company.

Here, we compared the means of the two groups, color red and color blue, within the product category of the insurance brand, measured on a scale from 1 to 5.

Our independent samples t-test revealed a significant difference in the logo affect of the insurance brand between the two colors $p < 0.05$, $t= 5.763$. The color red group mean= 2.86 SD= 1.354 compared to color blue group mean= 3.89 SD= 1.237. These results reveal that consumers have a significantly higher logo affect for an insurance company logo that is colored in blue than in red, thus supporting H4.1a.

To further support these findings, an additional test was conducted, comparing the means of the two product categories within the group color blue, thus analyzing whether the insurance logo colored in blue has a more positive logo affect than the blue-colored sports logo. To uncover if this created any significant difference compared to the test conducted before and whether there was a significant difference between the means of the two product categories and the color blue, we conducted another independent samples t-test solely based on the color blue group.

Our results again revealed significant differences between the two product categories within the same color group, namely blue, $p < 0.01$, $t= 4.487$, blue insurance group mean= 3.89 SD= 1.237 and blue sports group mean= 3.15 SD= 1.244. Thus, we can further support H4.1b and conclude that the insurance logo colored in blue will have a more positive logo affect than the blue-colored sports logo.

H4.2: Logo Affect and Sports Brand

Next, the influence of the two colors red and blue on the logo affect for the sports brand was investigated. In this t-test, we again used the grouping variable CONDITION to compare the means of the two groups of color red and color blue within the product category of the sports brand, resulting in Group 1= 2 and Group 2= 4.

According to our independent samples t-test, the perceived logo compatibility of the sports brand differed significantly between the two color hues, $p < 0.01$, $t= 5.272$.

The color red group mean= 3.96 SD= 1.171 compared to color blue group mean= 3.15 SD= 1.244. These findings show that red-colored sports brand logos are seen as having a higher logo affect than blue-colored sports brand logos, thus supporting H4.2a.

To further support these findings, we conducted an additional test, comparing the means of the two product categories within the group color red, thus analyzing whether the sports logo colored in red has a greater logo affect than the red-colored insurance logo.

To uncover if this created any significant difference compared to the test conducted before and whether there was a significant difference between the means of the two product categories and the color red, we conducted another independent samples t-test solely on the color red group. Our results again revealed significant differences between the two product categories within the same color group, namely red, thus further supporting H4.2b that the sports logo colored in red will have a higher logo affect than the red-colored insurance logo.

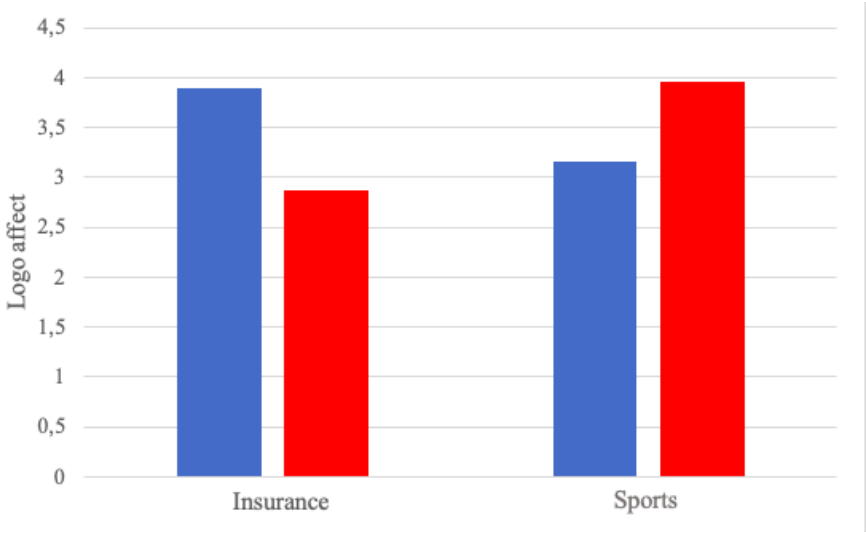

Figure 7: Logo Color and Product Congruence on Logo Affect

H5: Effect of Color and Product Congruence on Perceived Quality

H5.1: Perceived Quality and Insurance Brand

Our independent samples t-test on the perceived quality of the insurance brand revealed a significant difference between the colors, $p < 0.01$, $t = 7.02$.

The color blue group mean= 3.98 SD= .976 compared to color red group mean= 3.03 SD= .990. These results reveal that consumers have a significantly higher quality perception for an insurance company logo that is colored in blue than in red, thus supporting H5.1a.

To further examine whether this is due to the color or the congruence of the blue color and the product category, we have conducted an additional test analyzing the significant difference between the two product categories and the color blue $p = 0.01$, $t = 2.595$. The insurance blue group mean= 3.98 SD= .976 and the sports blue group mean= 3.65 SD= .087.

Given the $p < 0.05$, we can accept the hypothesis H5.1b, and conclude that the insurance logo colored in blue will be perceived as higher quality than the blue-colored sports logo, thus further supporting the fact that the perceived quality of the brand is due to the congruence of the color blue and the product category.

H5.2: Perceived Quality and Sports Brand

Next, we analyzed through our independent samples t-test the perceived quality of the sports brand and the difference between the colors, $p = .033$, $t = 2.139$. The sports red group mean= 3.89 SD= .788 compared to insurance blue group mean= 3.65 SD= .961. A significant difference was found between the sports logo colored in red vs. blue and its perceived quality, indicating that consumers have a significantly higher quality perception for a sports company logo that is colored in red than in blue. Thus, we can accept our hypothesis H5.2a.

Subsequently, we have tested whether there is a difference between the red color and the product categories, $p < 0.05$, $t = 7.287$. The sports red group mean= 3.89 SD= .788 and the insurance red group mean= 3.03 SD= .990. Thus, we can further support H5.2b and conclude that the sports logo colored in red will have a higher perceived quality than the sports logo colored in blue, finding support for the fact that the perceived quality of the brand is due to the congruence of the color red and the product category.

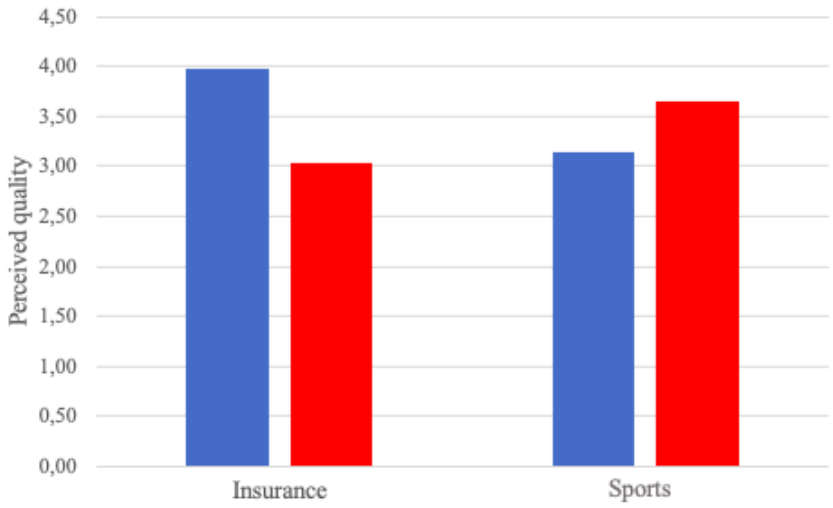

Figure 8: Logo Color and Product Congruence on perceived Quality

H6: Effect of Color and Product Congruence on WOM

H6.1: WOM and Insurance Brand

We then tested the effect of the two colors red and blue on the consumer's likelihood of WOM for the insurance company. Here, our independent samples t-test revealed a significant difference in the consumer's likelihood of recommending the insurance brand between the two colors $p < 0.01$, $t = 6.636$.

The insurance blue group mean= 3.48 SD= 1.181 compared to insurance red group mean= 2.54 SD= .847. A significant difference was found between the insurance logo colored in red vs. blue and its likelihood of WOM, indicating that consumers are significantly more likely to recommend the insurance brand that has a blue logo rather than red logo. Thus, we can accept our hypothesis H6.1a.

To further support these findings, we conducted an additional test, comparing the means of the two product categories within the group color blue, thus analyzing whether the insurance brand with a blue logo has a higher likelihood of WOM than the blue-colored sports brand $p = .05$, $t = 2.864$. The insurance blue group mean= 3.48 SD= 1.181 and the sports blue group mean= 3.07 SD= 1.010.

Given the $p < 0.05$, we can accept the hypothesis H6.1b, and conclude that the insurance logo colored in blue will have a higher likelihood of WOM than the blue-colored sports brand, thus further supporting the fact that the WOM of the brand is due to the congruence of the color blue and the product category.

H6.2: WOM and Sports Brand

Next, the influence of the two colors red and blue on consumer's likelihood of WOM for the sports brand was investigated.

Our independent samples t-test revealed a significant difference in the consumer's likelihood of recommending the insurance brand between the two colors $p < 0.01$, $t = 4.121$.

The color red group mean= 3.60 SD= 1.011 compared to color blue group mean= 3.07 SD= 1.010. These results reveal that consumers are significantly more likely to recommend the sports brand that has a red logo rather than a blue logo, thus finding support for hypothesis H6.2a.

Following that, we performed an additional test, comparing the means of the two product categories within the color red to see if the sports brand with a red logo had a higher likelihood of WOM than the red-colored insurance brand $p < 0.05$, $t = 4.121$. The sports red group mean= 3.60 SD= 1.011, whereas the insurance red group mean= 3.07 SD= 1.010.

Given the $p < 0.05$, we can accept the hypothesis H6.2b and infer that the sports logo in red has a higher likelihood of WOM than the red-colored insurance brand, confirming that the brand's WOM is likely to be related to the color red's congruence with the product category.

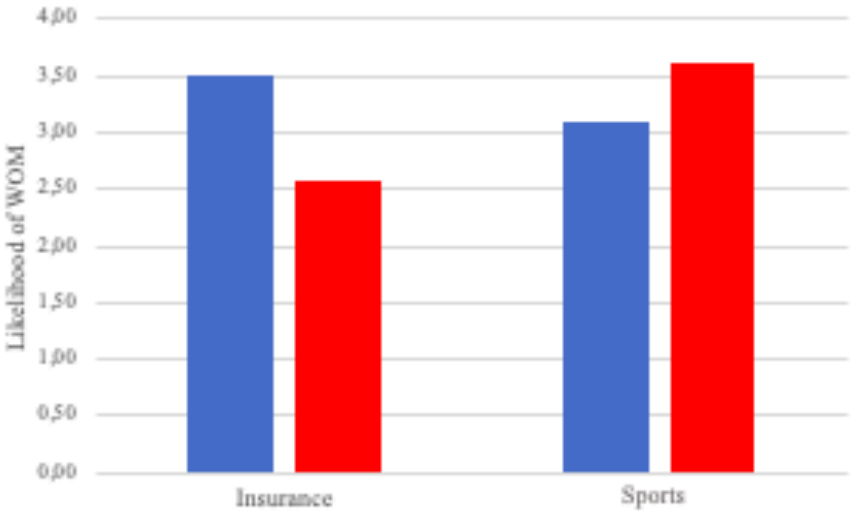

Figure 9: Logo Color and Product Congruence on WOM Behavior

H7: Effect of Color and Product Congruence on Purchase Intent

H7.1: Purchase Intent and Insurance Brand

The effect of the two colors red and blue on the consumer's purchase intent for the insurance firm was then examined. Our independent samples t-test found a significant difference between the two colors in the likelihood of the respondent becoming a customer of the insurance brand $p < 0.05$, $t= 5.636$. The color blue group mean= 3.41 SD= 1.225 compared to color red group mean= 2.56 SD= .933. These results reveal that consumers are significantly more likely to become a customer of the insurance brand that has a blue logo rather than a red logo, thus finding support for hypothesis H7.1a.

Next, a test comparing the means of the two product categories within the color blue was performed, to see if the insurance brand with a blue logo had a higher purchase intent than the blue-colored sports brand $p< 0.05$, $t= 3.299$. The insurance blue group mean= 3.41 SD= 1.225, whereas the sports blue group mean= 3.01 SD= .932.

Thus, we can accept the hypothesis H7.1b, and conclude that the insurance logo colored in blue has a higher likelihood of purchase intent than the blue-colored sports brand, thus further supporting the fact that the purchase intent of the brand is due to the congruence of the color blue and the product category.

H7.2: Purchase Intent and Sports Brand

An independent samples t-test was then conducted to examine the difference in consumer purchase intention for the insurance brand between the two colors $p < 0.05$, $t= 3.594$. The sports red group mean= 3.41 SD= 1.141, and the insurance red group mean= 2.91 SD= 1.044. According to these findings, consumers are substantially more likely to become customers of a sports brand with a red logo than one with a blue logo. Thus, we can accept our hypothesis H7.2a.

Subsequently, to investigate whether the sports brand with a red logo had a larger purchase intent than the red-colored insurance brand, an additional independent samples t-test was conducted. Here, our results revealed a significant difference in the purchase intent between the two product categories within the red color $p < 0.05$, $t= 6.108$. As a result, we may accept the hypothesis H7.2b and infer that the red-colored sports brand has a higher purchase intent than the red-colored insurance brand,

proving that the brand's purchase intent is attributable to the color red's congruence with the product category.

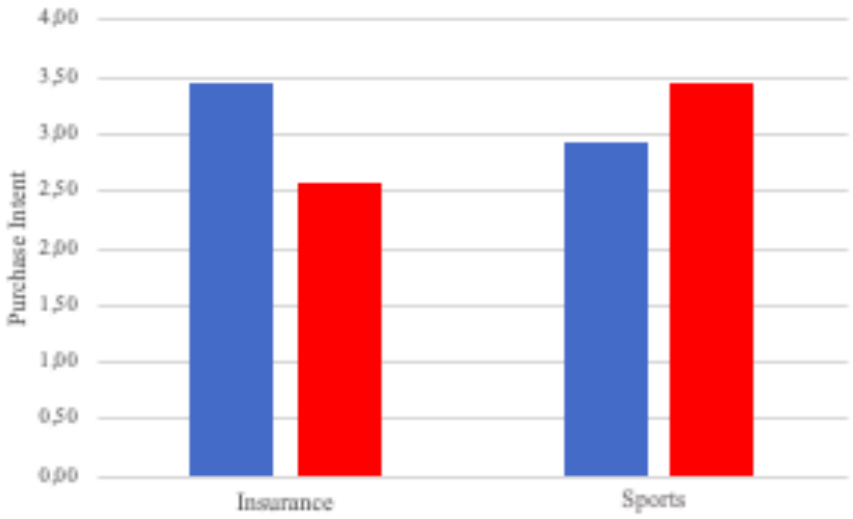

Figure 10: Logo Color and Product Congruence on Purchase Intent

H8: Effect of Color and Product Congruence on Perceived Price

H8.1 Perceived Price and Insurance Brand

Moreover, we analyzed through our independent samples t-test the perceived price of the insurance brand and the difference between the colors, p= .001, t= 3.327. The insurance blue group mean= 3.34 SD= 1.022 compared to insurance red group mean= 2.87 SD= 1.043. A significant difference was found between the insurance logo colored in blue vs. red and its perceived price level, indicating that consumers have a significantly higher perception of the price for the insurance company that commands a blue rather than a red brand logo. Thus, we can accept our hypothesis H8.1a.

Then, to examine if the insurance brand with a blue logo was perceived as higher priced by consumers than the blue-colored sports brand, a test comparing the means of the two product categories within the color blue was conducted p= .011, t= 2.560. The insurance blue group has a mean= 3.34 SD= 1.022, whereas the sports blue group has a mean= 3.01 SD= .932.

As a result, we may accept the hypothesis H8.1b and infer that the blue-colored insurance logo has a higher price perception than the blue-colored sports brand, proving that the brand's perceived price is attributable to the color blue's congruence with the product category.

H8.2 Perceived Price and Sports Brand

Furthermore, we examined the perceived price of the sports brand and the color difference using an independent samples t-test, p= .127, t= 1.530. The mean of the sports red group= 3.19 SD= .968 whereas the mean of the sports blue= 3.01 SD= .932.

Although price perception appears to be higher for the red sports brand, consistent with the color-product congruence assumption, the difference is not significant.

Thus, we can reject this hypothesis H8.2a as no significant difference in the perceived price level of the sports logo colored in red vs. blue was found, indicating that consumers have the same perception of the price for the sports brand with a red or blue brand logo.

Next, we tested whether there was a significant difference between the two product categories and the red color p= .015 t= 2.460. As our independent samples t-test reveals, there is a significant difference between the red insurance brand and the red sports brand, mean= 3.19 SD= .968 and mean= 2.87 SD= 1.043 respectively. Hence, we can accept the hypothesis H8.2b and infer that a red-colored sports logo has a higher price perception than the red-colored insurance brand.

These results are inconsistent, as we found no relationship between price level and color-product congruence, nor with any of the colors themselves.

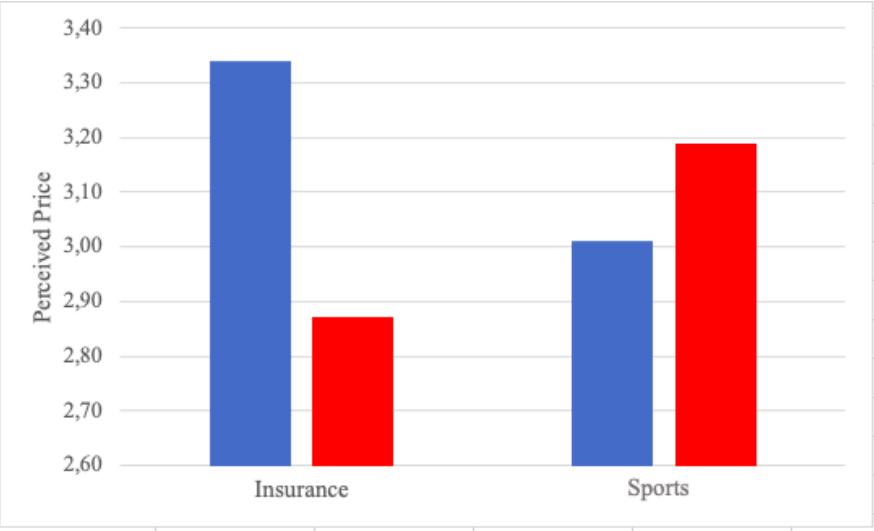

Figure 11: Logo Color and Product Congruence on perceived Price

H9: Brand Attitude and **Nationalities**

We then conducted an independent samples t-test to examine whether there was a difference in the brand attitude between German and Danish consumers based on their color perception of red and blue. Firstly, we split the file and organized the output by groups based on color.

To begin with, the color blue group test p= .276 t= -1.093. Here, the mean of German respondents, mean=3.49 SD= .752, and mean of Danish respondents mean=3.65 SD= 1.375. Although Danish consumers rate the color blue slightly higher than German respondents, the difference is not significant, thus rejecting H9.1.

The color red group test p= .427 t= .795. Here, the mean of German respondents, mean= 3.44 SD= .739 and mean of Danish respondents, mean= 3.33 SD= 1.376. It is noteworthy that, compared to the evaluation of the color blue, German respondents seem to rate the color red slightly higher than Danish consumers. However, the difference is not significant, thus we reject our hypothesis H9.2. Thus, we conclude that we did not find a significant difference in brand attitudes between Danish and German consumers for either the color red or the color blue.

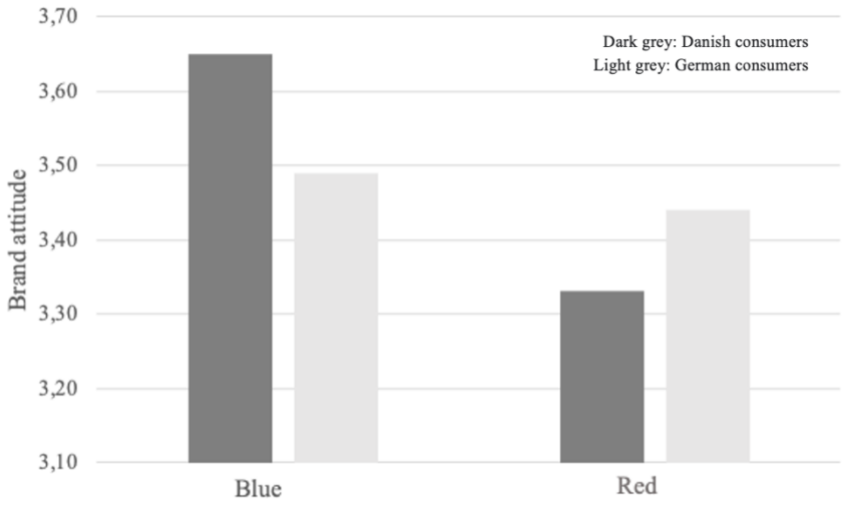

Figure 12: Color Perception and Brand Attitude

H10: Logo Affect and Nationalities

After having tested the difference between both nationalities on brand attitude, we again conducted an independent samples t-test to examine whether there was a difference in the logo affect between German and Danish consumers based on their color perception of red and blue.
First of all, the color blue group test p= .065 t= -1.858. Here, the mean of German respondents, mean= 3.39 SD= 1.216, and mean of Danish respondents mean= 3.73 SD= 1.400. Although Danish consumers feel slightly better about the blue-colored logo than German respondents, the difference is only marginally significant, as our p-value is slightly greater than the significance level p= .05. Thus, we cannot confirm our hypothesis H10.1, stating that there is a difference in the logo affect between both nationalities for the color blue, however, we want to highlight the moderately significant effect.

The color red group test p= .204 t= 1.273. Here, the mean of German respondents, mean= 3.57 SD= 1.246 and mean of Danish respondents, mean= 3.33 SD= 1.560.
Here, we can conclude that the difference between both nationalities and their feeling towards the red-colored logo is not significant. Thus, we reject our hypothesis H10.2 and conclude that we did not find a significant difference in the logo affect between Danish and German consumers for the color red.

H11: Purchase Intent and Nationalities

Next, we again conducted an independent samples t-test to examine whether there was a difference in the purchase intent between German and Danish consumers based on their color perception of red and blue.
First of all, the color blue group test $p < 0.05$ t= -2.959. Here, the mean of German respondents, mean= 2.98 SD= .904, and mean of Danish respondents mean= 3.45 SD= 1.409. Here, we can clearly see a significant difference in the purchase intent between Danish and German consumers based on their perception of the color blue. Thus, we can conclude that Danish consumers are more likely to purchase the product or service of a brand when a blue logo is used and accept our hypothesis H11.1 that there is a difference in the purchase intent for both nationalities for the color blue.

The color red group test p= .383 t= -.874. Here, the mean of German respondents, mean= 2.98 SD= .949 and mean of Danish respondents, mean= 3.12 SD= 1.376.
Compared to the color blue, where Danish respondents showed a higher purchase intent than German respondents, no significant difference was found in the purchase intent for the color red between the two nationalities. Thus, we reject our hypothesis H11.2 and conclude that we did not find a significant difference in the purchase intent between Danish and German consumers for the color red.

6.2.1 Sub-Conclusion

In this section, we examined the congruence between logo color and product category on the brand attitude, logo affect, WOM, as well as perceived price and quality of consumers. Key learnings from this section were that the uniformity of brand logo color and the product category significantly affect behavioral intentions of the consumer, which will be discussed in detail in the following.

First of all, we found that the product-color congruence of both product categories was associated with a higher brand attitude. A blue-colored insurance logo was found to be related to a more positive brand attitude compared to a red-colored insurance logo, and a red sports brand logo was linked to a more positive brand attitude than a blue sports brand logo.
Additionally, we have found that the insurance logo colored in blue has a more positive brand attitude than the blue sports logo, while the red sports logo is associated with a more positive brand attitude than the red-colored insurance logo.
This could be due to the fact that the affective qualities of both colors, namely *Competence* and *Excitement*, for which support was found in the first section of the analysis, correspond to the affective qualities of both product categories. Insurance companies appear to have a higher perceived association towards the trait *Competence* whereas sports brands might be more associated with *Excitement.* Thus, the two colors in themselves did not exhibit higher brand attitudes, but rather congruence between the logo color and the product category.

Further, the congruence of logo color and product category appears to have a positive effect on logo affect. Here, we have found that the insurance logo colored in blue has a higher logo affect than the red-colored insurance logo and the sports logo colored in red has a higher logo affect than the blue-colored sports logo. Again, our results further demonstrated that the higher logo affect is not due to the color itself but due to the consistency of logo color and brand.

Also, consumer's likelihood of WOM as well as purchase intent seems to be affected by the brand's appropriateness of the logo color. Again, we found support for both hypotheses, revealing that the insurance brand was associated with a higher likelihood of WOM and purchase intent when employed with a blue logo rather than a red logo. Consistent with these results, the sports brand was also associated with higher likelihood of WOM and purchase intent when used with a red logo rather than a blue logo. While no significant effects on WOM behavior were found due to the color itself.

In regard to consumer's perception of the quality and the price level of the two brands, we found that the congruence of logo color and product category appears to have an impact on the perceived quality of the two brands. Both brands were associated with a higher perceived quality when utilizing a logo color consistent with color norms of the related product category. However, it also became evident that the sports brand with the blue logo still had a higher perception of quality than the red insurance company, suggesting that the color blue may be associated with a higher perception of quality than the color red.

Furthermore, we found that the perceived price for the insurance company appears to be higher when it uses a blue logo compared to a red logo. However, we did not find any significant difference in the perceived price level of the sports logo colored in blue vs. red, suggesting that customers perceive the price of a sports brand with a red or blue brand logo to be the same.
Lastly, when comparing the differences between the two nationalities, German and Danish consumers, in regards to their brand attitude, logo affect and purchase intent based on their color perception of the colors red and blue, our results revealed the following: First of all, we found that there is no significant difference in the brand attitude resulting from the color perception of blue and red. When comparing the two nationalities in regards to logo affect based on their color perception, we only found a marginally significant difference for the color blue. Although we cannot confirm this result, we would like to point out the moderately significant effect, that Danish consumers evaluate a blue logo more positively.
However, we identified a difference between the two nationalities and purchase intention based on the perception of the blue logo. In particular, Danish consumers showed a higher purchase intention than German consumers when presented with a blue logo. However, when confronted with a red logo, no significant difference was found in the purchase intent between the two nationalities. In summary,

however, Danish consumers generally view a blue logo as more favorable than German consumers, which is reflected in their behavior such as purchase intent.

6.3 Effect of Logo Affect on Brand Attitude and Purchase Intent

Then, the hypothesized nomological network (Figure 13) was tested using a structural equation modeling approach, using AMOS 24.

Overall, we found strong support for the contention that the logo affect plays an important role in understanding consumer's decision and buying behavior. Logo affect has a significant and strong positive effect on consumer's brand attitude (BA .69, $p < 0.001$), which in turn has a significant and strong positive impact on the purchase intent (PI .64, $p < 0.001$), thereby confirming hypotheses 12 and 13. In addition, brand attitude also has a strong positive impact on the mediating variable perceived quality (PQ .78, $p > 0.001$), which on the other hand, only has an effect of 0.13 on the purchase intent. The total effect size of BA on PI can be calculated by multiplying and adding the two coefficients, thus 0.78 x 0.13 + 0.64, ending up with a total effect of 0.74. The effect on PI with perceived quality as a mediator is higher than solely the effect of BA on PI, thus supporting H14.

However, we did not find any significant effect of logo affect on purchase intent (PI; .06, ns), thus rejecting hypothesis 15.

Therefore, we can conclude that the positive association between logo affect and purchase intent can be explained by brand attitude, which has a significant mediating effect in this relationship. A positive logo affect leads to a positive brand attitude, which in turn leads to a high purchase intent. That is, brand attitude fully accounted for purchase intent.

In addition to that, perceived quality was found to have a mediating effect on the positive association between brand attitude and purchase intent. The more positive the consumer's brand attitude, the higher the perception of quality of that brand which then leads to a higher purchase intent.

For the output of the SEM, see Appendix 6.

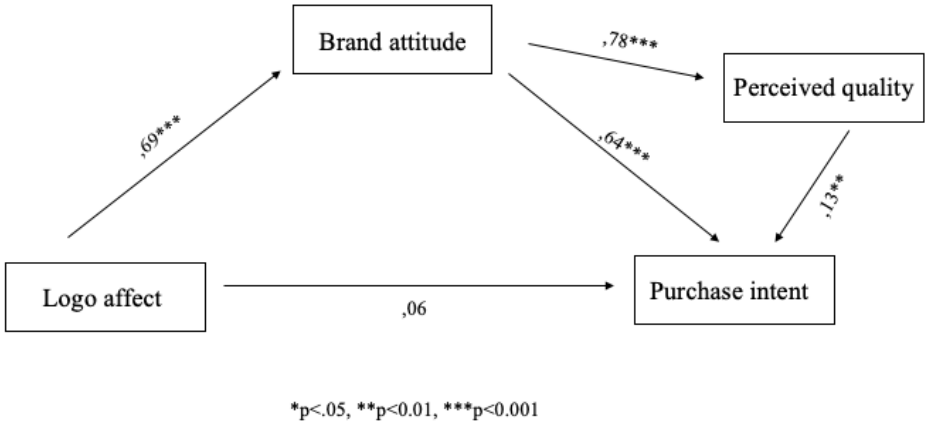

Figure 13: SEM: Relationship between Logo Affect and Purchase Intent with mediating effect of Brand Attitude and Perceived Quality

6.4 Conclusion of the Analysis

This study examined, among other things, whether consumers, when seeing a brand logo, associate personality traits with the brand that are consistent with commonly held color associations. The results of this study provide valuable insights into the selection of logo colors to convey brand personality. Firstly, we have tested how colors, in specific red and blue, influence the perceptions that consumers have of a brand's personality. The results of our study provide strong support for the relationship between color and brand personality, driven by color's referential meaning.

In particular, it was found that the congruence between the brand personality of the featured brand and the associated logo color resulted in a higher logo affect. Moreover, the insurance logos that included blue and the sports logos that were colored in red resulted in more positive brand attitudes, in a higher likelihood of WOM, higher perceived quality, as well as higher purchase intent. We have further analyzed the differences between the two nationalities, German and Danish consumers, in regard to their brand attitude, logo affect and purchase intent based on their color perception of the colors red and blue. We discovered that there was no significant difference in the logo affect and brand attitude resulting from the color perception of blue and red. However, we identified a difference between the two nationalities and purchase intention based on the perception of the blue logo. Specifically, Danish consumers indicated a higher purchase intention than German consumers when

presented with a blue logo. However, no significant difference in purchase intention and a red-colored logo was found between the two nationalities. In summary, Danish consumers generally perceive a blue logo more positively than German consumers. This is evident in their behavioral intentions, such as in their purchase intention and marginally, in the logo affect.

Finally, we have tested the relation of logo affect and purchase intent, by including brand attitude and perceived quality as mediating variables. The results have shown that brand attitude has a strong mediating effect on the association between logo affect and purchase intent. Furthermore, perceived quality was found to have a mediating effect on the positive association between brand attitude and purchase intent. Thus, the model has a double mediation.
Therefore, a positive logo affect leads to a more positive brand attitude, which in turn leads to a higher purchase intent. The perceived quality of the brand again has a mediating effect on the relationship between brand attitude and purchase intent.
The following table provides an overview of the learnings of our hypotheses.

Table 3: Learnings from our hypotheses

H1:	**A blue logo is associated with the BPS dimension *Competence.***	
H1a:	A blue logo is perceived as more competent than a red logo.	**Accepted**
H1b:	A blue logo is perceived as more trustworthy than a red logo.	**Accepted**
H1c:	A blue logo is perceived as more dependable than a red logo.	**Accepted**
H1d:	A blue logo is perceived as more secure than a red logo.	**Accepted**
H2:	**A red logo is associated with the BPS dimension *Excitement.***	
H2a:	A red logo is perceived as more energetic than a blue logo.	**Accepted**
H2b:	A red logo is perceived as more aggressive than a blue logo.	**Accepted**
H2c:	A red logo is perceived as warmer than a blue logo.	**Accepted**
H2d:	A red logo is perceived as more exciting than a blue logo.	**Accepted**
H3.1:	**Effect of Color and Product Congruence on Brand Attitude of Insurance Brand**	
H3.1a:	The blue insurance logo has a higher brand attitude than the red insurance logo.	**Accepted**
H3.1b:	The blue insurance logo has a higher brand attitude than the blue sports logo.	**Accepted**
H3.2:	**Effect of Color and Product Congruence on Brand Attitude of Sports Brand**	
H3.2a	The red sports logo has a higher brand attitude than the blue sports logo.	**Accepted**
H3.2b	The red sports logo has higher brand attitude than the red insurance logo.	**Accepted**
H4.1:	**Effect of Color and Product Congruence on Logo Affect of Insurance Brand**	
H4.1a:	The red insurance logo has a higher logo affect than the red insurance logo.	**Accepted**
H4.1b:	The blue insurance logo has a higher logo affect than the blue sports logo.	**Accepted**
H4.2:	**Effect of Color and Product Congruence on Logo Affect of Sports Brand**	
H4.2a	The red sports logo has a higher logo affect than the blue sports logo.	**Accepted**
H4.2b	The red sports logo has a higher logo affect than the red insurance logo.	**Accepted**

H5.1: Effect of Color and Product Congruence on Perceived Quality of Insurance Brand	
H5.1a: The blue insurance logo has a higher perceived quality than the red insurance logo.	**Accepted**
H5.1b: The blue insurance logo in has a higher perceived quality than the blue sports logo.	**Accepted**
H5.2: Effect of Color and Product Congruence on Perceived Quality of Sports Brand	
H5.2a: The red sports logo has a higher perceived quality than the blue sports logo.	**Accepted**
H5.2b: The red sports logo has a higher perceived quality than the red insurance logo.	**Accepted**
H6.1: Effect of Color and Product Congruence on WOM of Insurance Brand	
H6.1a: The blue insurance logo leads to a higher WOM behavior than the red insurance logo.	**Accepted**
H6.1b: The blue insurance logo leads to a higher WOM behavior than the blue sports logo.	**Accepted**
H6.2: Effect of Color and Product Congruence on WOM of Sports Brand	
H6.2a: The red sports logo leads to a higher WOM behavior than the blue sports logo.	**Accepted**
H6.2b: The red sports logo leads to a higher WOM behavior than the red insurance logo.	**Accepted**
H7.1: Effect of Color and Product Congruence on Perceived Price of Insurance Brand	
H7.1a: The blue insurance logo has a higher price perception than the red insurance logo.	**Accepted**
H7.1b: The blue insurance logo has a higher price perception than the blue sports logo.	**Accepted**
H7.2: Effect of Color and Product Congruence on Perceived Price of Insurance Brand	
H7.2a: The red sports logo has a higher price perception than the blue sports logo.	**Accepted**
H7.2b: The red sports logo has a higher price perception than the red insurance logo.	**Accepted**
H8.1: Effect of Color and Product Congruence on Purchase Intent of Insurance Brand	
H8.1a: The blue insurance logo leads to a higher purchase intent than the red insurance logo.	**Accepted**
H8.1b: The blue insurance logo leads to a higher purchase intent than the blue sports logo.	**Accepted**
H8.2: Effect of Color and Product Congruence on Purchase Intent of Sports Brand	
H8.2a: The red sports logo leads to a higher purchase intent than the blue sports logo.	**Accepted**
H8.2b: The red sports logo leads to a higher purchase intent than the red insurance logo.	**Accepted**
H9: Brand Attitude and Nationalities	
There is a difference in the brand attitude between Danish and German consumers when exposed to a blue logo.	**Rejected**
There is a difference in the brand attitude between Danish and German consumers when exposed to a red logo.	**Rejected**
H10: Logo Affect and Nationalities	
There is a difference in the logo affect between Danish and German consumers when exposed to a blue logo.	**Rejected**
H10.2: There is a difference in the logo affect between Danish and German consumers when exposed to a red logo.	**Rejected**
H11: Purchase Intent and Nationalities	
There is a difference in the purchase intent between Danish and German consumers when exposed to a blue logo.	**Accepted**
There is a difference in the purchase intent between Danish and German consumers when exposed to a red logo.	**Rejected**
H12: Logo affect has a positive effect on brand attitude.	**Accepted**
H13: Brand attitude has a positive effect on purchase intent.	**Accepted**
H14: Perceived quality mediates the relationship between brand attitude and purchase intent.	**Accepted**
H15: Logo affect has a positive impact on purchase intent.	**Rejected**

7. Discussion

Colors surround people every day and influence our state of mind and behavior. This fact also prompts marketing to deal with the effects of colors in order to be able to apply them in a targeted manner. It is increasingly necessary and challenging for companies to differentiate their brands from the competition as more brands are entering the market than ever before (Keller & Richey, 2006). The correct use of colors in marketing can support the advertising message and the desired effect of an activity or brand and also generate attention among consumers. The knowledge about the effects of colors in marketing is therefore crucial for the perception of consumers and for the success of a company's marketing. Color accounts for one of the key and strongest elements of marketing tools and can help brands to build an effective visual identity, establish strong relationships with a target market, and position itself in the marketplace against competitors. A logo and its color play an important role in the corporate identity of any company, as the color used for a company design is the first thing that consumers think of when they think about a company (Su et al., 2019).

The purpose of this paper was to investigate how logo colors, based on associations with certain brand personality traits, influence consumers' behavioral intentions and how these vary depending on the congruence of logo color and product category. More specifically, we wanted to provide more clarity and possible applications for managers in relation to colors in marketing in general, but specifically on the impact of logo colors on consumer attitudes towards brands in specific product categories.

This was deemed important because previous literature has conducted various studies on corporate logo design and examined elements such as logo font (Grohmann et al., 2013) or logo shape (Labrecque & Milne, 2012). However, only limited literature streams exist that examine logo color in combinations with a product category and its effect on consumers.

Based on existing research, we focused specifically on brands whose brand personality conveys competence and excitement. In this study, we focused on sports and insurance industries. Our findings show brand managers from these industries which colors are best suited for their corporate identity and can thus positively influence consumer attitudes and behavior.

Therefore, despite the low level of scientific attention to date, the choice of an appropriate logo design and its color congruent with the corporate image is crucial and should be given great consideration by companies and brand managers.

The results of our study provide strong evidence for the relationship between color, brand personality, and product category due to the referential importance of color to brand attitudes. We investigated consumers' behavioral intentions, such as brand attitude, by confronting them with the description of a brand (sports or insurance brand) in combination with a colored logo (red or blue). In total, we conducted four different studies:

Study 1: *Sports brand with blue logo*
Study 2: *Insurance brand with red logo*
Study 3: *Insurance brand with blue logo*
Study 4: *Sports brand with red logo*

After analyzing our hypotheses, we generally found that logo affect, attitude towards the brand and behavioral intentions, such as purchase intention, are positively influenced when the brand logo color and product category were congruent. In this case, the correspondence of the sports brand with the red logo and the insurance brand with the blue logo resulted in higher behavioral responses than when the sports brand was assigned a blue logo and the insurance brand a red logo.

7.1 Implications

In our thesis, we agreed with the findings of existing research, that colors do unconsciously impact the perception of consumers. We tried to find out what influence the colors red and blue of a logo have on the attitude towards a brand, specifically towards a sports and insurance brand. In the following we will present the managerial and theoretical implications and contributions that will help to provide insights into the research area of color psychology and logo design for businesses. Thus, our study helps managers appropriately align logo design with consumer perceptions to achieve the maximum brand success that can result from the right use of color in a company's visual identity.
In general, it can be said that our study provides strong evidence that consumers, first of all, associate certain colors with certain brand personality traits and therefore demonstrates the link between colors and brand personality. Additionally, our results contribute to existing literature, showing that there exists a strong relationship between logo color design and product category and the resulting influence of the consumers attitude towards the brand.

7.1.1 Managerial Implications

In today's multi-faceted market, there is a great demand among consumers for more color options. Increasing customization, computer-aided design interfaces that allow consumers to create customized products and simulated online testing environments require managers to understand the role color plays in how consumers perceive their offerings. Earlier in times, the choice of color was limited only to clothing, various cosmetics, cars and also paints. In contrast, nowadays, the situation is quite different: among other things, sports shoes, game consoles, electronic devices such as cell phones, computers and headphones can be purchased in a wide variety of colors. Marketers like Apple and Nike are good examples of companies that have recognized the importance of color and offer a variety of colors for their products, so that consumers have the option to better express themselves and their personalities. In response to consumers' growing need to identify and express themselves through their purchases, color is becoming increasingly prevalent (Belk, 1988) and help companies to build a brand personality that customers can identify with.

Colors are usually perceived first, followed by images and only lastly word signs. Thus, clear definitions such as color guidance systems, corporate design, and psychological coloring are becoming increasingly important in design within communication processes. Colors and their combination also play an essential role in relation to the branding and corporate identity of a brand. The aim is to ensure that a company or brand is recognized and creates identity and personality on the basis of its corporate color alone.

A brand's image, values, and personality are communicated to consumers through visual elements, such as colors, typography, layouts, and symbols (Orth & Malkewitz, 2008). Many brand managers are still relying on their personal preferences or gut feeling for corporate color choices, including the choice for logo color, rather than trusting color psychology and the several meanings colors have. Psychologists, philosophers and researchers have been studying the effect of colors since ancient times. Today, the findings of modern brain research and psychology even flow into the color design of supermarkets or medical treatment rooms. Colors are also an important component in logo design and branding. And this is mainly due to the effect of colors on the subconscious of consumers.

Advertisers can create an emotional link between the brand and consumers through these visual elements, whether the impression is positive or negative (Aaker, 1997). Advertising that effectively and efficiently uses visual elements creates memorable consumer experiences (Aaker, 1997), establishes brand personality, and enhances brand recall (Tavassoli, 2001).

An appealing logo is crucial since customers' impressions of a company's logo lead to a "more positive company attitude and purchase intention" (Jun et al. 2008, p. 382). With our research and findings, we can provide brand managers and logo designers who want to convey a brand image related to the brand personality dimensions 'excitement' and 'competence' with an initial effective and simple guide as to which colors lead to a more positive behavior.

When managers decide on a color scheme for their brand, the color should not be chosen based on gut feeling, but rather attention should be paid to the psychological effects of the colors, among other things, in order to unconsciously give the customer an initial image of the brand and its personality. For example, managers should compile important aspects of their communication or features of their products or services. With this overview of specific features of product characteristics, managers can target color symbolism and weight which colors correspond best with the listed features. The same is true, of course, for brands that want to reestablish themselves. Knowing what makes a brand stand out will then best help managers better narrow down color choices. Brand logos and their design can create positive affective reactions even before advertising activities are carried out (Bresciani & Del Ponte, 2017). This is especially important for startups that do not have a budget for branding activities in their early stages and cannot invest in brand management consultants.

As explained in the beginning, the perception of colors is subjective, context-dependent and also culturally different. If brands interact internationally, brand managers should also take cultural factors into account if the brand's target group is from a very different cultural background, as color perceptions differ from culture to culture. Our findings have shown that there is a difference in the perception of the color blue between Danish and German consumers. In general, Danish consumers had a more favorable attitude towards the blue-colored logo than German consumers. Thus, even if managers take many aspects into account when selecting their colors, it is not yet feasible to reach all members of their target group. The effect of colors is ultimately always subjective and also dependent on the culture (Jun et al., 2008; Kilic et al. 2011).

Sports Industry

The color red in a sporting context has been studied many times, and it has been shown that both seeing and wearing red leads to higher performance and actual achievement such as winning. In addition to these findings, certain personality traits are associated with the color red, such as *exciting* and *active*. Based on existing literature, we therefore hypothesized that red would be a well matching color in the logo design of a sports brand, due to the congruence of affective qualities of the color red and the sports brand, both being associated with personality traits like 'energetic' and 'exciting'. Our results show that consumers' attitude towards a sports brand is more positive when the logo is colored in red rather than in blue. We therefore recommend brand managers from sports brands to rely on a red rather than blue-colored logo, in order to match their corporate identity. Not only was the perceived quality higher when the sports logo was shown in red rather than blue, but also the purchase intent, and the WOM behavior.

When using red in or as a brand logo color, marketers should remember that red is associated by consumers with active, exciting and also energetic, so red should be used for companies that want to convey an exciting and active image. In our research of brand personalities, the color red was the best fit for the dimension of 'excitement'. This means that consumers perceive a brand with a red logo as active, exciting and energetic, but also warm. Previous studies have also found that red is associated with eroticism and attractiveness. Thus, our findings can be applied not only to the sports industry, but in conjunction with our literature review also to other companies, such as the sex industry, as red is associated with brand personality traits such as love, passion and erotic.

Insurance Industry

As previous literature suggested, the color blue is mostly associated with adjectives such as trustful, dependable and reliable (Labrecque & Milne, 2012). As some literature streams suggest, the insurance industry is based on trust (Guiso, 2012; Schanz, 2009). We therefore hypothesized that a blue logo color is associated with certain brand personality traits like trustful and dependable and that the attitude towards an insurance brand is higher when the logo is colored in blue rather than in red. Our findings confirmed that the attitude towards an insurance brand with a blue logo rather than a red logo is higher compared to employing a red logo.

In our study of brand personalities, the color blue best matched the brand personality dimension of *Competence*. When using the color blue in a logo, marketers must keep in mind that consumers perceive blue logos as trustful, competent, reliable and dependable. Blue logos should therefore be used for brands that seek to embody an image that reflects these personality traits.
Thus, our findings can be applied not only to the insurance industry, but also to other companies for which these values play a major role, such as law firms or financial institution.

After all, the sensations and associations evoked by color also contribute to image formation and at the same time represent a decisive factor in product evaluation and purchasing behavior. Our study provides clear insights for brand managers that logo colors influence brand attitudes and various behavioral aspects that are influenced by brand attitudes. Therefore, all managers responsible for a company's logo design must consider color design and its meaning, as well as the personality traits associated with it, in order to achieve brand success.

Our research can also help to develop new brands and reposition existing ones. Brand and marketing managers can use our findings and results not only in the choice of logo colors, but also in the overall color scheme of their corporate visual identity, using colors for packaging, websites and store windows, for example, to support and reinforce a particular brand personality. As can be retrieved from our findings, the importance of colors differs from product category to product category. Therefore, we recommend managers to carefully examine the norms of their product categories and the competitors' choices of colors within their product category. Some brands that are new to the market even adopt the colors of a well-established competitor to communicate category affiliation (Keller & Richey, 2006), despite possible differences in corporate values and image. To summarize, colors can help brands create a unique personality, which can be seen as a successful strategy for differentiation.

Based on our study, marketers are advised to adjust the guidelines of creating logos and optimize them with the help of the current results. This means that logos should not be considered as a separate aspect of branding, but that an integral approach is created where logos take an important role. The better this new insight is taken into account, the more consumers' perception of logos can be assessed and influenced in the long run, creating a lasting relationship with the product. This should be taken

into account especially for new, young logos, by conducting longitudinal studies and thus creating a deeper insight into the role of the logo.

With a selected logo color that matches the personality of a brand, the success of any company can be strengthened. Thus, it is the responsibility of the brand managers how the first impression of their brand is received by consumers, as colors are the first perceived element of a corporate's visual identity and also remains longest in the memory of consumers. Beyond the psychology of color, it is crucial for managers to bear in mind that there are other factors for a successful business, with logo colors being just one of several important parts of the overall marketing strategy. Furthermore, just as impeccable branding is not enough to successfully establish an inferior product or service as a brand, an appealing logo alone will not convince customers to buy a product or service. Rather, it depends on the interplay of several small improvements in different areas of the product or service. Nevertheless, aligning the logo color with the overall brand image to be conveyed can be seen as an important first step towards a brand's success.

7.1.2 Theoretical Contributions and Implications

From a theoretical perspective, this study contributes to the limited research that has been conducted on the relationship between logo color and brand personality, as well as the generally limited research on a company's logo and the effects on consumers' brand attitudes and behavioral intentions. Further, this study attempted to examine the construct of brand personality and treated colors as key variables in the construction of brand personality.

The BPS developed by Aaker (1997) has been used by researchers in a variety of settings, including examining online communication of brand personality (Okazaki, 2006) comparing brand personality across cultures (Aaker, 2001; Rojas-Mendezet al., 2004), and measuring the effects of brand personality on consumers' reactions to apparel brands (Azevedo & Pessoa, 2005; Ismail & Spinelli, 2012). In this study, Aaker's (1997) BPS dimensions are used to examine how Danish and German consumers associate personality traits with logo colors.

Psychology has long linked colors to personality and emotions (Valdez and Mehrabian 1994), yet, marketing literature has not fully incorporated these findings. Despite the great importance of logo designs, no established guidelines for the creation of logos exist to date. Therefore, it is not surprising that some logos are insufficiently recognizable or even negatively judged (Kohli et al., 2002). Due to

the fact that there are no elaborate regulations for the creation of logos, the design of a logo can vary greatly from industry to industry. Logos can represent the brand name alone or be accompanied by unique visual symbols (Park et al., 2013).

Several studies exist on logo design, observing the shape or naturalness of the logo (Henderson & Cote; Walsh et al., 2010), but also investigating the combination of a symbol and name of logos (Salgado-Montejo et al., 2014). Bottomley and Doyle (2006) investigated the role color can play in building brand meaning. More specifically, the researchers investigated which color is appropriate for a brand logo and adds direct and inherent value to the brand. In doing so, they examined sensory-social and functional products and what colors are considered appropriate for those products. The study found that functional colors like blue are more appropriate for functional brands whereas sensory colors like red are more appropriate for social-sensory products. However, Bottomley & Doyle (2006) did not include brand personalities in their study.
These studies have all studied logo design and impacts on different cognitive and behavioral intentions, however, have not yet investigated how consumers' perceptions vary by product category, based on the findings of associations with personality traits.
To the best of our knowledge, there exists no research that investigated the relationship between colors used in brand logos and the personality traits associated, and thus the influence on consumer's behavior based on different product categories.

With our study we have contributed to existing literature by showing the impact of logo colors on the overall perceived brand attitude and purchase intent in congruence with brand's product categories. This study additionally provides theoretical implications by extending the application of associative learning theory and anthropomorphism to explain consumers' attribution of personality traits to brands. Our finding that consumers attribute brand personality traits when viewing blue and red logos that are consistent with common color associations, is in line with anthropomorphism theory, which states that consumers attribute personality traits naturally to brands (Freling & Forbes, 2005).
The blue logo was increasingly associated with the personality traits reliable, secure and trustful, which are components of the competence dimension of the BPS, while the red logo was associated with the personality traits warm, aggressive and energetic, which are all traits of the excitement dimension of the BPS.

We extend existing research on logo design by including brand personality associations on the dimensions of *Excitement* and *Competence* in relation to product categories.

Since previous literature on logos has not yet included the aspect of logo color for different product categories in its research, we therefore felt it was important. In addition, this work responds to Labrecque and Milne's (2013) implication to investigate the brand-building properties of logos and nonverbal brand elements such as color in certain product categories.

More specifically, we examined red and blue logos in combination with the brand personality dimensions *Excitement* and *Competence*, respectively. Since literature has associated the sports industry with items from the *Excitement* dimension and the insurance industry with items from the *Competence* dimension, we used these findings to examine the effects of logo color in these industries on various cognitive and affective components, as well as various behavioral intentions.

Blue and Competence

In recent studies, the color blue has been associated with certain adjectives such as competent and trustworthy. We therefore sought to corroborate these findings by examining the relationship between blue and certain brand personality traits of the BPS developed by Aaker (1997). Thus, in order to link color psychology to the logo design literature, we attempted to determine which traits from the BPS are associated with blue-colored brand logos. We found evidence that blue is particularly correlated with brand personality traits competent, reliable, trustworthy, and secure. Thus, our contribution to the existing literature on brand personality is that blue-colored brand logos are correlated with these four traits.

Blue Logo and Insurance Brands

Bottomley & Doyle (2006) showed in their study that certain logo colors are better suited for sensory-social brands than for functional brands and vice versa. However, they did not integrate the different dimensions of the brand personality scale and did not elaborate on different product categories. Our study extends their findings by linking the importance of colors to different product categories in conjunction with the corresponding brand personality traits. Therefore, based on our findings that a blue-colored logo correlates with certain attributes of the competence dimension of the BPS, we wanted to examine a blue-colored logo of a brand operating in an industry characterized by trust, safety, reliability, and competence. As existing literature has found that high levels of trust and competence are linked to the insurance sector, we sought to examine a blue insurance brand logo and

explore specific cognitive and affective responses of consumers. These responses included attitude toward the brand, purchase intention, price and quality perceptions, and finally WOM behavior. Our results clearly show that the blue brand logo leads to positive brand attitudes and further has a positive effect on purchase intention, perceived price and quality, and WOM behavior.

Red and Excitement

Studies have shown that certain adjectives such as exciting, warm, and active were associated with the color red. Following Aaker's (1997) BPS, we therefore concluded that the color red is associated with the brand personality dimension "excitement". In our study, we therefore investigated whether the presence of the color red in a brand logo correlates with the dimension *Excitement* by testing its relationship with certain personality traits. We found significant evidence and support that there exists a strong relationship between red logos and certain brand personality traits of the BPS.

Red Logo and Sports Brands

Based on the results of the associations between red logos and brand personality traits of the dimension *Excitement*, we felt it was important to investigate whether a red logo evoked higher brand attitudes and a positive logo affect in relation to a sports brand. Additionally, we intended to investigate if the congruence of logo color and brands' product category led to a higher perceived quality and price, WOM behavior and also purchase intention. Based on the analysis of our data, we were able to confirm our hypothesis and found that a sports brand that uses a red brand logo leads to higher brand attitudes and also higher perceived quality, as well as higher WOM behavior and purchase intent. However, we did not find any influence of the congruence between a red logo and the sports brand on the perceived price.

We have now found that combining a blue logo with an insurance brand led to more positive brand attitudes, as does combining a red logo with a sports brand. However, it is also important to add that a red logo combined with an insurance brand and a blue logo combined with a sports company led to lower brand attitudes. We find that the logo affect, i.e., consumers' feelings toward the red or blue brand logo, is significant and varies substantially depending on the combination of logo color and product category.

In addition, we found that brand attitude had a strong mediating effect on the relationship between logo affect and purchase intention. This suggests that a strong logo affect alone, resulting from the congruence of the brand's logo color and product category, does not directly lead to higher purchase intention. Rather, our results showed that logo affect positively influences consumers' brand attitudes, which in turn has a positive impact on purchase intention. Furthermore, our findings indicate that a positive brand attitude leads to a higher perceived quality of the brand, which in turn positively influences the purchase intent.

These findings provide valuable insights for brand managers, who must remember that an appealing and appropriate brand logo alone does not lead to increased purchase behavior. Rather, the creation of a positive consumer attitude towards the brand should not be disregarded, as this appears to have a strong, direct positive influence on purchase intention. As studies have shown, consumers' attitude toward the brand is recognized as an essential element of the customer-brand relationship (Augusto & Torres, 2018; Bartsch et al., 2016) and plays the most important role in forming positive consumer behavior (Ajzen, 1991). In addition to repeat purchase behavior, customers must have relatively strong favorable attitude towards a brand to be truly loyal to that brand (Day, 1969).

Thus, our results suggest that increasing brand attitudes is critical to driving and also sustaining repeat consumer purchase behavior.

In summary, we can now say that our research provides valuable insights and contributions to existing literature into the fact that the suitability of different logo colors varies across brand’s product categories. More specifically, our results have provided insights into the sports and insurance industry and the congruence with red-colored and blue-colored brand logos respectively. Thus, it is important to choose the appropriate logo color for a product category to, hence, achieve a more positive brand attitude. Finally, attitude is a strong driver in consumer behavioral responses, such as purchase intent. The findings of this study highlight the importance of the mediating effect of consumers' attitude towards the brand on the purchase intent. Therefore, brand managers should strengthen consumers’ brand attitudes by choosing a logo color that is congruent with the color norms of their belonging product category as well as their brand personality. This, in turn, helps reinforce behavioral responses such as purchase intention.

8. Limitations and Further Research

Although we made every effort to ensure the validity of this study, there are several limitations that should be considered when interpreting the results. Therefore, we will now state limitations of our work, and present them with suggestions for further research.

We conducted our study with fictitious descriptions of companies in connection with what we, from a subjective point of view, considered to be a suitable logo in order to achieve the best possible findings and thus not to confront the respondents with a logo they were familiar with and thus influence their perception. We recognized that a brand logo is a multi-faceted construct with many factors that affect human's perception, including design elements like shape, font or size, and non-design factors such as price. This research focuses exclusively on one design factor of a logo, namely the logo color, to determine the role of color in influencing consumer perceptions.
More specifically, we focused on only one color that best matched the brand personality of a product category. However, most logos on the market today are not monochromatic, but contain more than one color (e.g. Google), or have one main color with small color accents (e.g. Starbucks). However, research suggests that the predominant color of a logo can play a large role in brand recognition (Abril et al. 2009). Additionally, specific color combinations are associated with certain meanings, such as holidays (e.g., green and red for Christmas) and countries of origin (e.g., green, white and red for Italy). However, it would be interesting for future research to investigate the interplay of colors in the logo design.
In addition, future research could investigate how consumers attribute brand personality traits when color combinations are used in brand logos. According to Zaichkowsky (2010), by using color combinations instead of a single color, a brand can more easily distinguish itself from its competitors in the market.

In our study, only one of the attributes of a color was varied, namely hue. The other two color attributes, saturation and lightness, were not considered because existing literature criticizes that only one attribute should be varied in new studies. Therefore, it could be interesting to vary e.g., the lightness of the logo color, e.g., to address different target groups and thus also to draw conclusions about different behavioral patterns.

The research design of our study demonstrates the first contact with a brand and how color of a brand logo can affect brand judgments. Researchers could extend our initial approach to logo color design by not only investigating other colors but also different product categories - with or without consideration of brand personality traits. As our study showed, the logo design of any company is an important factor for corporate identity and thus serves as a first clue when thinking about a company. Having so far only investigated the effects of logo design on overall brand attitude, perceived price and quality, and purchase intention, future research should also focus on other behavioral variables. Brand love and identification with one's brand are also important elements of brand management. In this context, further research could investigate the unconscious effects of colors on these variables.

In our study, respondents were shown a logo in conjunction with a brief description of a company. Therefore, it could be that the respondents did not respond to the logo color when selecting the associated brand personality traits but selected the brand personality traits based only on the brand description. In this case, it would be relevant for future studies to give only a logo without a description of the brand so that subjects cannot be influenced by the brand description. In this case, future studies could simply show different colored logos and ask consumers which industry that color would match.

Another limitation of our work is that we only compared the color perception of a logo between German and Danish consumers. Since previous literature has found that there are differences between cultures, we assumed that we would encounter differences here as well. After our analysis, it became clear that there was no significant difference in color perception between Danish and German consumers. However, we must acknowledge that the perception and meaning of color differs across cultures (Block & Kramer 2009; Chebat & Morrin 2007; Madden et al., 2000). Therefore, another area of research would be to compare the perception of a logo color and its effect on overall perceived brand attitudes and other variables between two different nations such as Germany and an Asian culture such as China. Previous research suggests that differences in color perception exist, especially between Western and Asian cultures (Aslam et al., 2006). Further work should investigate possible cultural differences related to logo design. The color associations presented in *Figure 1* must therefore also be interpreted with caution, since the associations of colors vary from culture to culture and managers need to take these associations into consideration.

Due to non-probability sampling, our sample can be considered non-representative. In addition to the nationality limitation, the sample size of our study was relatively small, N = 469. The more dominant part participating in the study were women. In terms of age, the 26- to 35-year-old age group was also the most frequently represented. Therefore, the external validity or generalizability of the results of this study is limited. It would be interesting for future research dealing with corporate logo design to survey a larger sample of participants that includes men and women relatively equally and covers all age groups of the respective target group, since men and women also have different color perceptions.

After our research was quantitative, we were unable to obtain accurate explanations from consumers as to why they associate the color red with active, for example. To better understand consumer attitudes regarding a brand logo and its color, it may be useful to test our findings in a qualitative study to determine the deep-seated reasons for consumer attitudes when confronted with different brand logos. Here, consumers can be shown colors directly and their initial reaction, perceptions, feelings and emotions, can be explored. Then, different product categories can also be presented in conjunction with different logo colors and thus consumers can understand the underlying reasons why a specific colored logo would be a better fit for a specific product category. This could provide even deeper insights for brand managers who are responsible for the color design of the company.

Furthermore, brand personality forms the basis of the consumer-brand relationship, provided that the consumer's personality and that of the brand are predominantly congruent (Kilian, 2009). The higher this congruence, the higher the probability of a purchase or follow-up purchase. This results in a specific brand relationship quality. Therefore, it could also be interesting for future studies how brand attitude towards a company, based on certain brand personality traits, affects variables such as brand love.

9. Conclusion

With this thesis, we set out to examine the effects of logo color on consumer's brand attitude by assessing the differences between two product categories and two national markets, namely Germany and Denmark. More specifically, we aimed at answering the underlying research question of this study:

How do logo colors affect consumers' brand attitudes in different product categories?

In order to show how colors influence consumers' perceptions of brands, we decided to focus our study on the colors red and blue, and on the two industries of sports and insurance. Since most research in the field of color psychology has examined the colors red and blue and the emotions they evoke, as well as the opposite effect they convey, with red being one of the warm colors and blue one of the cool colors, we decided to include these two colors in our study. Furthermore, the selection of the two brands was based on the correspondence between the affective qualities of the colors red and blue, the brand personality dimensions *Excitement* and *Competence* and the affective qualities of the sports and insurance brands, respectively. To investigate and answer our research question, we developed 15 hypotheses aimed at investigating consumers' attitudes towards the brand depending on the logo color and the respective product category.

Firstly, we examined the association consumers have of a colored brand logo with certain personality traits. Specifically, we hypothesized that the presence of the color blue and red in a brand logo will be associated with certain personality traits of Aaker's (1997) BPS, namely *Competence* and *Excitement* respectively.

Next, we hypothesized that the perceived congruence of brand logo color and product category would influence consumer's attitude towards the brand. Moreover, we hypothesized that the logo affect, being consumers either overall positive or negative feeling toward the logo, as well as behavioral intentions such as perceived quality and price, WOM behavior and purchase intent would be affected by perceptions of congruence between brand logo color and product category. Subsequently, we hypothesized that there is a difference in brand attitude between Danish and German consumers based on the color perception of red and blue.

Lastly, we analyzed the relation between logo affect and purchase intention and particularly hypothesized that logo affect has an influence on the brand attitude, which in turn has a positive influence on the purchase intent. Further, we specifically hypothesized that perceived quality has a mediating effect on the relationship between brand attitude and the purchase intention.

To test our 15 hypotheses, we chose a quantitative method and developed a survey-experiment with four manipulations in which respondents were exposed to a brand in combination with a colored logo, either blue or red. In particular, we chose two different product categories for our study, namely the sports and insurance industry, and two different logos distinguished only by their color, either red or blue. By uncovering significant differences in consumers' attitudes depending on which brand and logo color manipulation they were exposed to, we were able to determine how consumers' attitudes towards the brand were influenced by color perceptions and associations with brand personality.
Our analysis revealed that consumers' attitudes were influenced by the color of the brand logo and the perceived congruence with the brand's product category.

First, we found that colors in logos, in specific blue and red, are associated with certain brand personality traits of Aaker's (1997) BPS, namely Competence and Excitement respectively.
Second, we found that consumers consider a color more appropriate for a brand logo when the affective attributes of the color, the associated brand personality, and the affective attributes of the brand's product category are congruent. More specifically, we found that congruence of brand logo color and product category, namely the combination of the color blue and the insurance brand, as well as red and the sports brand, positively influenced consumer's brand attitude. Also, we discovered this effect to be solely related to congruence of logo color and product category, as no significant effects on brand attitude were found due to the color itself.

Third, our analysis found that the correspondence of the aforementioned colors and product categories led to a higher logo affect as well as higher behavioral intentions, such as a higher likelihood of WOM, greater perceived quality, and a stronger purchase intention. Again, we discovered these effects to be solely related to congruence of logo color and product category, as no significant effects on the aforementioned logo affect and behavioral intentions were found due to the color itself.
We also found that the perceived price level for the insurance brand was influenced by the color of the logo employed, resulting in a higher perceived price if a blue brand logo was used. However, we

did not find a significant difference in the perceived price level of the sports logo as a function of logo color.

Additionally, we uncovered that Danish consumer in general perceived the color blue as more favorably than German consumers, which was reflected in their attitude towards the brand as well as in their higher purchase intent, whereas the color red was unaffected by the different nationalities.
We also discovered that the logo affect, resulting from the perceived congruence of logo color and product category of the brand, positively affected brand attitude, which in turn led to a higher purchase intent. Accordingly, we identified that brand attitude had a strong, mediating effect on the relationship between logo affect and purchase intention. More specifically, our analysis revealed that perceived quality had a mediating effect on the positive association between brand attitude and purchase intent. Therefore, we uncovered that a positive logo affect led to a more positive attitude towards the brand, which in turn led to a higher quality perception of the brand and ultimately to a higher purchase intention.

With our findings, we contribute empirical findings of brand logo colors and congruence with brand's product categories eliciting positive consequences on consumers' attitudes toward a brand. Previous literature on logo colors has largely been limited to the effects of colors on different cognitive and behavioral intentions and has not yet focused on how consumers' perceptions vary by product category. Consequently, our findings provide evidence that consumers, first of all, associate colors used in brand logos with certain brand personality traits. Furthermore, our results show how the use of certain colors in brand logos in combination with certain product categories can have positive effects on consumers' brand attitudes, logo affect, and purchase intention. Specifically, our studies confirm that a high logo affect, resulting from congruence between logo color and product category, does not directly lead to a higher purchase intention, but rather positively influences brand attitudes, which in turn has a positive effect on purchase behavior. This contributes as evidence for brand managers that logo color can aid them in increasing consumer attitudes toward the brand and, consequently, purchase intent.

In summary, we conclude that the congruence of logo color and product categories positively influences consumer attitudes and leads to further behavioral intentions such as increased purchase intention. This can be attributed to the assigned brand personalities that result from the association

with logo colors. Our findings provide researchers and brand managers with greater clarity when selecting logo colors for their brand in the context of their brand personality. In our effort to create an initial guide to logo design for various product categories, this study can serve as an incentive for further research.

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11. Appendix

Appendix 1:

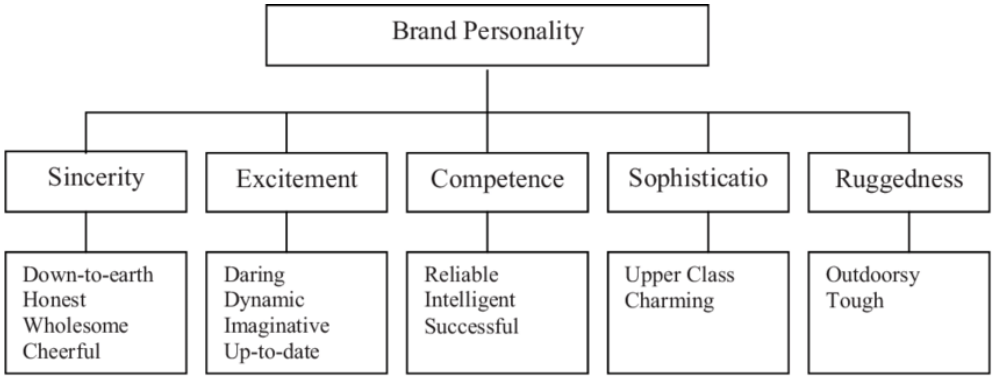
Appendix A

A BRAND PERSONALITY SCALE

(Means and Standard Deviations)*

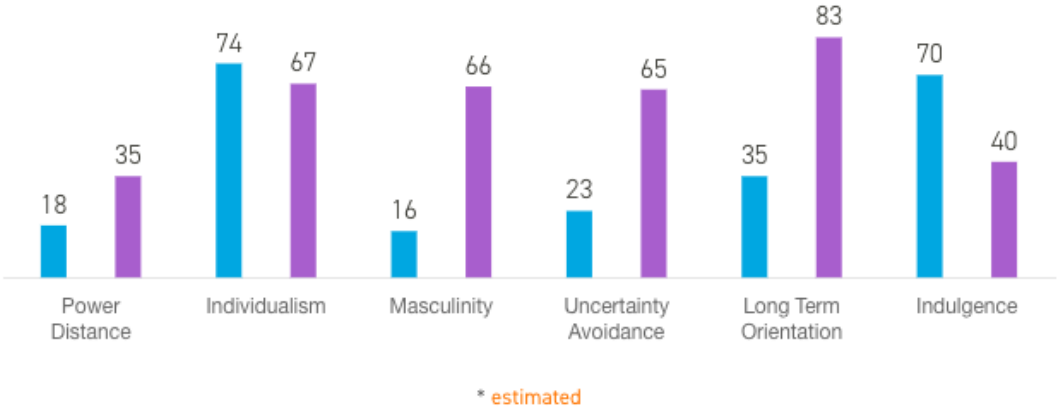
Traits	*Mean*	*Standard Deviation*	*Facet*	*Facet Name*	*Factor Name*	*Mean*	*Standard Deviation*
down-to-earth	2.92	1.35	(1a)	Down-to-earth	Sincerity	2.72	.99
family-oriented	3.07	1.44	(1a)				
small-town	2.26	1.31	(1a)				
honest	3.02	1.35	(1b)	Honest			
sincere	2.82	1.34	(1b)				
real	3.28	1.33	(1b)				
wholesome	2.81	1.36	(1c)	Wholesome			
original	3.19	1.36	(1c)				
cheerful	2.66	1.33	(1d)	Cheerful			
sentimental	2.23	1.26	(1d)				
friendly	2.95	1.37	(1d)				
daring	2.54	1.36	(2a)	Daring	Excitement	2.79	1.05
trendy	2.95	1.39	(2a)				
exciting	2.79	1.38	(2a)				
spirited	2.81	1.38	(2b)	Spirited			
cool	2.75	1.39	(2b)				
young	2.73	1.40	(2b)				
imaginative	2.81	1.35	(2c)	Imaginative			
unique	2.89	1.36	(2c)				
up-to-date	3.60	1.30	(2d)	Up-to-date			
independent	2.99	1.36	(2d)				
contemporary	3.00	1.32	(2d)				
reliable	3.63	1.28	(3a)	Reliable	Competence	3.17	1.02
hard working	3.17	1.43	(3a)				
secure	3.05	1.37	(3a)				
intelligent	2.96	1.39	(3b)	Intelligent			
technical	2.54	1.39	(3b)				
corporate	2.79	1.45	(3b)				
successful	3.69	1.32	(3c)	Successful			
leader	3.34	1.39	(3c)				
confident	3.33	1.36	(3c)				
upper class	2.85	1.42	(4a)	Upper class	Sophistication	2.66	1.02
glamorous	2.50	1.39	(4a)				
good looking	2.97	1.42	(4a)				
charming	2.43	1.30	(4b)	Charming			
feminine	2.43	1.43	(4b)				
smooth	2.74	1.34	(4b)				
outdoorsy	2.41	1.40	(5a)	Outdoorsy	Ruggedness	2.49	1.08
masculine	2.45	1.42	(5a)				
Western	2.05	1.33	(5a)				
tough	2.88	1.43	(5b)	Tough			
rugged	2.62	1.43	(5b)				

*Based on n = 9, 910



Brand Personality Scale (Aaker, 1997)

Appendix 2:



Hofstede's Model on Cultural Dimensions: Denmark and Germany (Hofstede Insights, 2022)

Appendix 3:

Survey:

Introduction:

Welcome to this study.

Thank you for participating! This survey will ask your opinion about a fictitious company.

It will take approximately 2-3 minutes. We encourage you to follow your first thought and feeling and not spend too much time rationalizing or evaluating each question. The study is conducted by Nina Riegel and Emily Luelfesmann, Master students at Copenhagen Business School studying MSc International Marketing and Management.

The study aims solely to contribute to science and your answers will be treated anonymously.

Study 1:

In the following, we will present a fictitious brand to you. We would like to hear your opinion about it.

Halo Insurance is an insurance company that provides a high-quality insurance experience for its customers. It strives to make insurance experiences simple, personal and affordable. Halo Insurance serves consumers across multiple service lines, like car or cell phone insurance, in various markets and offers a number of specialized and customized plans.

How do you feel about this logo?

Study 2:

In the following, we will present a fictitious brand to you. We would like to hear your opinion about it.

Strava Sports is a sports tech company that enables athletes all around the globe to connect. The company allows the community to interact with other athletes and to share their running and fitness experience and activity. An activity's recorded information may include a route summary, speed and timing.

How do you feel about this logo?

Study 3:

In the following, we will present a fictitious brand to you. We would like to hear your opinion about it.

Halo Insurance is an insurance company that provides a high-quality insurance experience for its customers. It strives to make insurance experiences simple, personal and affordable. Halo Insurance serves consumers across multiple service lines, like car or cell phone insurance, in various markets and offers a number of specialized and customized plans.

How do you feel about this logo?

Study 4:

Remove Question

In the following, we will present a fictitious brand to you. We would like to hear your opinion about it.

Strava Sports is a sports tech company that enables athletes all around the globe to connect. The company allows the community to interact with other athletes and to share their running and fitness experience and activity. An activity's recorded information may include a route summary, speed and timing.

How do you feel about this logo?

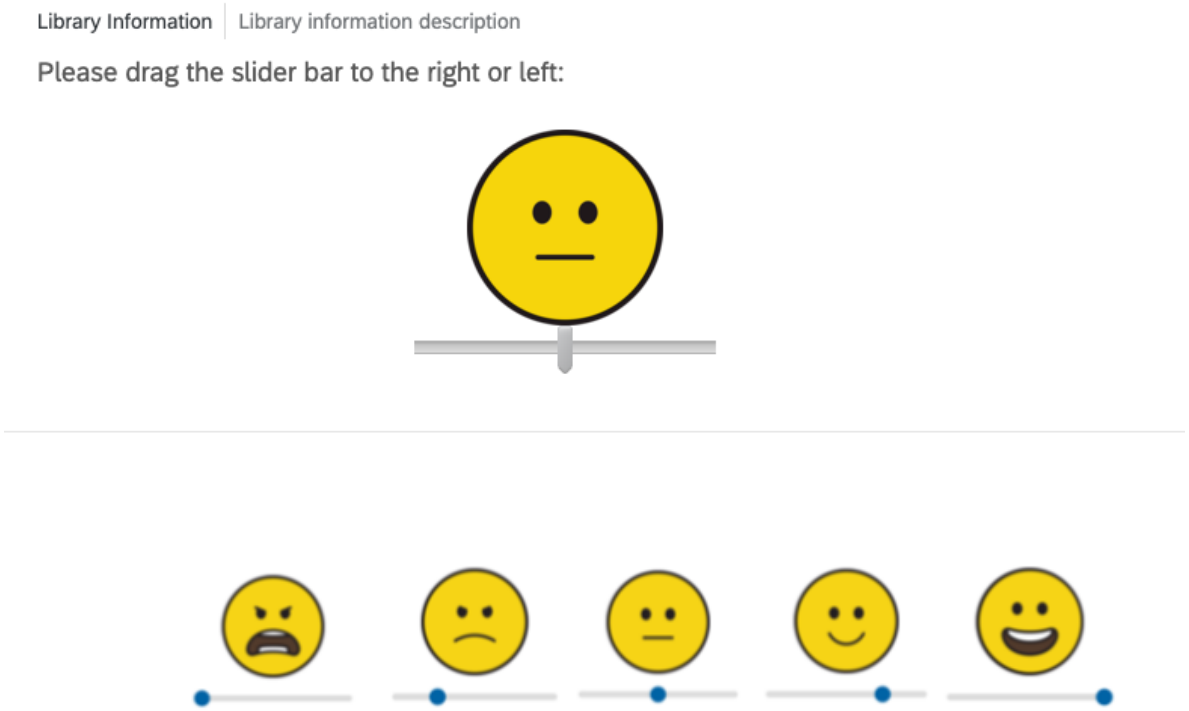
Question 1:

Q3 Dropdown list | The question tour has helped me learn how to configure my own questions in Qualtrics.

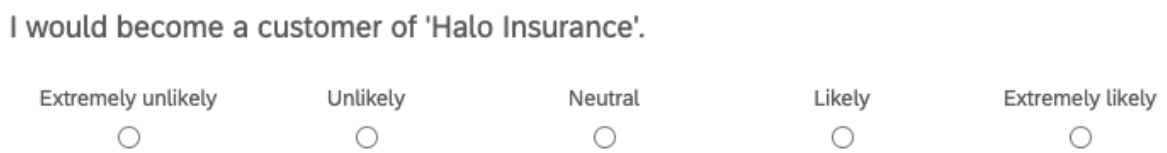
To what extent do the following words describe the brand 'Halo Insurance':

	Not descriptive	Slightly descriptive	Descriptive	Very descriptive	Extremely descriptive
Trustful	○	○	○	○	○
Warm	○	○	○	○	○
Energetic	○	○	○	○	○
Competent	○	○	○	○	○
Dependable	○	○	○	○	○
Aggressive	○	○	○	○	○
Sophisticated	○	○	○	○	○
Secure	○	○	○	○	○
Exciting	○	○	○	○	○
Sustainable	○	○	○	○	○
Rugged	○	○	○	○	○
Sincere	○	○	○	○	○

Question 2:



Question 3:



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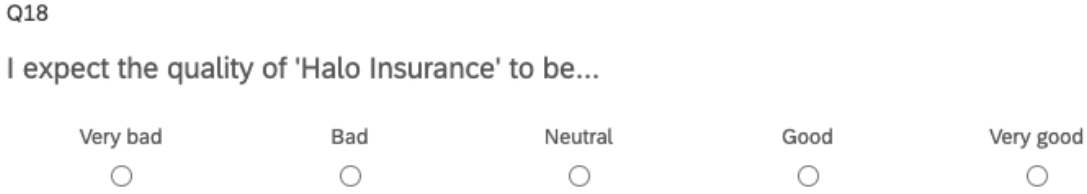

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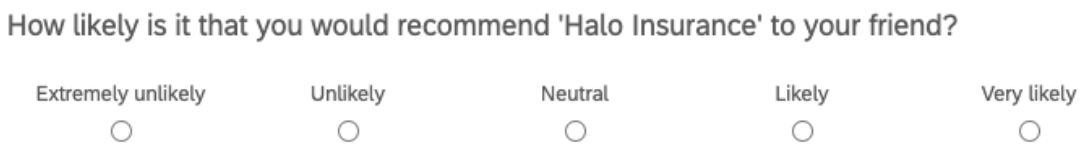
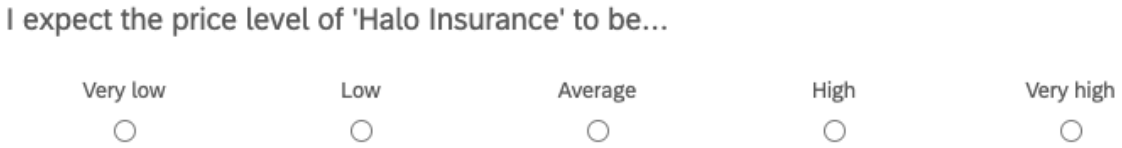
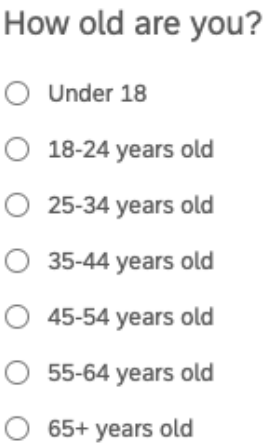


Question 6:

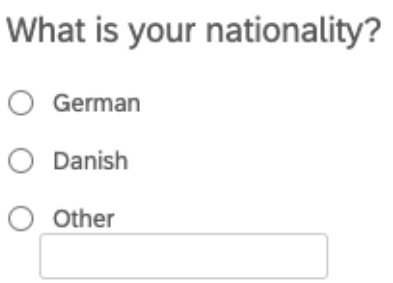


Question 7:

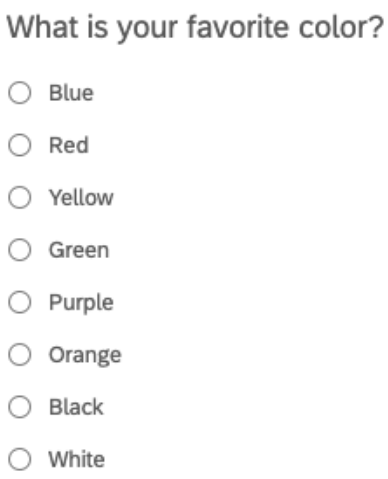
Question 8:



Question 9:



Question 10:

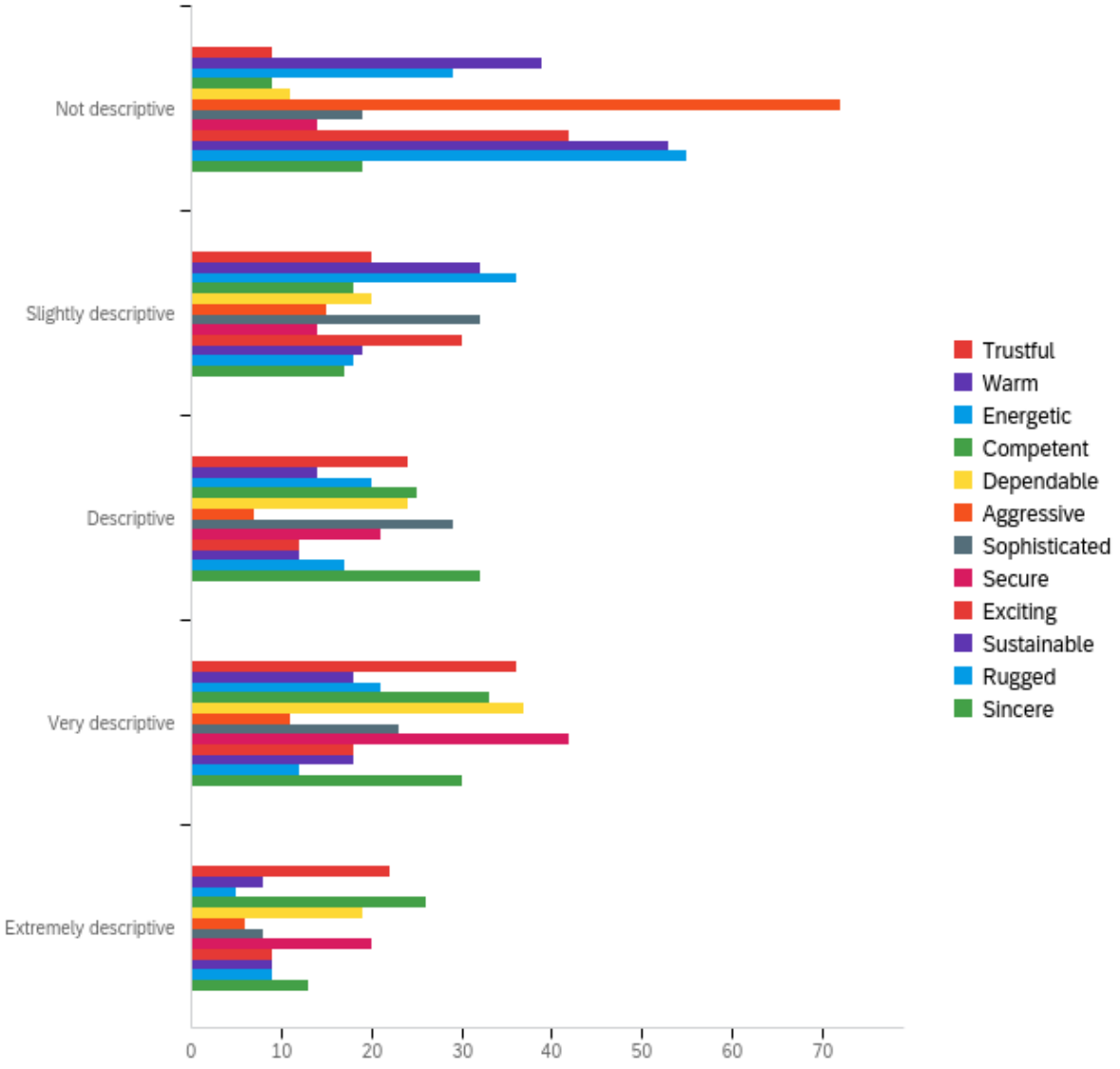


Appendix 4:

Default Report

Masterthesis Emily and Nina
May 14th 2022, 5:55 am MDT

Q3 Dropdown list - The question tour has helped me learn how to configure my own questions in Qualtrics.



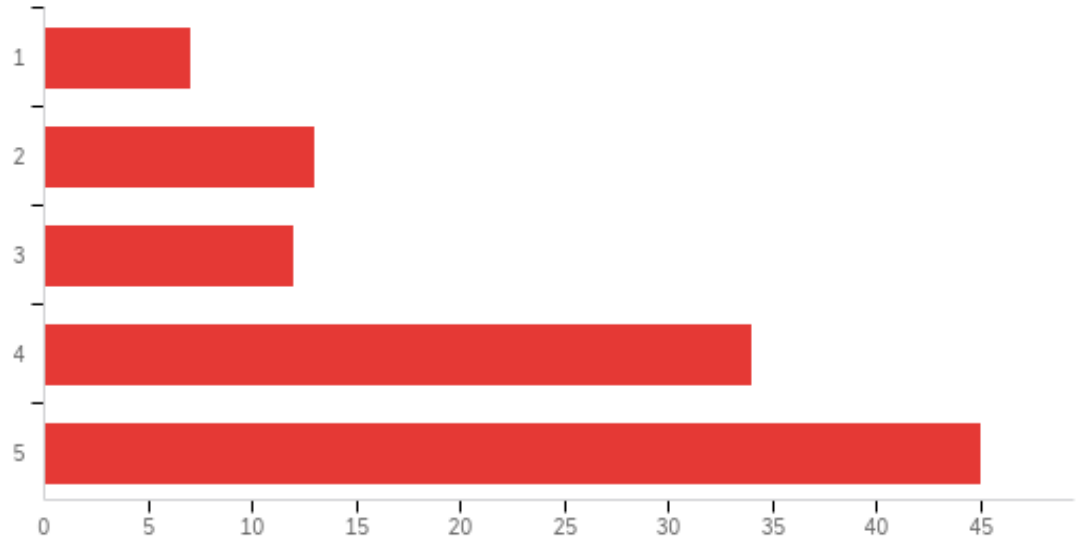
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Trustful	1.00	5.00	3.38	1.22	1.48	111

2	Warm	1.00	5.00	2.32	1.29	1.68	111
3	Energetic	1.00	5.00	2.43	1.19	1.42	111
4	Competent	1.00	5.00	3.44	1.24	1.53	111
5	Dependable	1.00	5.00	3.30	1.23	1.51	111
6	Aggressive	1.00	5.00	1.77	1.24	1.54	111
7	Sophisticated	1.00	5.00	2.72	1.18	1.39	111
8	Secure	1.00	5.00	3.36	1.26	1.60	111
9	Exciting	1.00	5.00	2.30	1.33	1.78	111
10	Sustainable	1.00	5.00	2.20	1.39	1.92	111
11	Rugged	1.00	5.00	2.12	1.34	1.80	111
12	Sincere	1.00	5.00	3.01	1.26	1.58	111

#	Question	Not descriptive		Slightly descriptive		Descriptive		Very descriptive		Extremely descriptive		Total
1	Trustful	8.11%	9	18.02%	20	21.62%	24	32.43%	36	19.82%	22	111
2	Warm	35.14%	39	28.83%	32	12.61%	14	16.22%	18	7.21%	8	111
3	Energetic	26.13%	29	32.43%	36	18.02%	20	18.92%	21	4.50%	5	111
4	Competent	8.11%	9	16.22%	18	22.52%	25	29.73%	33	23.42%	26	111
5	Dependable	9.91%	11	18.02%	20	21.62%	24	33.33%	37	17.12%	19	111
6	Aggressive	64.86%	72	13.51%	15	6.31%	7	9.91%	11	5.41%	6	111
7	Sophisticated	17.12%	19	28.83%	32	26.13%	29	20.72%	23	7.21%	8	111
8	Secure	12.61%	14	12.61%	14	18.92%	21	37.84%	42	18.02%	20	111
9	Exciting	37.84%	42	27.03%	30	10.81%	12	16.22%	18	8.11%	9	111
10	Sustainable	47.75%	53	17.12%	19	10.81%	12	16.22%	18	8.11%	9	111

11	Rugged	49.55%	55	16.22%	18	15.32%	17	10.81%	12	8.11%	9	111
12	Sincere	17.12%	19	15.32%	17	28.83%	32	27.03%	30	11.71%	13	111

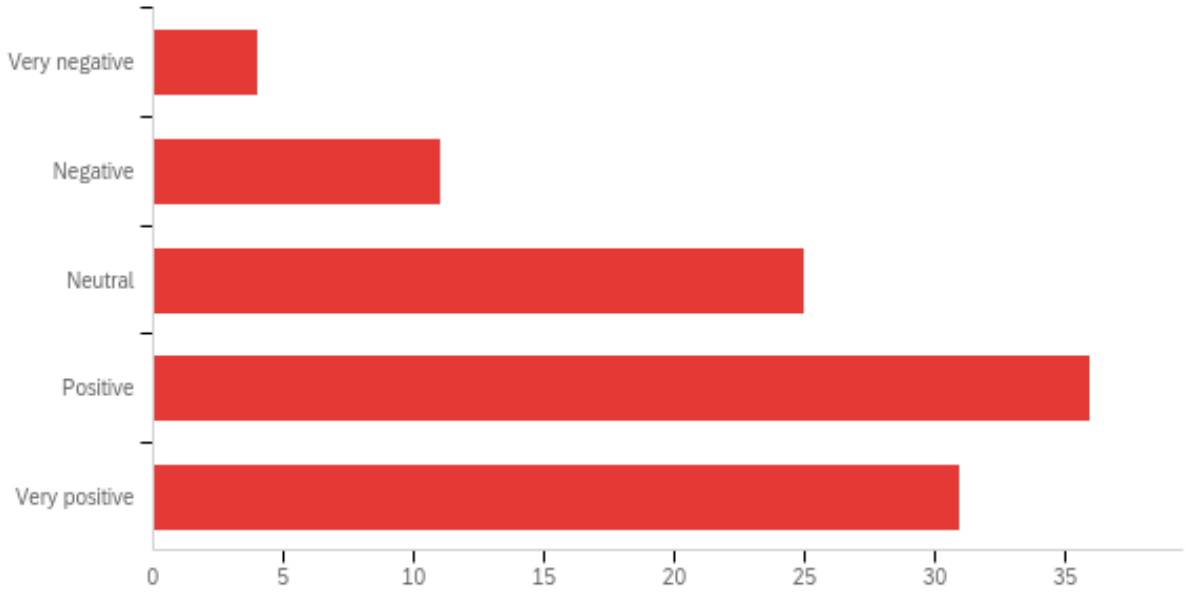
Library Information - Library information description



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Library information description	1.00	5.00	3.87	1.24	1.53	111

#	Answer	%	Count
1	1	6.31%	7
2	2	11.71%	13
3	3	10.81%	12
4	4	30.63%	34
5	5	40.54%	45
	Total	100%	111

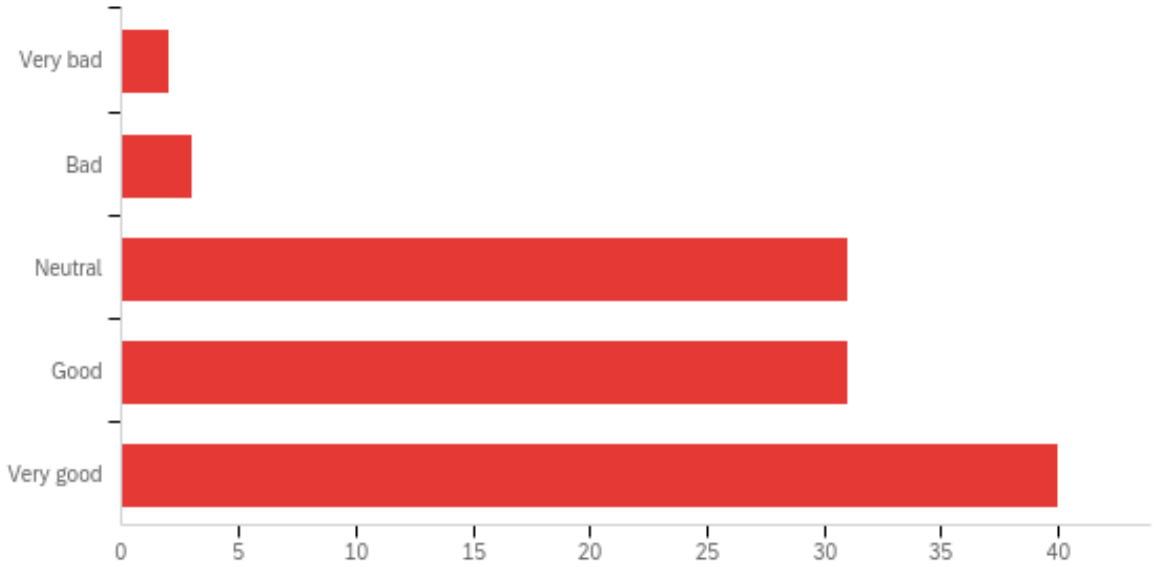
Q17 - What is your overall perceived brand attitude of 'Halo Insurance'?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your overall perceived brand attitude of 'Halo Insurance'?	1.00	5.00	3.74	1.10	1.20	107

#	Answer	%	Count
1	Very negative	3.74%	4
2	Negative	10.28%	11
3	Neutral	23.36%	25
4	Positive	33.64%	36
5	Very positive	28.97%	31
	Total	100%	107

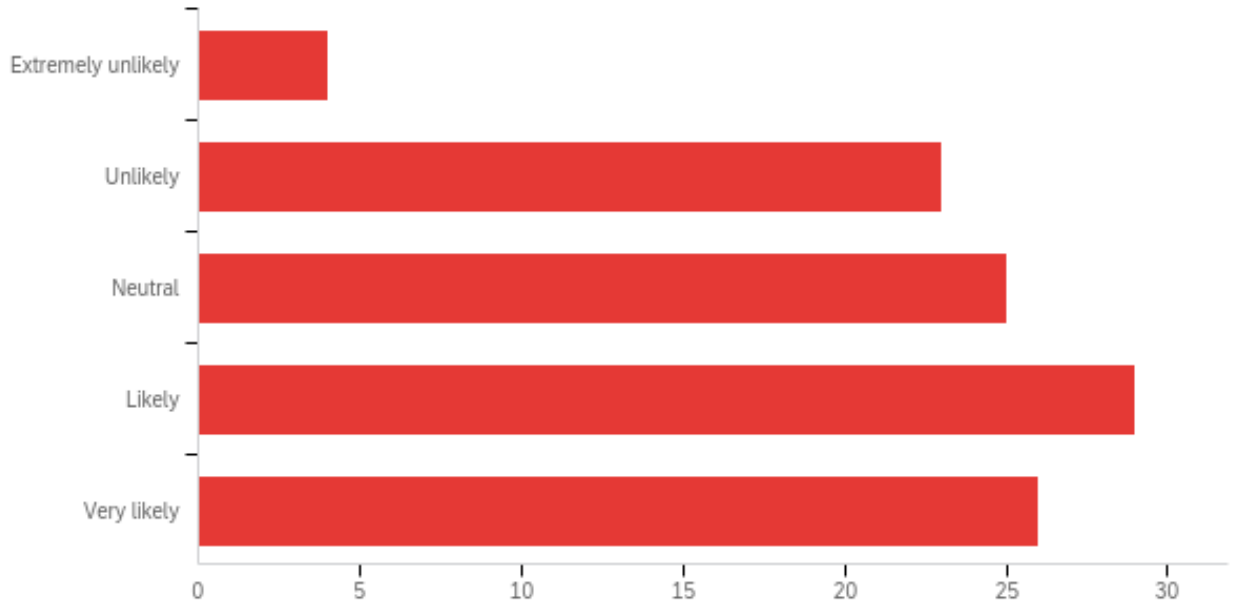
Q18 - I expect the quality of 'Halo Insurance' to be...



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	I expect the quality of 'Halo Insurance' to be...	1.00	5.00	3.97	0.97	0.94	107

#	Answer	%	Count
1	Very bad	1.87%	2
2	Bad	2.80%	3
3	Neutral	28.97%	31
4	Good	28.97%	31
5	Very good	37.38%	40
	Total	100%	107

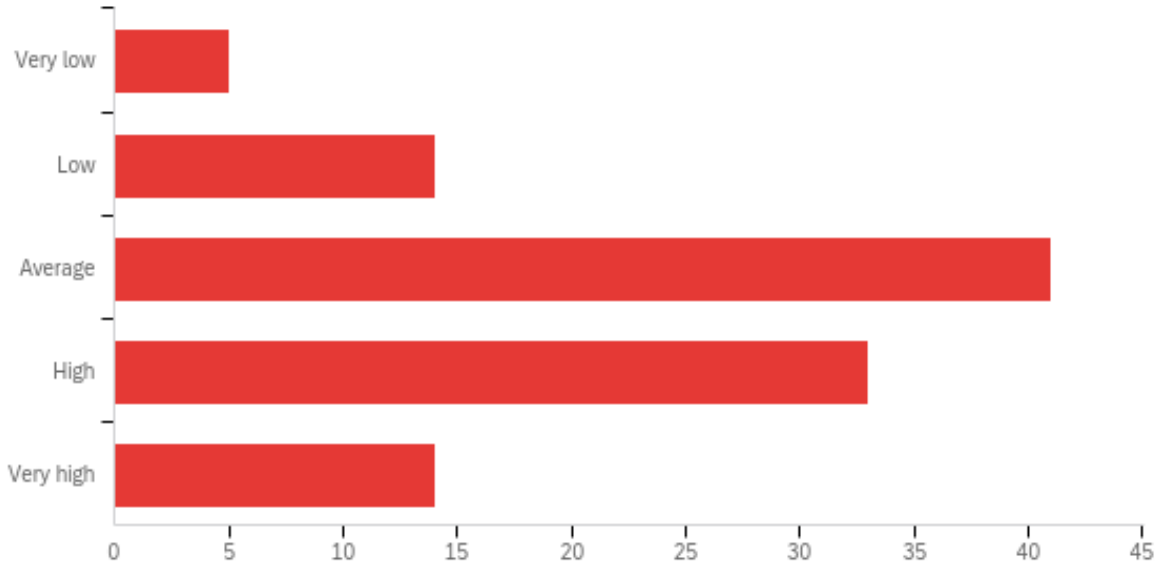
Q19 - How likely is it that you would recommend 'Halo Insurance' to your friend?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How likely is it that you would recommend 'Halo Insurance' to your friend?	1.00	5.00	3.47	1.18	1.39	107

#	Answer	%	Count
1	Extremely unlikely	3.74%	4
2	Unlikely	21.50%	23
3	Neutral	23.36%	25
4	Likely	27.10%	29
5	Very likely	24.30%	26
	Total	100%	107

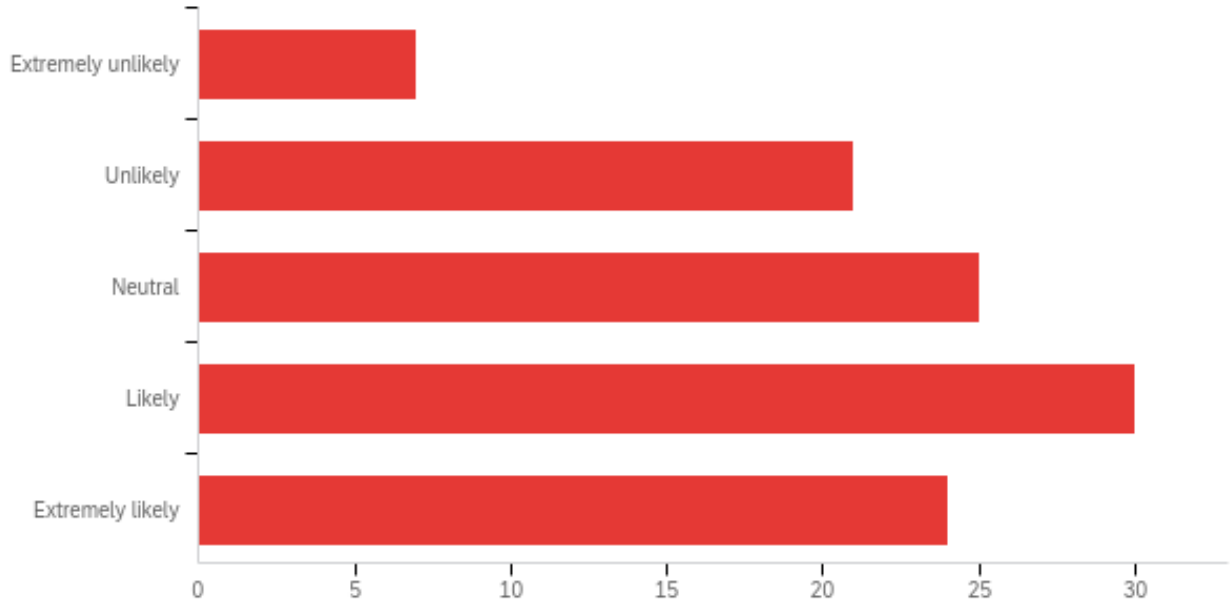
Q20 - I expect the price level of 'Halo Insurance' to be…



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	I expect the price level of 'Halo Insurance' to be…	1.00	5.00	3.35	1.01	1.03	107

#	Answer	%	Count
1	Very low	4.67%	5
2	Low	13.08%	14
3	Average	38.32%	41
4	High	30.84%	33
5	Very high	13.08%	14
	Total	100%	107

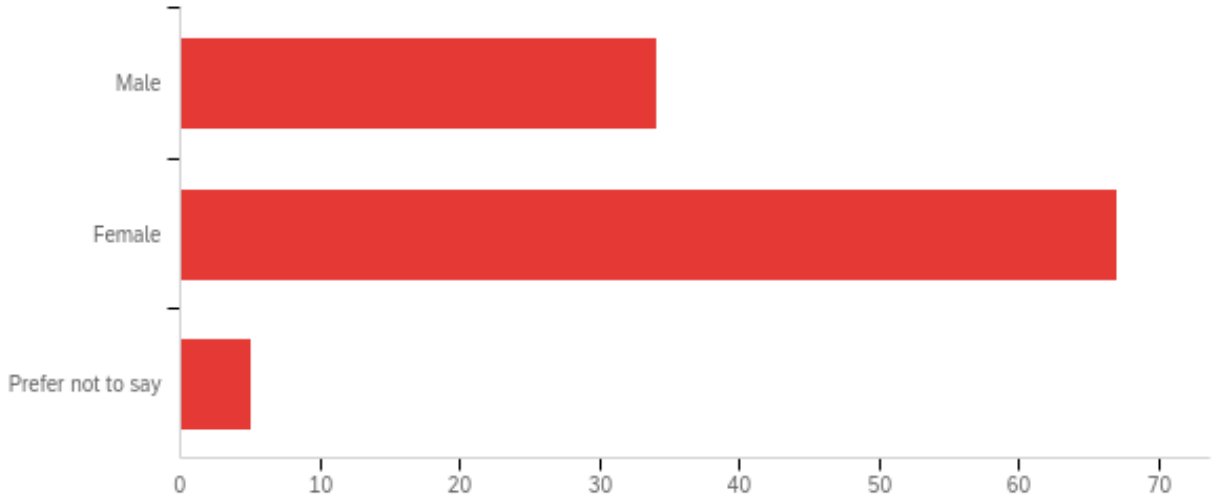
Q21 - I would become a customer of 'Halo Insurance'.



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	I would become a customer of 'Halo Insurance'.	1.00	5.00	3.40	1.21	1.47	107

#	Answer	%	Count
1	Extremely unlikely	6.54%	7
2	Unlikely	19.63%	21
3	Neutral	23.36%	25
4	Likely	28.04%	30
5	Extremely likely	22.43%	24
	Total	100%	107

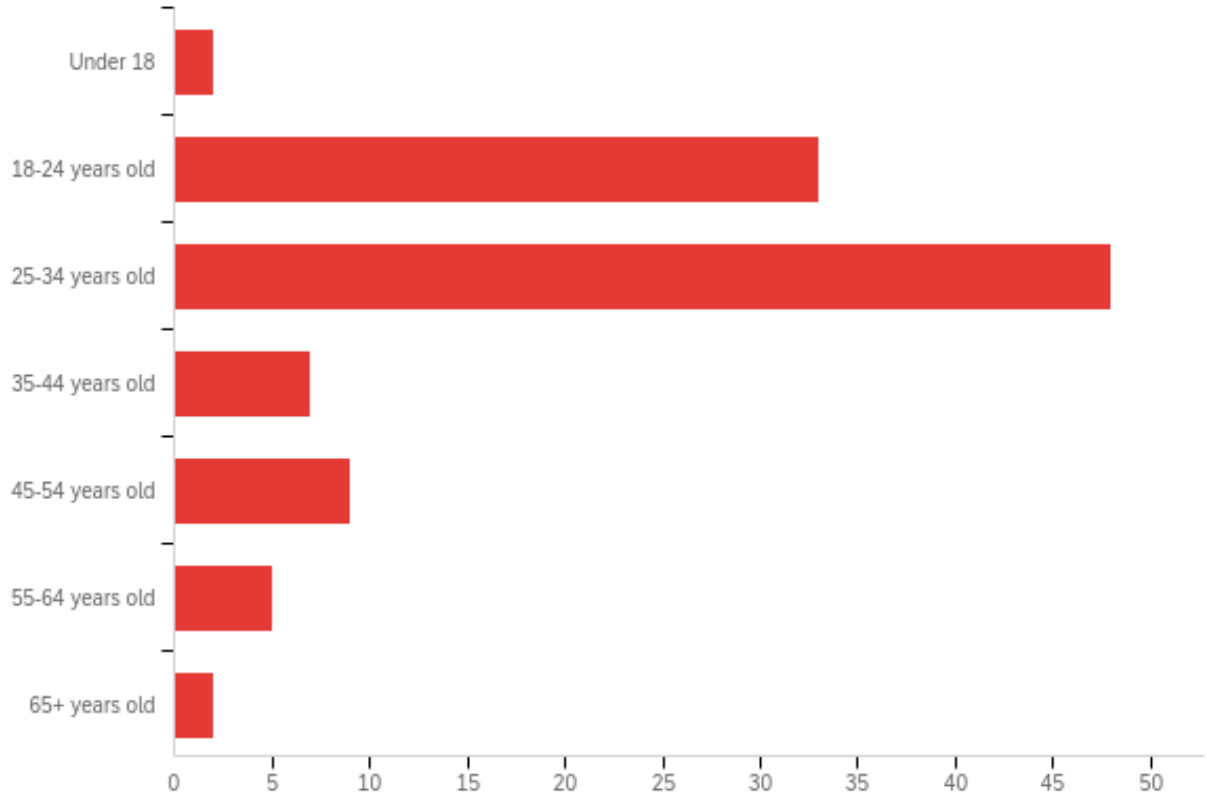
Q18 - What is your gender?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your gender?	1.00	3.00	1.73	0.54	0.29	106

#	Answer	%	Count
1	Male	32.08%	34
2	Female	63.21%	67
3	Prefer not to say	4.72%	5
	Total	100%	106

Q4 Certified - How old are you?

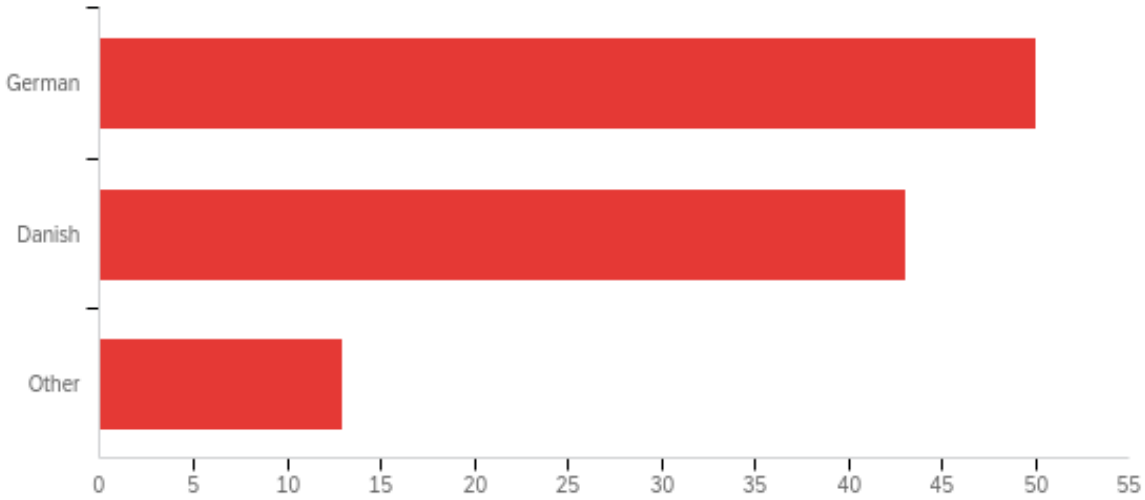


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How old are you?	1.00	7.00	3.10	1.23	1.51	106

#	Answer	%	Count
1	Under 18	1.89%	2
2	18-24 years old	31.13%	33
3	25-34 years old	45.28%	48
4	35-44 years old	6.60%	7
5	45-54 years old	8.49%	9
6	55-64 years old	4.72%	5
7	65+ years old	1.89%	2

	Total	100%	106

Q19 - What is your nationality?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your nationality? - Selected Choice	1.00	3.00	1.65	0.69	0.47	106

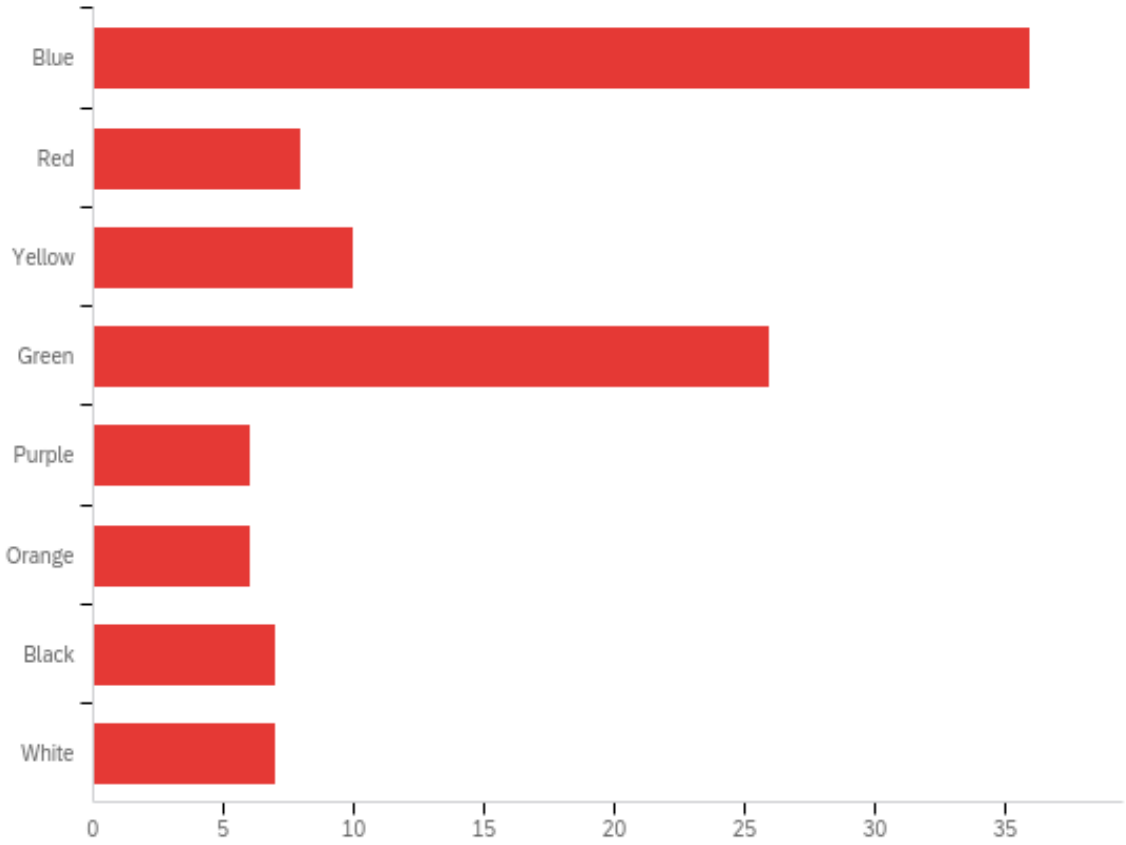
#	Answer	%	Count
1	German	47.17%	50
2	Danish	40.57%	43
3	Other	12.26%	13
	Total	100%	106

Q19_3_TEXT - Other

Other - Text
Polish
Austria
Czech

Austrian
Swiss
Austrian
Danish and german
Swedish
Finnish
Italian

Q20 - What is your favorite color?

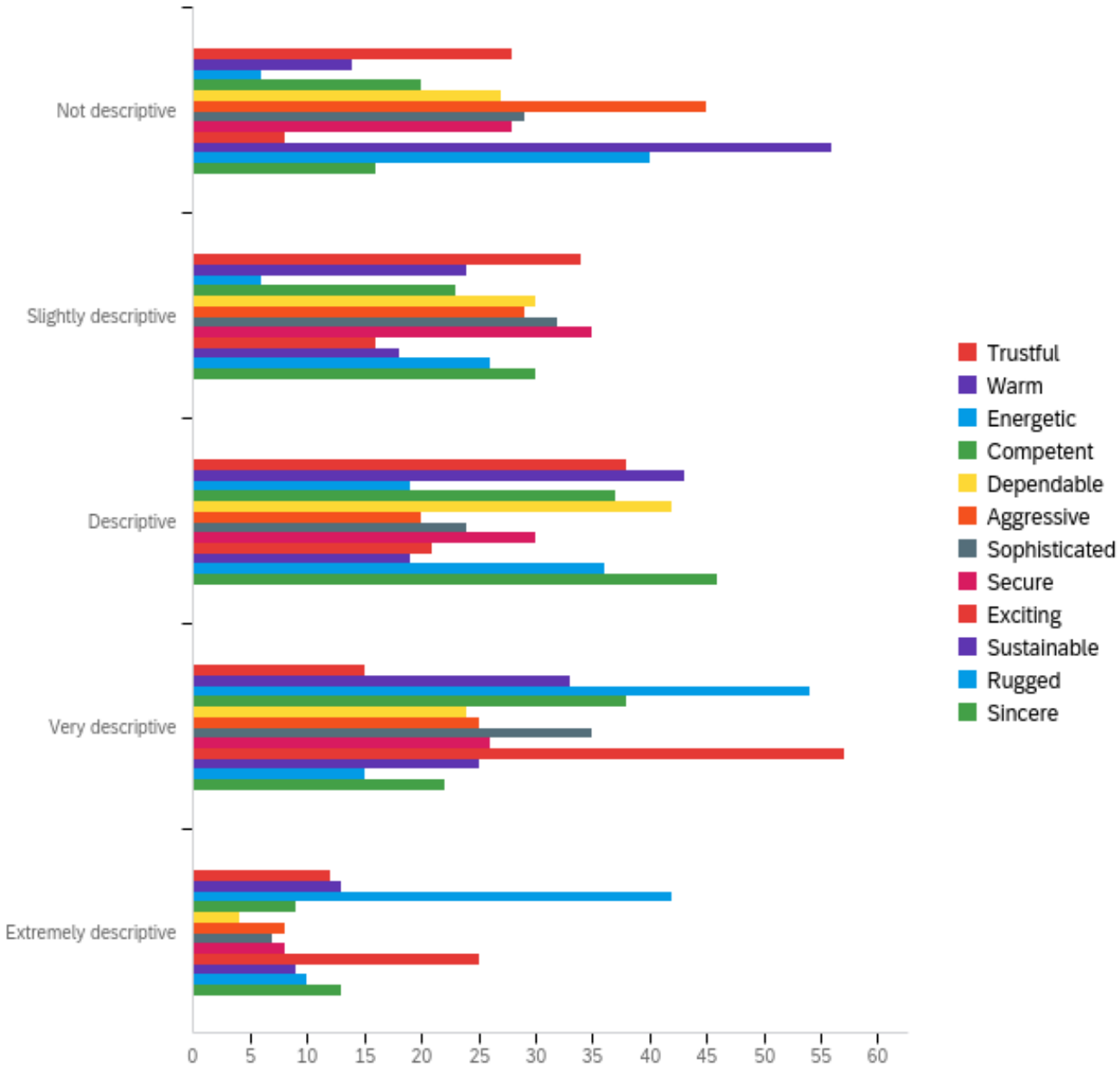


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your favorite color?	1.00	8.00	3.37	2.23	4.99	106

#	Answer	%	Count
1	Blue	33.96%	36
2	Red	7.55%	8
3	Yellow	9.43%	10
4	Green	24.53%	26
5	Purple	5.66%	6
6	Orange	5.66%	6

7	Black	6.60%	7
8	White	6.60%	7
	Total	100%	106

Q67 - The question tour has helped me learn how to configure my own questions in Qualtrics.

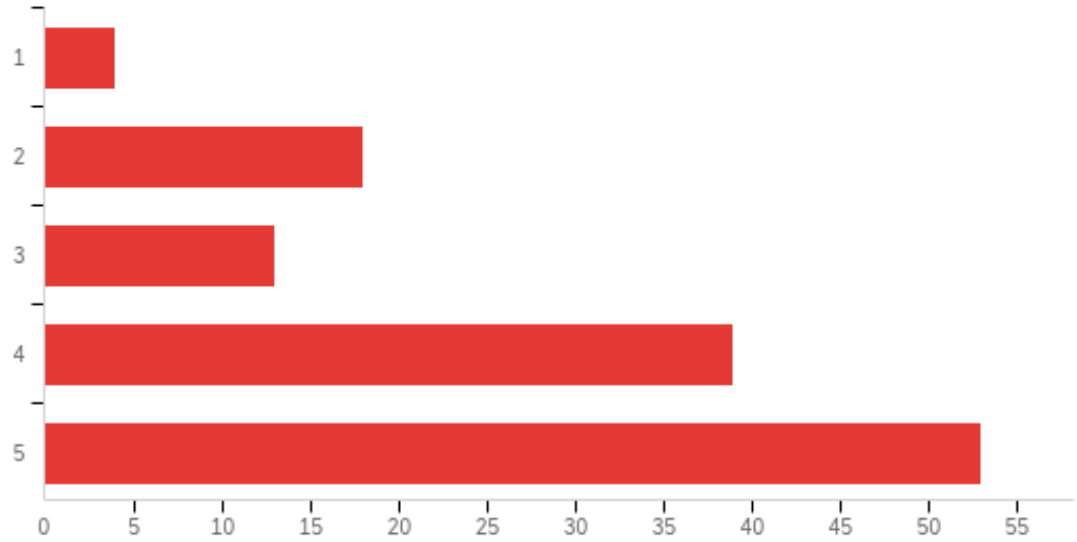


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Trustful	1.00	5.00	2.60	1.22	1.48	127
2	Warm	1.00	5.00	3.06	1.14	1.30	127
3	Energetic	1.00	5.00	3.94	1.04	1.09	127
4	Competent	1.00	5.00	2.94	1.18	1.39	127

5	Dependable	1.00	5.00	2.59	1.11	1.23	127
6	Aggressive	1.00	5.00	2.39	1.31	1.72	127
7	Sophisticated	1.00	5.00	2.68	1.25	1.56	127
8	Secure	1.00	5.00	2.61	1.21	1.47	127
9	Exciting	1.00	5.00	3.59	1.12	1.27	127
10	Sustainable	1.00	5.00	2.31	1.38	1.92	127
11	Rugged	1.00	5.00	2.44	1.26	1.59	127
12	Sincere	1.00	5.00	2.89	1.14	1.31	127

#	Question	Not descriptive		Slightly descriptive		Descriptive		Very descriptive		Extremely descriptive		Total
1	Trustful	22.05%	28	26.77%	34	29.92%	38	11.81%	15	9.45%	12	127
2	Warm	11.02%	14	18.90%	24	33.86%	43	25.98%	33	10.24%	13	127
3	Energetic	4.72%	6	4.72%	6	14.96%	19	42.52%	54	33.07%	42	127
4	Competent	15.75%	20	18.11%	23	29.13%	37	29.92%	38	7.09%	9	127
5	Dependable	21.26%	27	23.62%	30	33.07%	42	18.90%	24	3.15%	4	127
6	Aggressive	35.43%	45	22.83%	29	15.75%	20	19.69%	25	6.30%	8	127
7	Sophisticated	22.83%	29	25.20%	32	18.90%	24	27.56%	35	5.51%	7	127
8	Secure	22.05%	28	27.56%	35	23.62%	30	20.47%	26	6.30%	8	127
9	Exciting	6.30%	8	12.60%	16	16.54%	21	44.88%	57	19.69%	25	127
10	Sustainable	44.09%	56	14.17%	18	14.96%	19	19.69%	25	7.09%	9	127
11	Rugged	31.50%	40	20.47%	26	28.35%	36	11.81%	15	7.87%	10	127
12	Sincere	12.60%	16	23.62%	30	36.22%	46	17.32%	22	10.24%	13	127

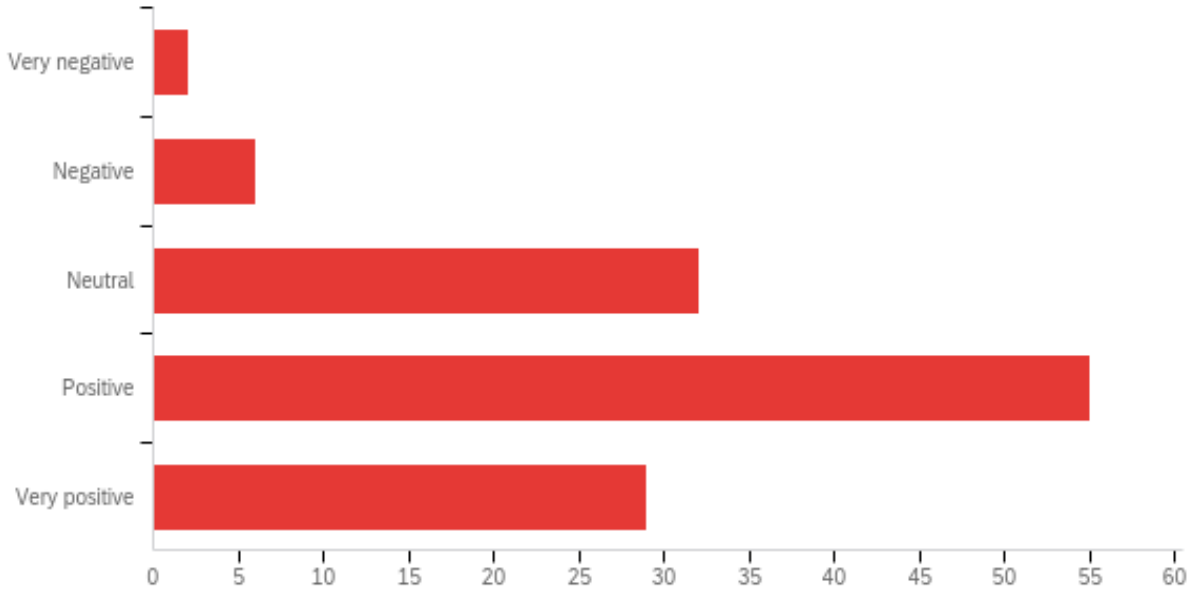
Q68 - Library information description



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Library information description	1.00	5.00	3.94	1.17	1.37	127

#	Answer	%	Count
1	1	3.15%	4
2	2	14.17%	18
3	3	10.24%	13
4	4	30.71%	39
5	5	41.73%	53
	Total	100%	127

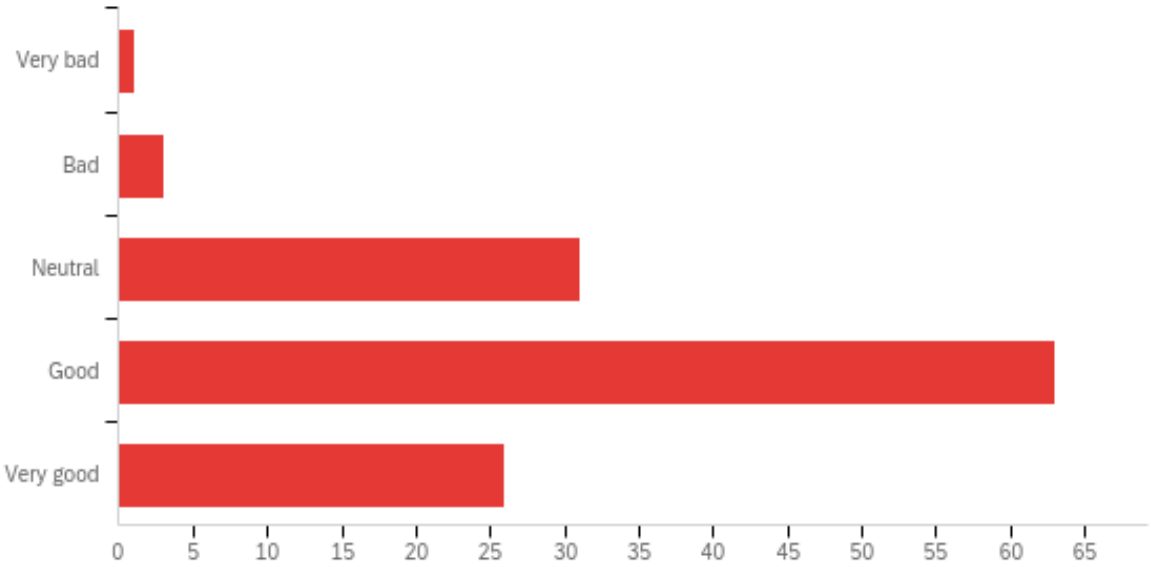
Q69 - What is your overall perceived brand attitude of 'Strava Sports'?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your overall perceived brand attitude of 'Strava Sports'?	1.00	5.00	3.83	0.90	0.80	124

#	Answer	%	Count
1	Very negative	1.61%	2
2	Negative	4.84%	6
3	Neutral	25.81%	32
4	Positive	44.35%	55
5	Very positive	23.39%	29
	Total	100%	124

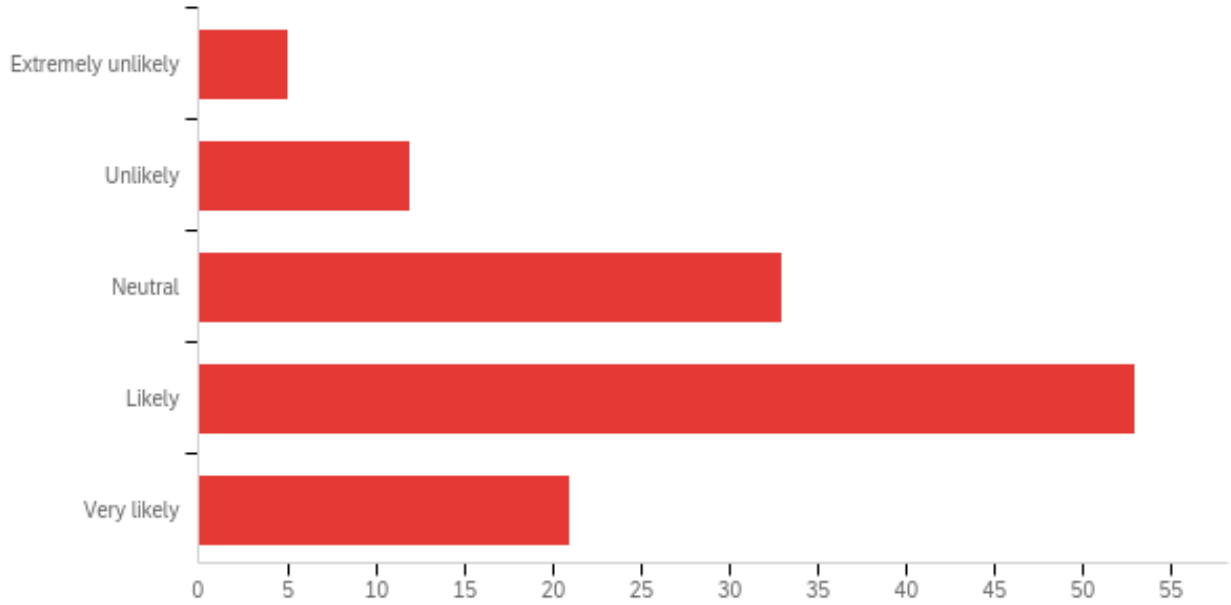
Q70 - I expect the quality of 'Strava Sports' to be...



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	I expect the quality of 'Strava Sports' to be...	1.00	5.00	3.89	0.79	0.62	124

#	Answer	%	Count
1	Very bad	0.81%	1
2	Bad	2.42%	3
3	Neutral	25.00%	31
4	Good	50.81%	63
5	Very good	20.97%	26
	Total	100%	124

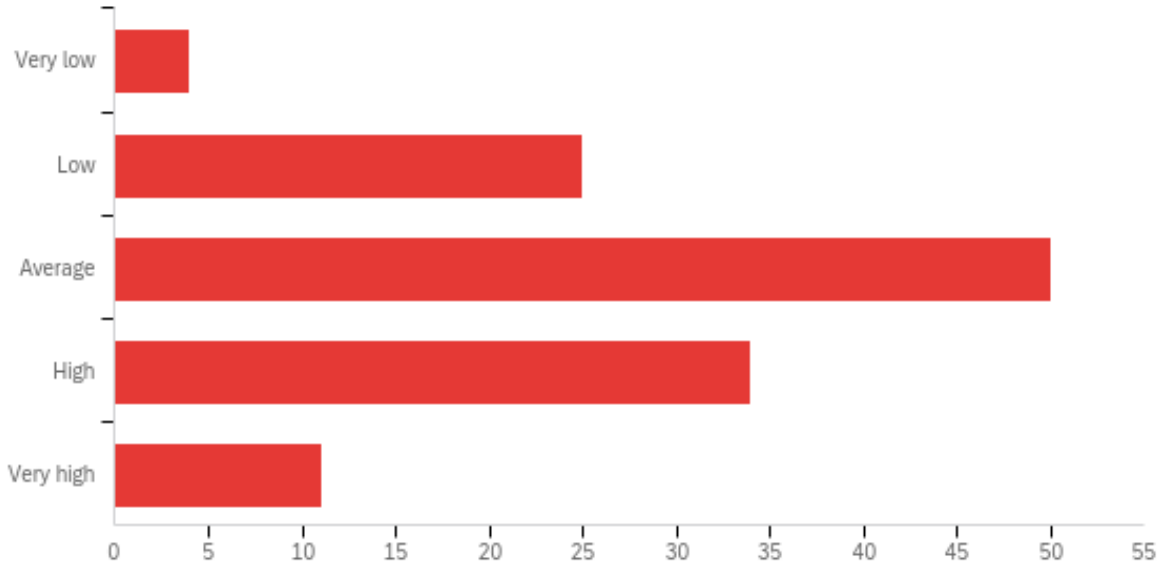
Q71 - How likely is it that you would recommend 'Strava Sports' to your friend?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How likely is it that you would recommend 'Strava Sports' to your friend?	1.00	5.00	3.59	1.01	1.02	124

#	Answer	%	Count
1	Extremely unlikely	4.03%	5
2	Unlikely	9.68%	12
3	Neutral	26.61%	33
4	Likely	42.74%	53
5	Very likely	16.94%	21
	Total	100%	124

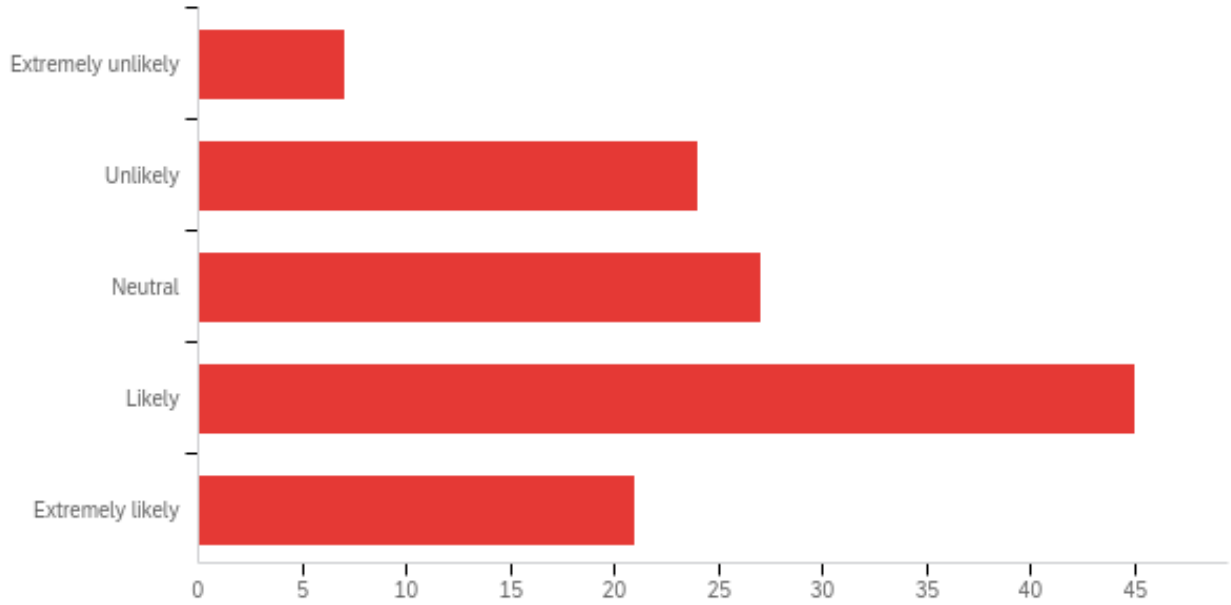
Q72 - I expect the price level of 'Strava Sports' to be…



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	I expect the price level of 'Strava Sports' to be…	1.00	5.00	3.19	0.96	0.93	124

#	Answer	%	Count
1	Very low	3.23%	4
2	Low	20.16%	25
3	Average	40.32%	50
4	High	27.42%	34
5	Very high	8.87%	11
	Total	100%	124

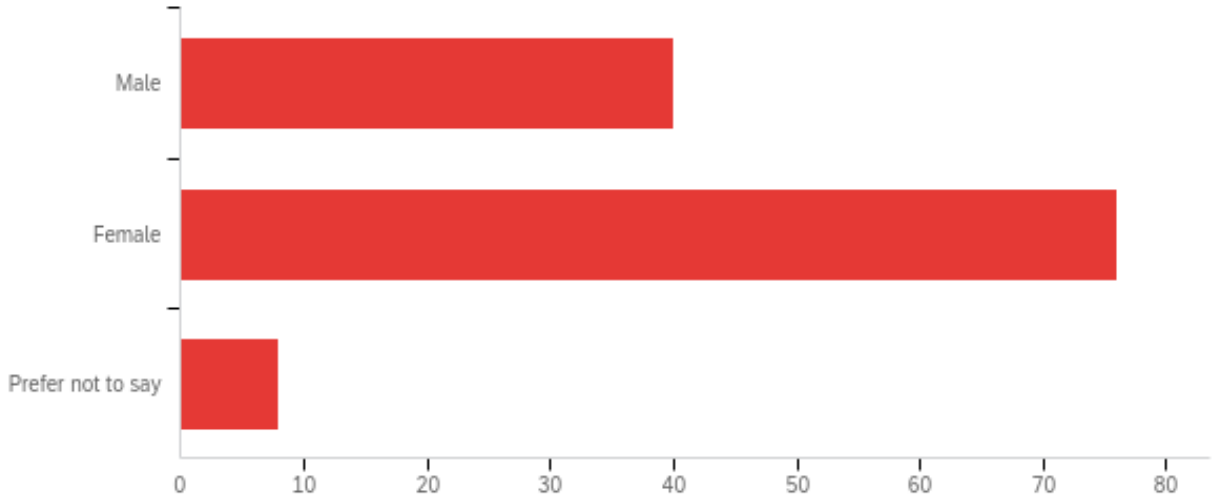
Q73 - I would become a customer of 'Strava Sports'



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	I would become a customer of 'Strava Sports'	1.00	5.00	3.40	1.14	1.30	124

#	Answer	%	Count
1	Extremely unlikely	5.65%	7
2	Unlikely	19.35%	24
3	Neutral	21.77%	27
4	Likely	36.29%	45
5	Extremely likely	16.94%	21
	Total	100%	124

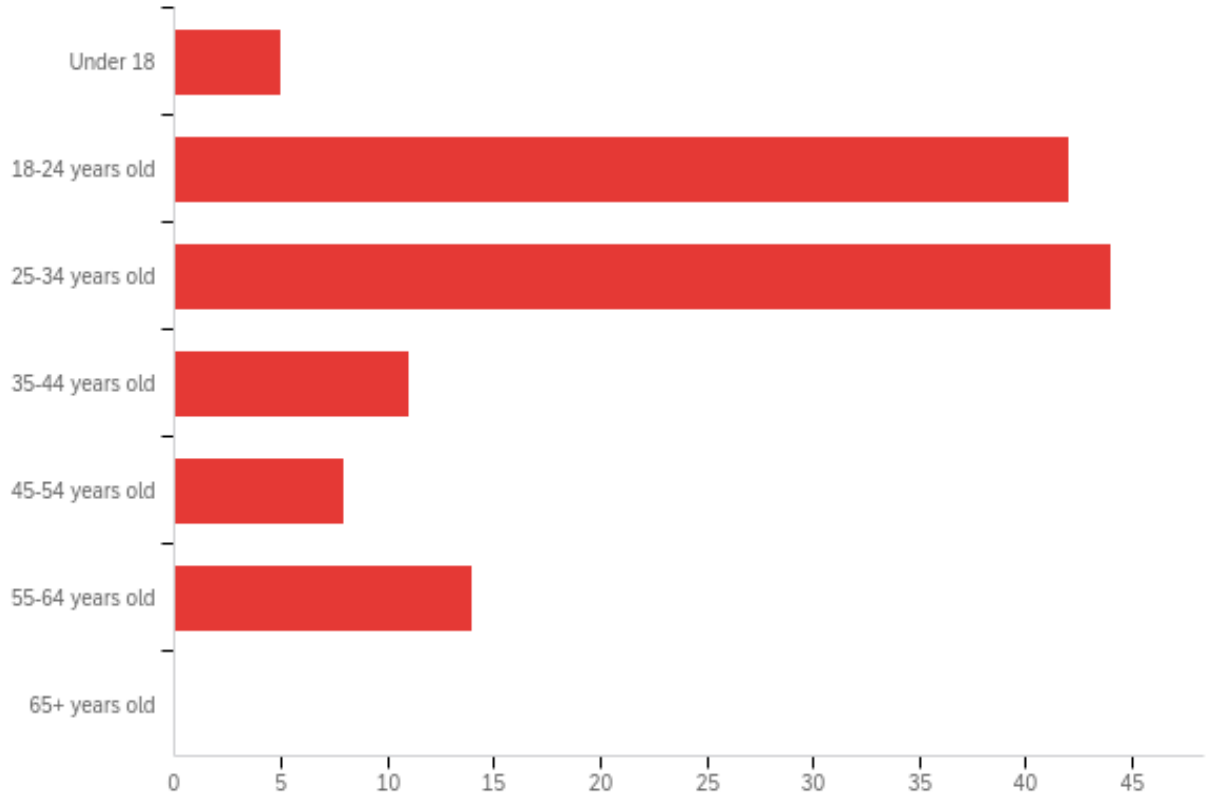
Q74 - What is your gender?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your gender?	1.00	3.00	1.74	0.57	0.32	124

#	Answer	%	Count
1	Male	32.26%	40
2	Female	61.29%	76
3	Prefer not to say	6.45%	8
	Total	100%	124

Q75 - How old are you?

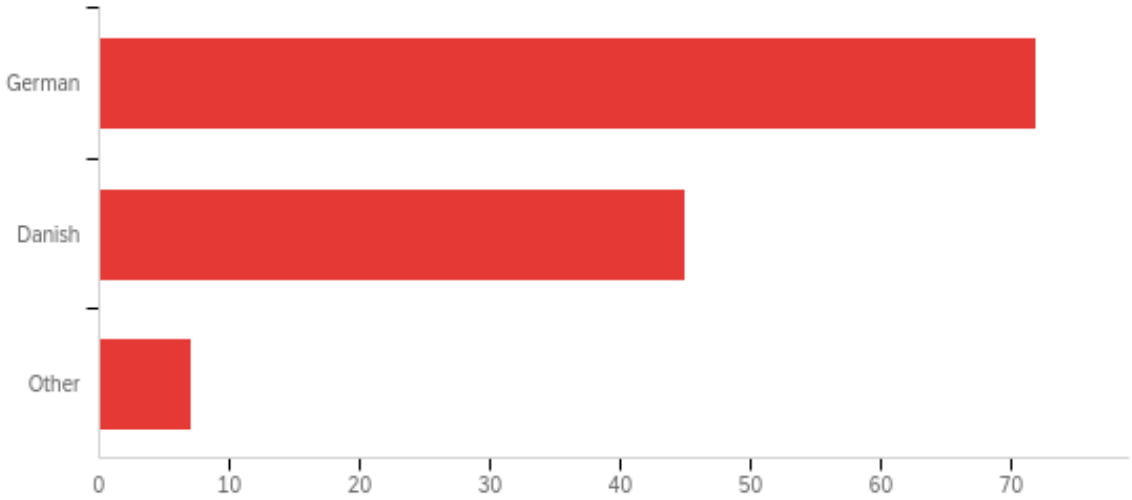


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How old are you?	1.00	6.00	3.14	1.36	1.84	124

#	Answer	%	Count
1	Under 18	4.03%	5
2	18-24 years old	33.87%	42
3	25-34 years old	35.48%	44
4	35-44 years old	8.87%	11
5	45-54 years old	6.45%	8
6	55-64 years old	11.29%	14
7	65+ years old	0.00%	0

	Total	100%	124

Q76 - What is your nationality?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your nationality? - Selected Choice	1.00	3.00	1.48	0.60	0.36	124

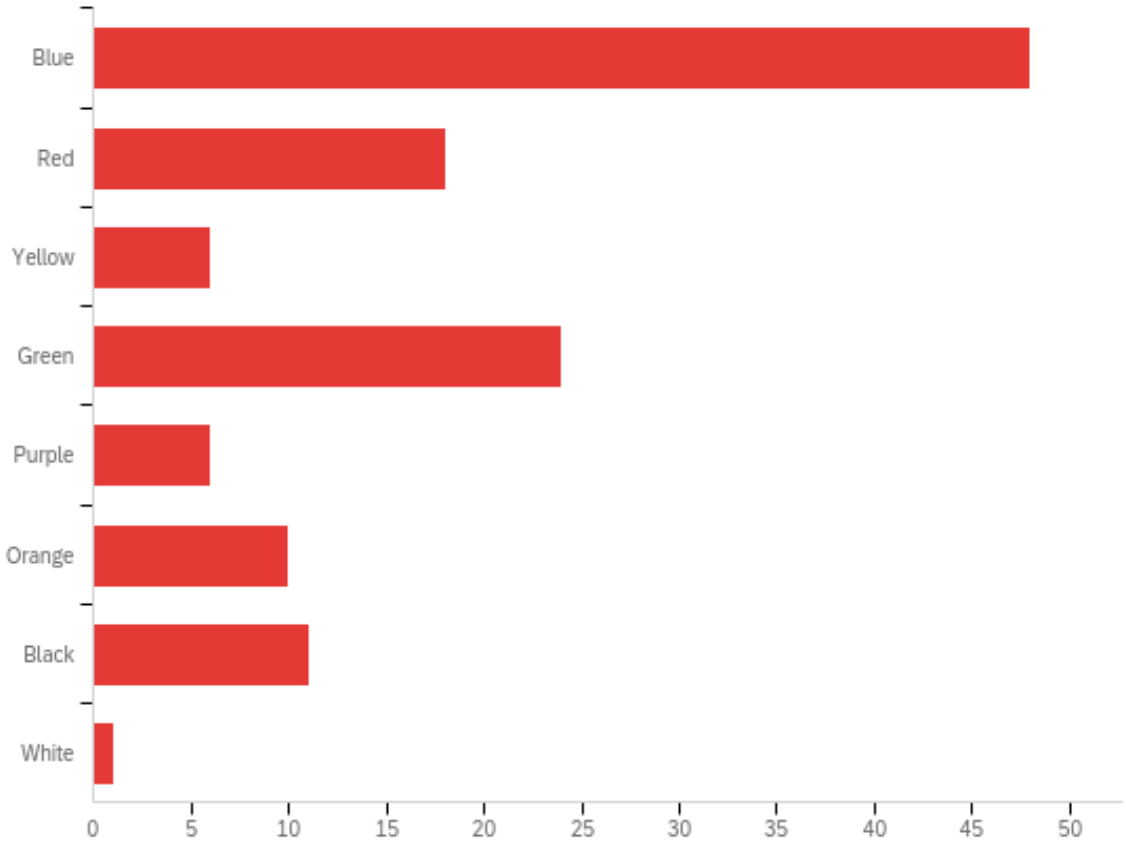
#	Answer	%	Count
1	German	58.06%	72
2	Danish	36.29%	45
3	Other	5.65%	7
	Total	100%	124

Q76_3_TEXT - Other

Other - Text
British
Italian
Swiss

Austrian
Swedish
English

Q77 - What is your favorite color?

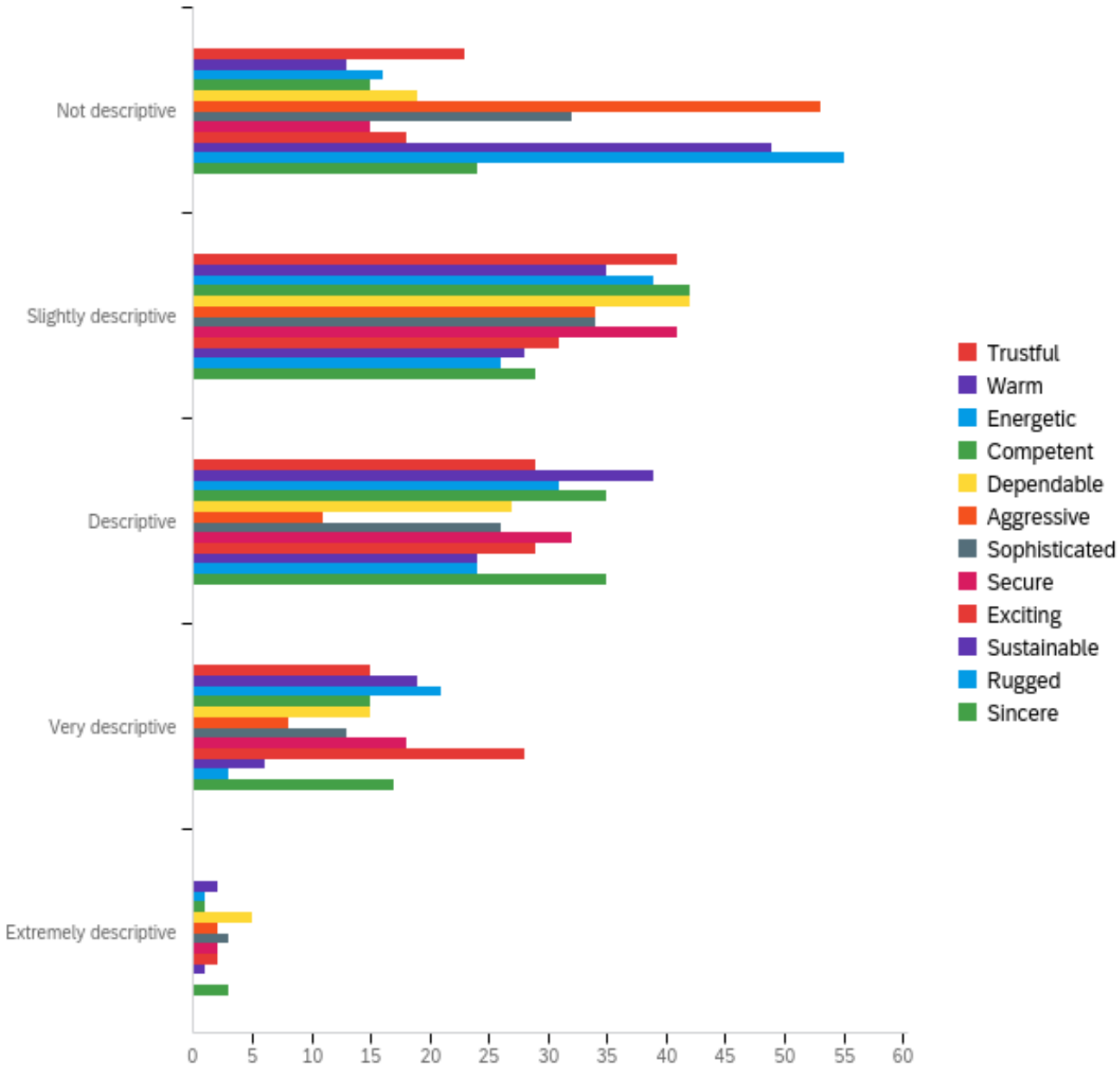


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your favorite color?	1.00	8.00	3.01	2.10	4.43	124

#	Answer	%	Count
1	Blue	38.71%	48
2	Red	14.52%	18
3	Yellow	4.84%	6
4	Green	19.35%	24
5	Purple	4.84%	6
6	Orange	8.06%	10

7	Black	8.87%	11
8	White	0.81%	1
	Total	100%	124

Q55 - The question tour has helped me learn how to configure my own questions in Qualtrics.

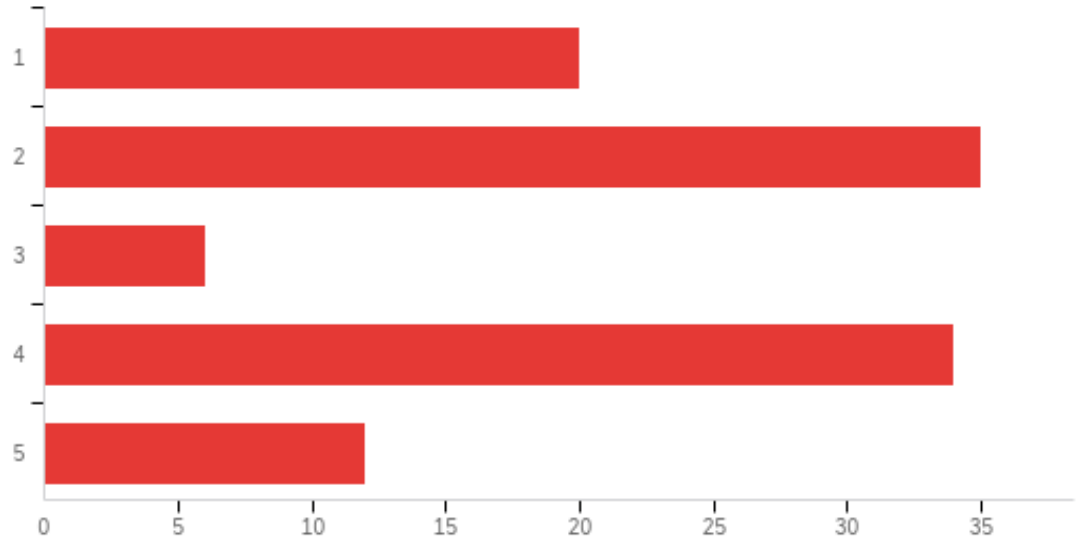


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Trustful	1.00	4.00	2.33	0.96	0.93	108
2	Warm	1.00	5.00	2.65	0.97	0.93	108
3	Energetic	1.00	5.00	2.56	0.99	0.99	108
4	Competent	1.00	5.00	2.49	0.93	0.86	108

5	Dependable	1.00	5.00	2.49	1.08	1.16	108
6	Aggressive	1.00	5.00	1.81	1.01	1.02	108
7	Sophisticated	1.00	5.00	2.27	1.09	1.20	108
8	Secure	1.00	5.00	2.55	0.98	0.97	108
9	Exciting	1.00	5.00	2.68	1.09	1.18	108
10	Sustainable	1.00	5.00	1.91	0.99	0.97	108
11	Rugged	1.00	4.00	1.77	0.89	0.79	108
12	Sincere	1.00	5.00	2.50	1.08	1.18	108

#	Question	Not descriptive		Slightly descriptive		Descriptive		Very descriptive		Extremely descriptive		Total
1	Trustful	21.30%	23	37.96%	41	26.85%	29	13.89%	15	0.00%	0	108
2	Warm	12.04%	13	32.41%	35	36.11%	39	17.59%	19	1.85%	2	108
3	Energetic	14.81%	16	36.11%	39	28.70%	31	19.44%	21	0.93%	1	108
4	Competent	13.89%	15	38.89%	42	32.41%	35	13.89%	15	0.93%	1	108
5	Dependable	17.59%	19	38.89%	42	25.00%	27	13.89%	15	4.63%	5	108
6	Aggressive	49.07%	53	31.48%	34	10.19%	11	7.41%	8	1.85%	2	108
7	Sophisticated	29.63%	32	31.48%	34	24.07%	26	12.04%	13	2.78%	3	108
8	Secure	13.89%	15	37.96%	41	29.63%	32	16.67%	18	1.85%	2	108
9	Exciting	16.67%	18	28.70%	31	26.85%	29	25.93%	28	1.85%	2	108
10	Sustainable	45.37%	49	25.93%	28	22.22%	24	5.56%	6	0.93%	1	108
11	Rugged	50.93%	55	24.07%	26	22.22%	24	2.78%	3	0.00%	0	108
12	Sincere	22.22%	24	26.85%	29	32.41%	35	15.74%	17	2.78%	3	108

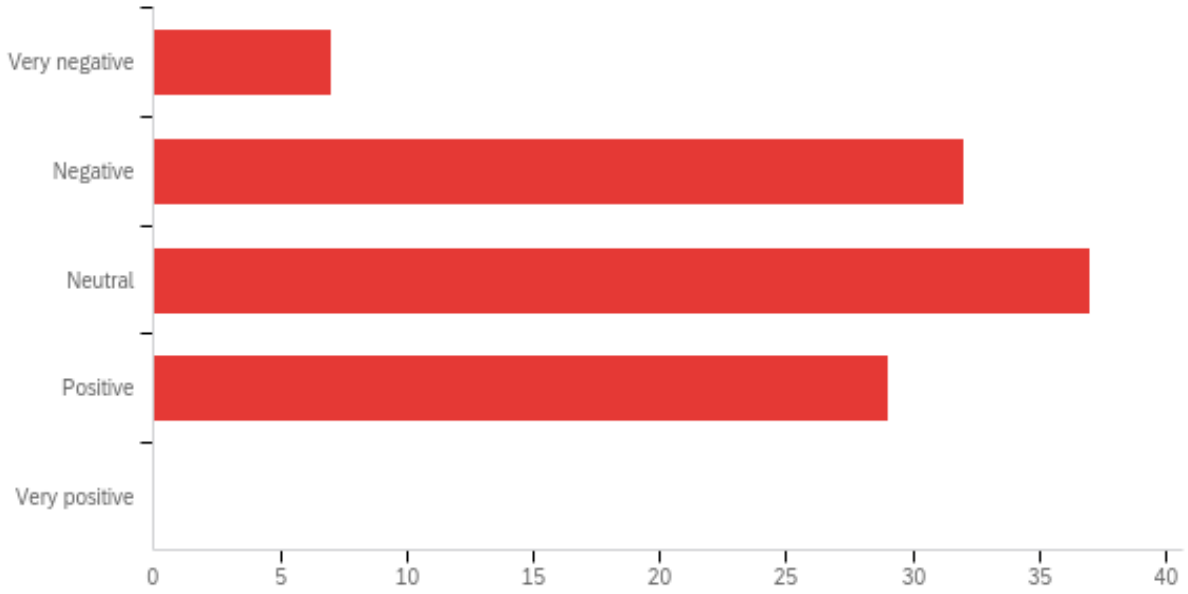
Q56 - Library information description



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Library information description	1.00	5.00	2.84	1.35	1.82	107

#	Answer	%	Count
1	1	18.69%	20
2	2	32.71%	35
3	3	5.61%	6
4	4	31.78%	34
5	5	11.21%	12
	Total	100%	107

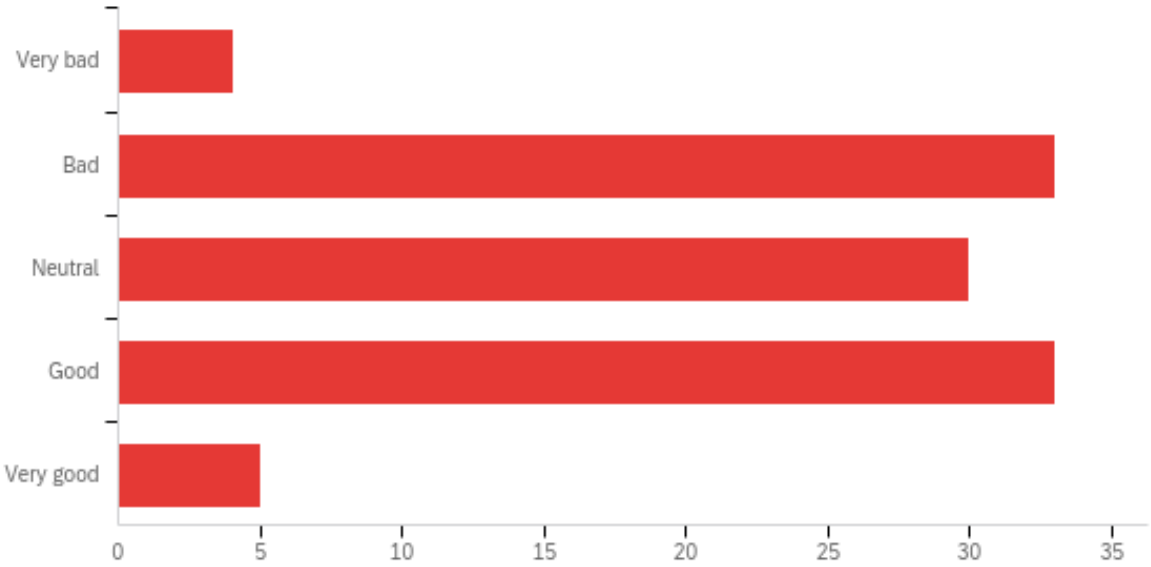
Q57 - What is your overall perceived brand attitude of 'Halo Insurance'?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your overall perceived brand attitude of 'Halo Insurance'?	1.00	4.00	2.84	0.91	0.82	105

#	Answer	%	Count
1	Very negative	6.67%	7
2	Negative	30.48%	32
3	Neutral	35.24%	37
4	Positive	27.62%	29
5	Very positive	0.00%	0
	Total	100%	105

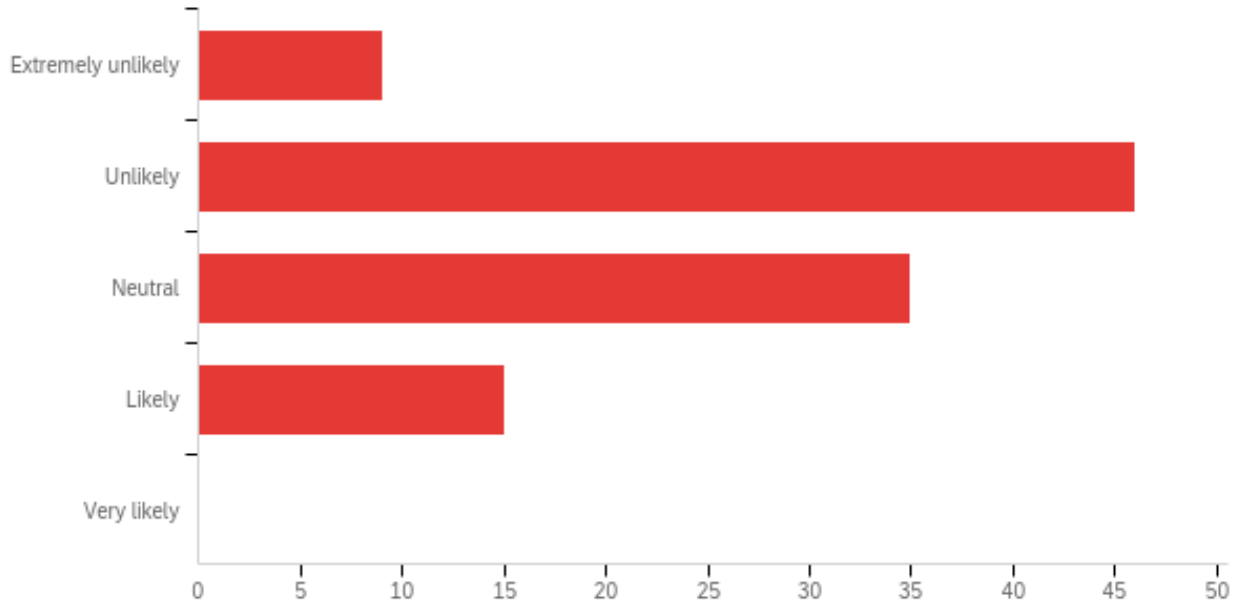
Q58 - I expect the quality of 'Halo Insurance' to be...



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	I expect the quality of 'Halo Insurance' to be...	1.00	5.00	3.02	0.99	0.97	105

#	Answer	%	Count
1	Very bad	3.81%	4
2	Bad	31.43%	33
3	Neutral	28.57%	30
4	Good	31.43%	33
5	Very good	4.76%	5
	Total	100%	105

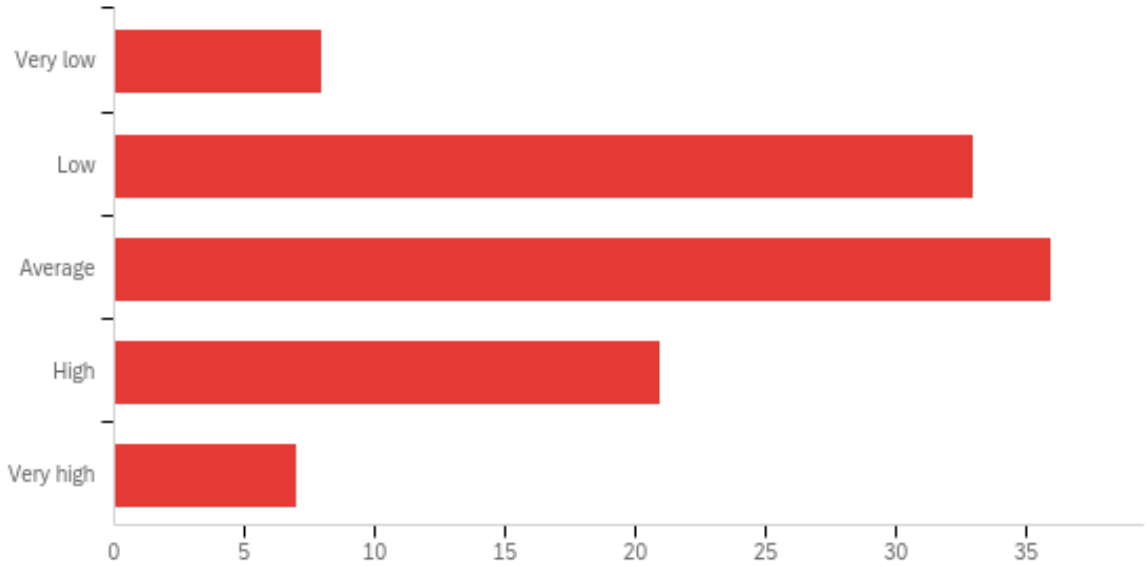
Q59 - How likely is it that you would recommend 'Halo Insurance' to your friend?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How likely is it that you would recommend 'Halo Insurance' to your friend?	1.00	4.00	2.53	0.84	0.71	105

#	Answer	%	Count
1	Extremely unlikely	8.57%	9
2	Unlikely	43.81%	46
3	Neutral	33.33%	35
4	Likely	14.29%	15
5	Very likely	0.00%	0
	Total	100%	105

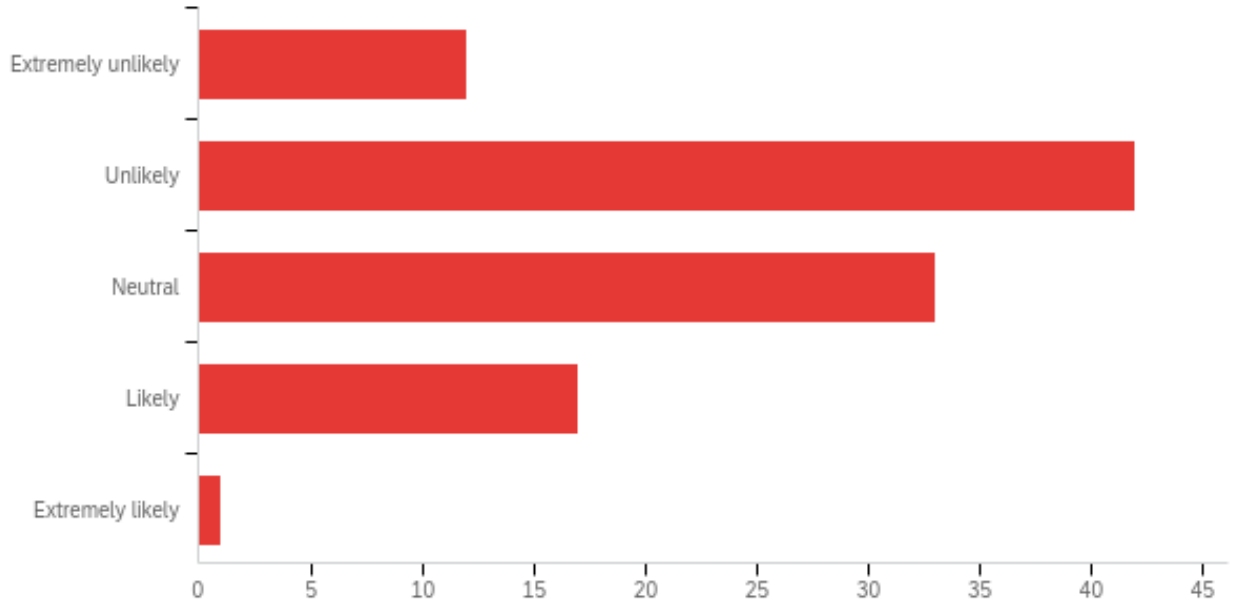
Q60 - I expect the price level of "Halo Insurance" to be…



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	I expect the price level of "Halo Insurance" to be…	1.00	5.00	2.87	1.03	1.07	105

#	Answer	%	Count
1	Very low	7.62%	8
2	Low	31.43%	33
3	Average	34.29%	36
4	High	20.00%	21
5	Very high	6.67%	7
	Total	100%	105

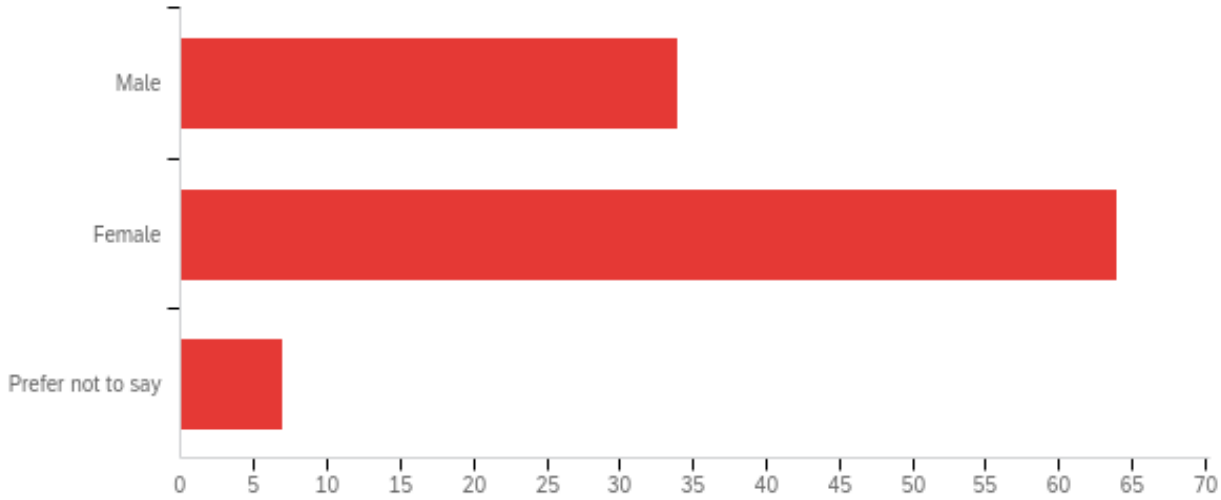
Q61 - I would become a customer of 'Halo Insurance'.



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	I would become a customer of 'Halo Insurance'.	1.00	5.00	2.55	0.93	0.86	105

#	Answer	%	Count
1	Extremely unlikely	11.43%	12
2	Unlikely	40.00%	42
3	Neutral	31.43%	33
4	Likely	16.19%	17
5	Extremely likely	0.95%	1
	Total	100%	105

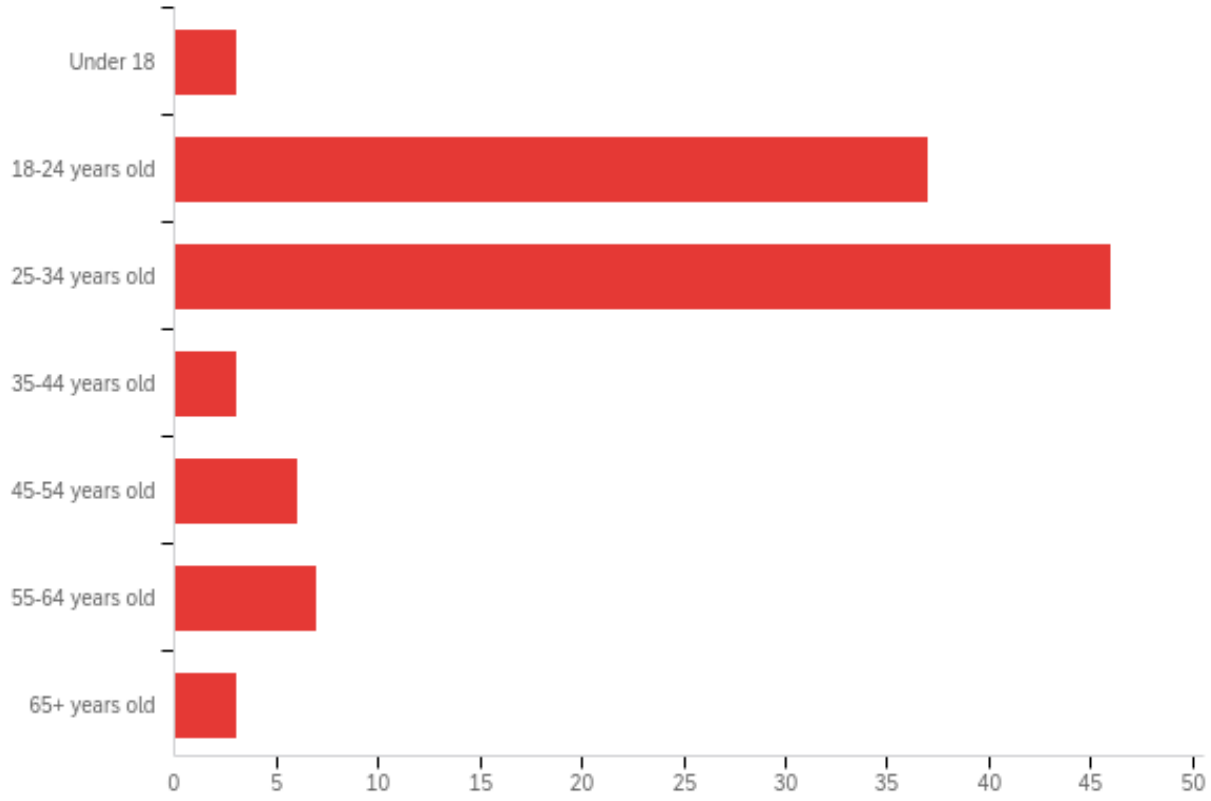
Q62 - What is your gender?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your gender?	1.00	3.00	1.74	0.57	0.32	105

#	Answer	%	Count
1	Male	32.38%	34
2	Female	60.95%	64
3	Prefer not to say	6.67%	7
	Total	100%	105

Q63 - How old are you?

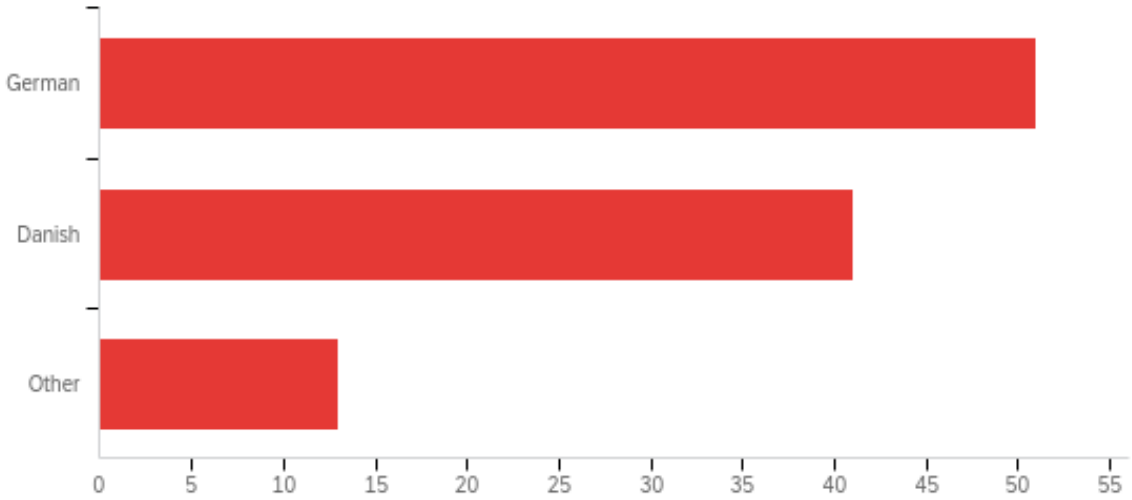


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How old are you?	1.00	7.00	3.05	1.33	1.78	105

#	Answer	%	Count
1	Under 18	2.86%	3
2	18-24 years old	35.24%	37
3	25-34 years old	43.81%	46
4	35-44 years old	2.86%	3
5	45-54 years old	5.71%	6
6	55-64 years old	6.67%	7
7	65+ years old	2.86%	3

	Total	100%	105

Q64 - What is your nationality?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your nationality? - Selected Choice	1.00	3.00	1.64	0.69	0.48	105

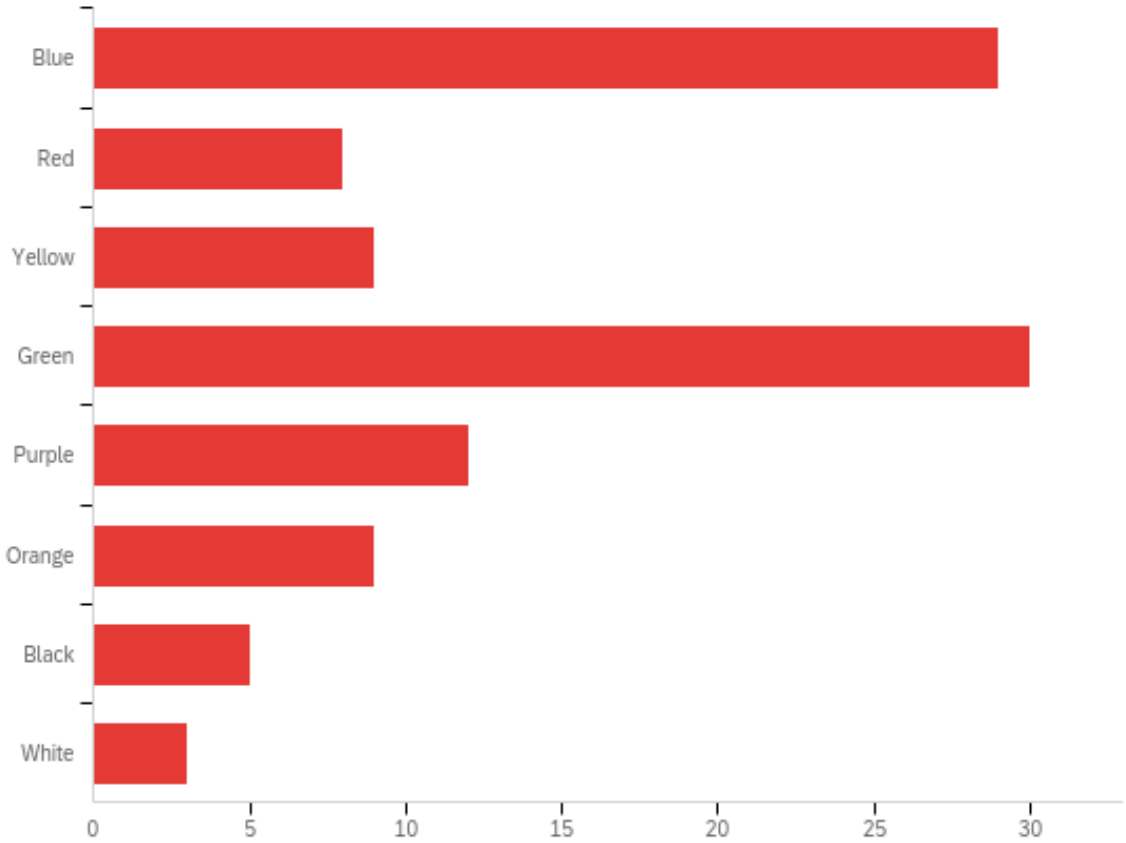
#	Answer	%	Count
1	German	48.57%	51
2	Danish	39.05%	41
3	Other	12.38%	13
	Total	100%	105

Q64_3_TEXT - Other

Other - Text
Italian
Switzerland
Italian

Norwegian
Swiss
French
Swiss
Austrian
Austrian

Q65 - What is your favorite color?

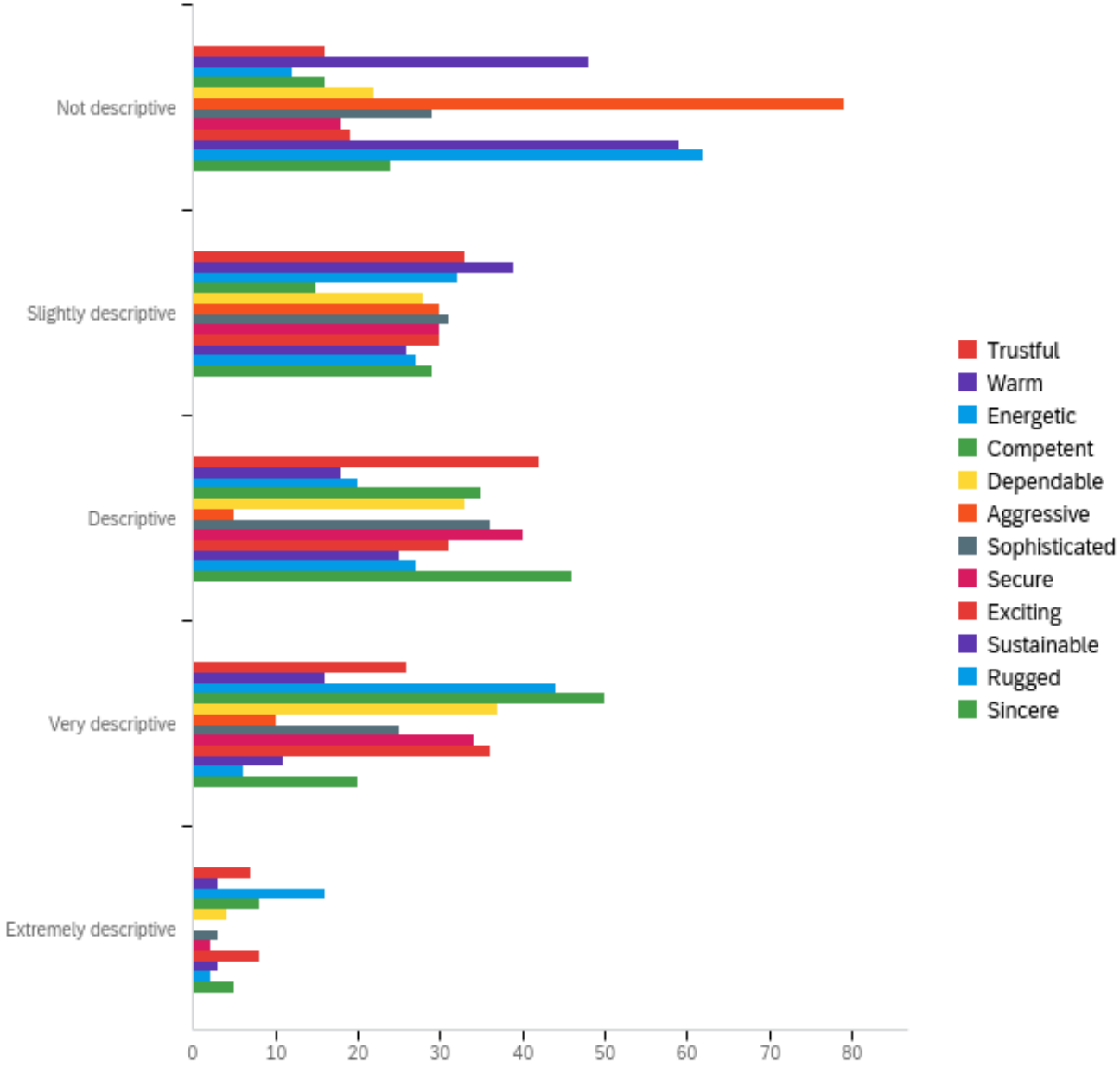


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your favorite color?	1.00	8.00	3.48	1.99	3.94	105

#	Answer	%	Count
1	Blue	27.62%	29
2	Red	7.62%	8
3	Yellow	8.57%	9
4	Green	28.57%	30
5	Purple	11.43%	12
6	Orange	8.57%	9

7	Black	4.76%	5
8	White	2.86%	3
	Total	100%	105

Q79 - The question tour has helped me learn how to configure my own questions in Qualtrics.

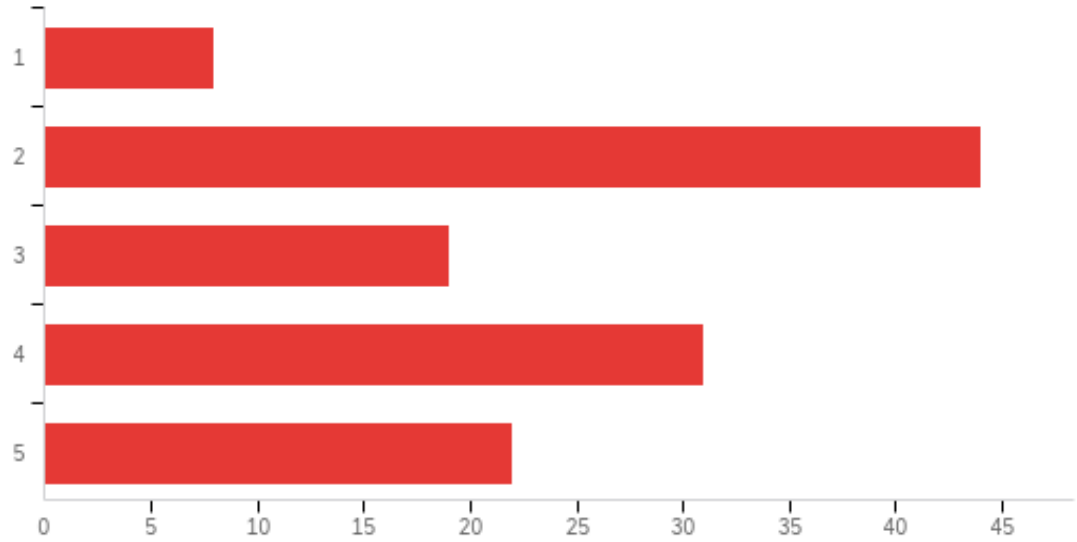


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Trustful	1.00	5.00	2.80	1.08	1.18	124
2	Warm	1.00	5.00	2.09	1.12	1.26	124
3	Energetic	1.00	5.00	3.16	1.22	1.49	124
4	Competent	1.00	5.00	3.15	1.13	1.27	124

5	Dependable	1.00	5.00	2.78	1.15	1.32	124
6	Aggressive	1.00	4.00	1.56	0.90	0.81	124
7	Sophisticated	1.00	5.00	2.53	1.12	1.27	124
8	Secure	1.00	5.00	2.77	1.05	1.11	124
9	Exciting	1.00	5.00	2.87	1.18	1.39	124
10	Sustainable	1.00	5.00	1.98	1.12	1.25	124
11	Rugged	1.00	5.00	1.86	1.02	1.04	124
12	Sincere	1.00	5.00	2.62	1.09	1.19	124

#	Question	Not descriptive		Slightly descriptive		Descriptive		Very descriptive		Extremely descriptive		Total
1	Trustful	12.90%	16	26.61%	33	33.87%	42	20.97%	26	5.65%	7	124
2	Warm	38.71%	48	31.45%	39	14.52%	18	12.90%	16	2.42%	3	124
3	Energetic	9.68%	12	25.81%	32	16.13%	20	35.48%	44	12.90%	16	124
4	Competent	12.90%	16	12.10%	15	28.23%	35	40.32%	50	6.45%	8	124
5	Dependable	17.74%	22	22.58%	28	26.61%	33	29.84%	37	3.23%	4	124
6	Aggressive	63.71%	79	24.19%	30	4.03%	5	8.06%	10	0.00%	0	124
7	Sophisticated	23.39%	29	25.00%	31	29.03%	36	20.16%	25	2.42%	3	124
8	Secure	14.52%	18	24.19%	30	32.26%	40	27.42%	34	1.61%	2	124
9	Exciting	15.32%	19	24.19%	30	25.00%	31	29.03%	36	6.45%	8	124
10	Sustainable	47.58%	59	20.97%	26	20.16%	25	8.87%	11	2.42%	3	124
11	Rugged	50.00%	62	21.77%	27	21.77%	27	4.84%	6	1.61%	2	124
12	Sincere	19.35%	24	23.39%	29	37.10%	46	16.13%	20	4.03%	5	124

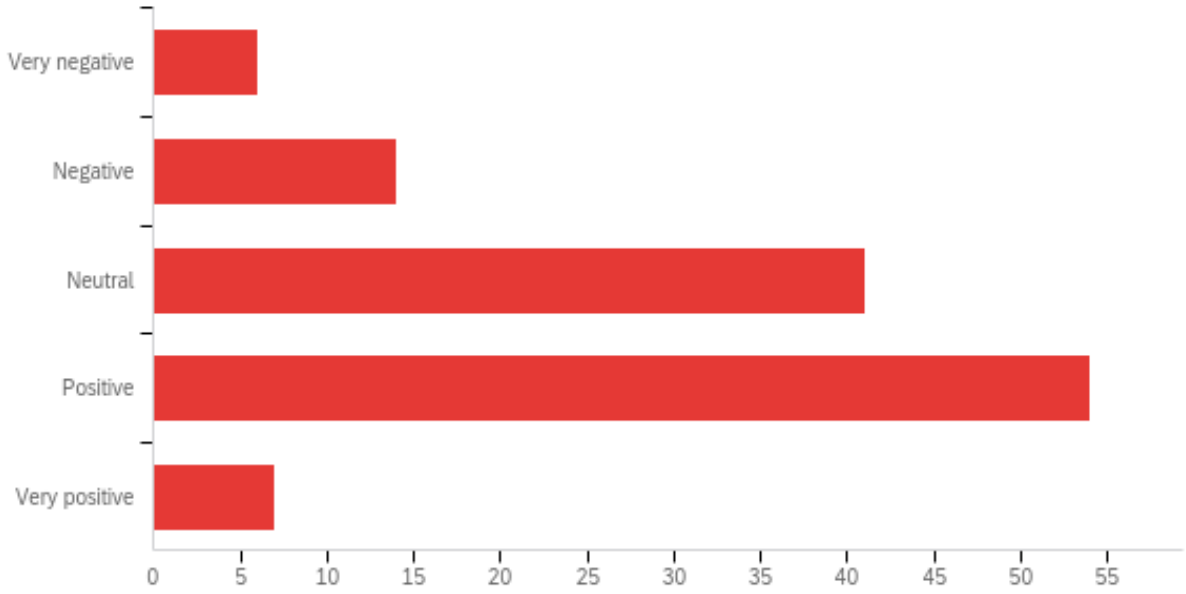
Q80 - Library information description



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Library information description	1.00	5.00	3.12	1.25	1.56	124

#	Answer	%	Count
1	1	6.45%	8
2	2	35.48%	44
3	3	15.32%	19
4	4	25.00%	31
5	5	17.74%	22
	Total	100%	124

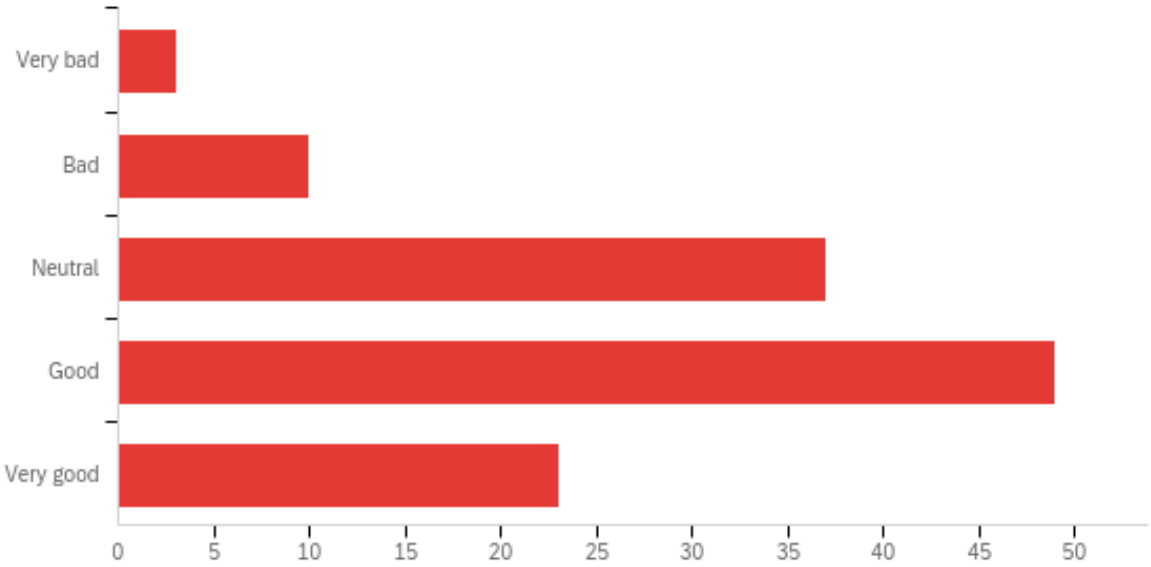
Q81 - What is your overall perceived brand attitude of 'Strava Sports'?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your overall perceived brand attitude of 'Strava Sports'?	1.00	5.00	3.34	0.93	0.87	122

#	Answer	%	Count
1	Very negative	4.92%	6
2	Negative	11.48%	14
3	Neutral	33.61%	41
4	Positive	44.26%	54
5	Very positive	5.74%	7
	Total	100%	122

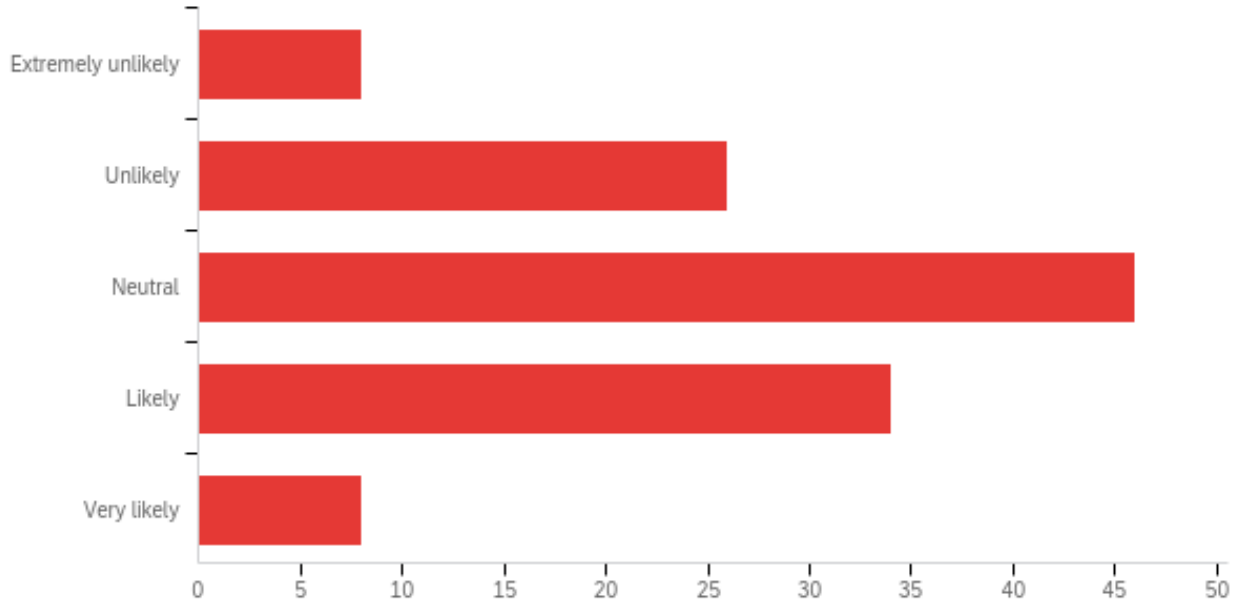
Q82 - I expect the quality of 'Strava Sports' to be...



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	I expect the quality of 'Strava Sports' to be...	1.00	5.00	3.65	0.96	0.92	122

#	Answer	%	Count
1	Very bad	2.46%	3
2	Bad	8.20%	10
3	Neutral	30.33%	37
4	Good	40.16%	49
5	Very good	18.85%	23
	Total	100%	122

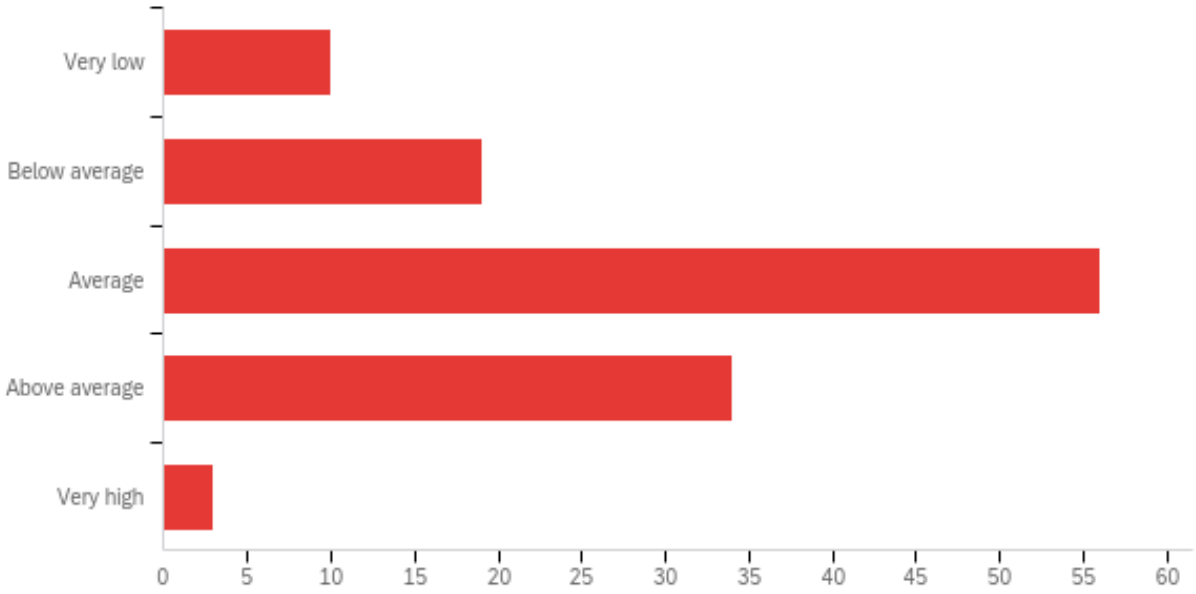
Q83 - How likely is it that you would recommend 'Strava Sports' to your friend?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How likely is it that you would recommend 'Strava Sports' to your friend?	1.00	5.00	3.07	1.01	1.01	122

#	Answer	%	Count
1	Extremely unlikely	6.56%	8
2	Unlikely	21.31%	26
3	Neutral	37.70%	46
4	Likely	27.87%	34
5	Very likely	6.56%	8
	Total	100%	122

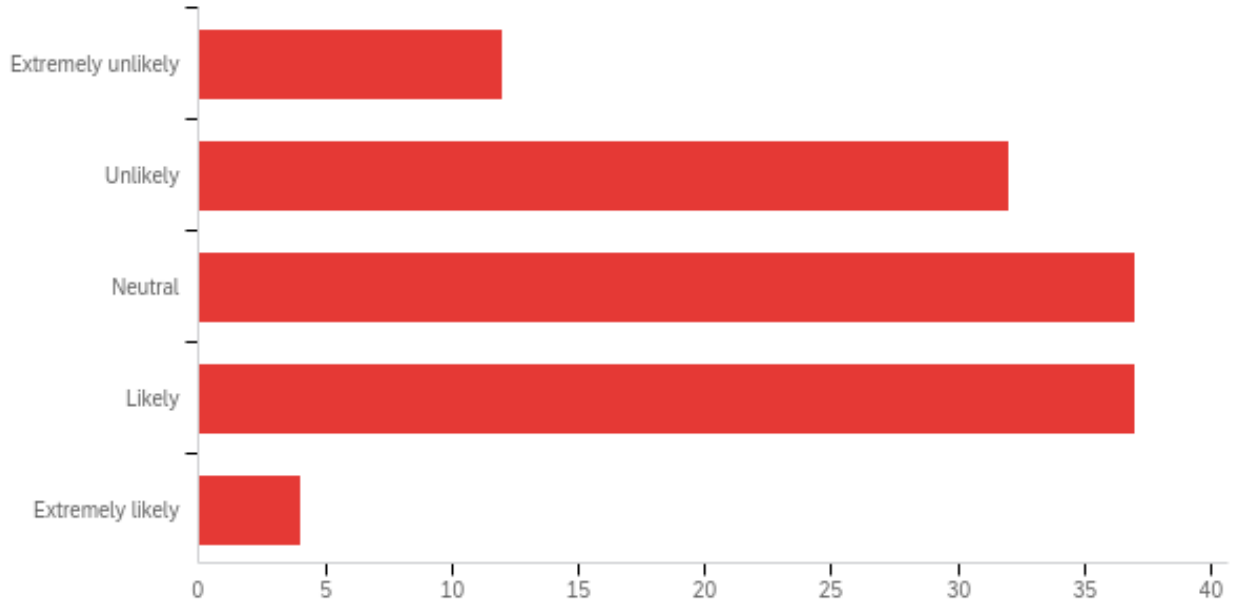
Q84 - I expect the price level of 'Strava Sports' to be…



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	I expect the price level of 'Strava Sports' to be…	1.00	5.00	3.01	0.93	0.86	122

#	Answer	%	Count
1	Very low	8.20%	10
2	Below average	15.57%	19
3	Average	45.90%	56
4	Above average	27.87%	34
5	Very high	2.46%	3
	Total	100%	122

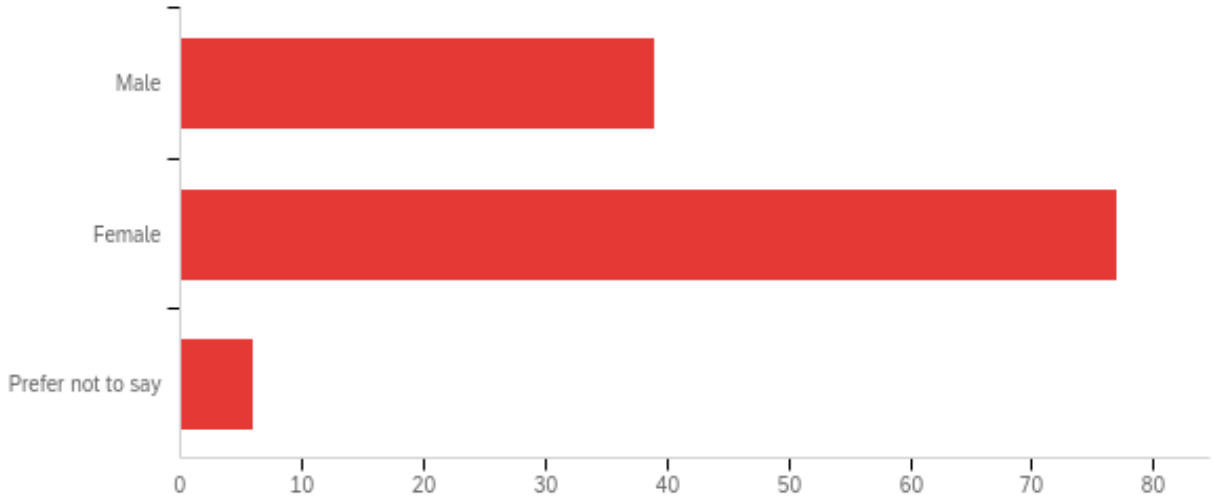
Q85 - I would become a customer of 'Strava Sports'.



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	I would become a customer of 'Strava Sports'.	1.00	5.00	2.91	1.04	1.08	122

#	Answer	%	Count
1	Extremely unlikely	9.84%	12
2	Unlikely	26.23%	32
3	Neutral	30.33%	37
4	Likely	30.33%	37
5	Extremely likely	3.28%	4
	Total	100%	122

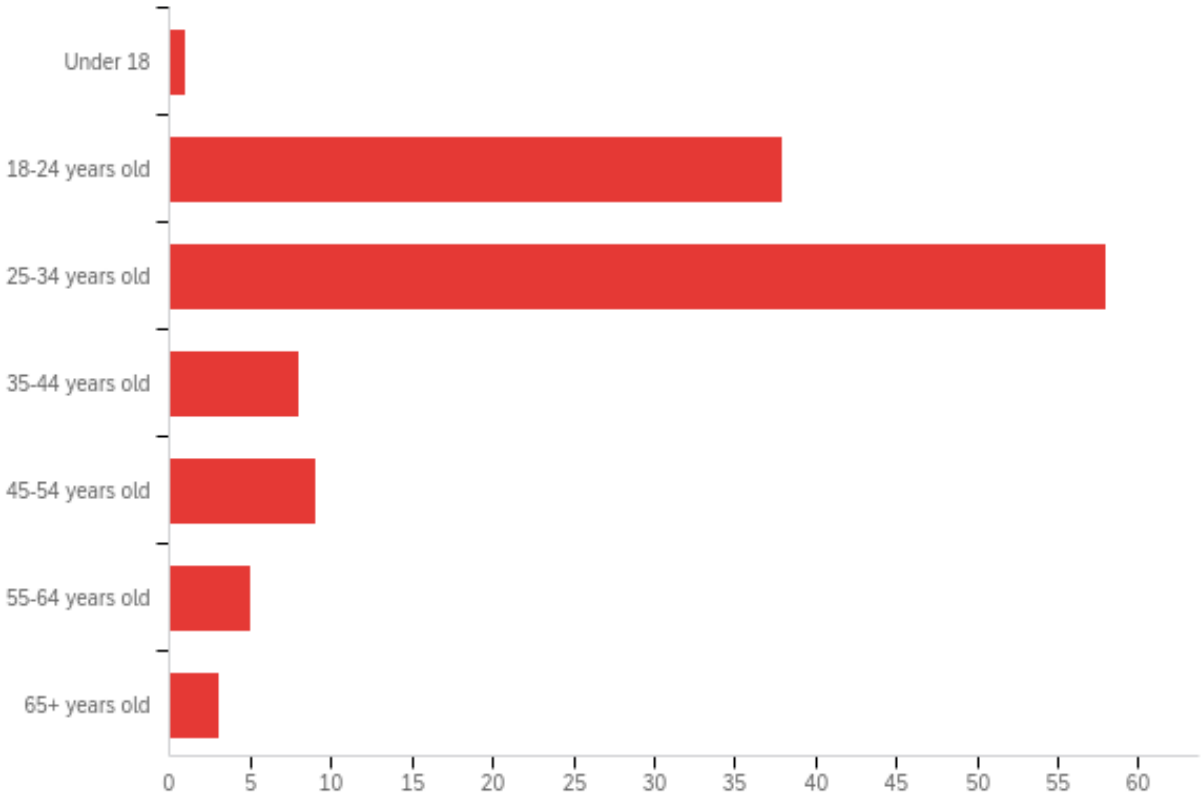
Q86 - What is your gender?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your gender?	1.00	3.00	1.73	0.54	0.30	122

#	Answer	%	Count
1	Male	31.97%	39
2	Female	63.11%	77
3	Prefer not to say	4.92%	6
	Total	100%	122

Q87 - How old are you?

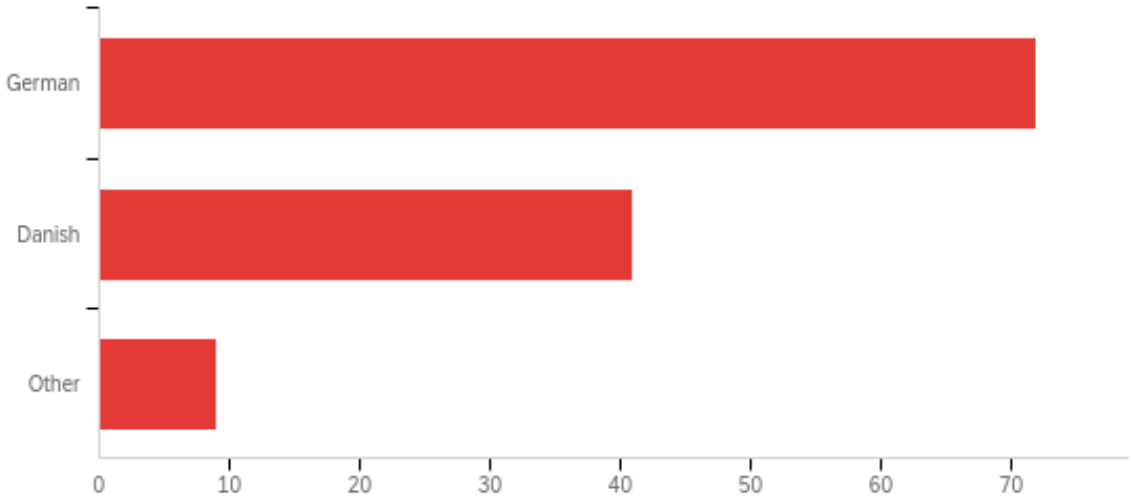


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How old are you?	1.00	7.00	3.11	1.21	1.46	122

#	Answer	%	Count
1	Under 18	0.82%	1
2	18-24 years old	31.15%	38
3	25-34 years old	47.54%	58
4	35-44 years old	6.56%	8
5	45-54 years old	7.38%	9
6	55-64 years old	4.10%	5
7	65+ years old	2.46%	3

	Total	100%	122

Q88 - What is your nationality?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your nationality? - Selected Choice	1.00	3.00	1.48	0.63	0.40	122

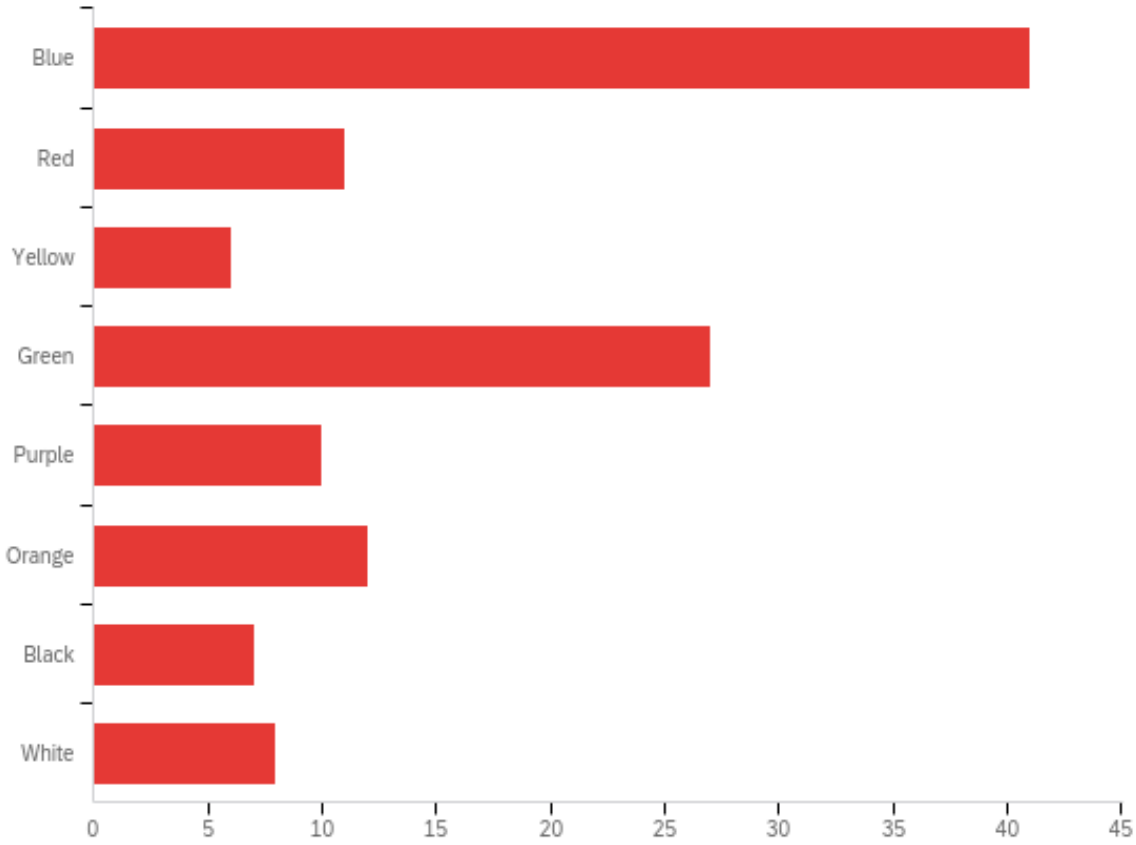
#	Answer	%	Count
1	German	59.02%	72
2	Danish	33.61%	41
3	Other	7.38%	9
	Total	100%	122

Q88_3_TEXT - Other

Other - Text
Italy
Swiss
Swiss

Austrian
Slovenian
British

Q89 - What is your favorite color?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your favorite color?	1.00	8.00	3.48	2.28	5.20	122

#	Answer	%	Count
1	Blue	33.61%	41
2	Red	9.02%	11
3	Yellow	4.92%	6
4	Green	22.13%	27
5	Purple	8.20%	10
6	Orange	9.84%	12

7	Black	5.74%	7
8	White	6.56%	8
	Total	100%	122

Appendix 5:

Hypothesis 1:

Group Statistics

	CONDCOLOR	N	Mean	Std. Deviation	Std. Error Mean
The question tour has helped me learn how to configure my own questions in Qualtrics. - Trustful	1,00	228	3,09	1,193	,079
	2,00	228	2,50	1,132	,075
The question tour has helped me learn how to configure my own questions in Qualtrics. - Competent	1,00	228	3,32	1,190	,079
	2,00	228	2,72	1,119	,074
The question tour has helped me learn how to configure my own questions in Qualtrics. - Dependable	1,00	228	3,04	1,216	,081
	2,00	228	2,54	1,112	,074
The question tour has helped me learn how to configure my own questions in Qualtrics. - Secure	1,00	228	3,07	1,204	,080
	2,00	228	2,59	1,125	,074

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
The question tour has helped me learn how to configure my own questions in Qualtrics. - Trustful	Equal variances assumed	,149	,699	5,476	454	,000	,596	,109	,382	,811
	Equal variances not assumed			5,476	452,765	,000	,596	,109	,382	,811
The question tour has helped me learn how to configure my own questions in Qualtrics. - Competent	Equal variances assumed	,716	,398	5,555	454	,000	,601	,108	,388	,813
	Equal variances not assumed			5,555	452,258	,000	,601	,108	,388	,813
The question tour has helped me learn how to configure my own questions in Qualtrics. - Dependable	Equal variances assumed	,985	,322	4,623	454	,000	,504	,109	,290	,719
	Equal variances not assumed			4,623	450,423	,000	,504	,109	,290	,719
The question tour has helped me learn how to configure my own questions in Qualtrics. - Secure	Equal variances assumed	,249	,618	4,422	454	,000	,482	,109	,268	,697
	Equal variances not assumed			4,422	451,937	,000	,482	,109	,268	,697

Hypothesis 2:

Group Statistics

	CONDCOLOR	N	Mean	Std. Deviation	Std. Error Mean
The question tour has helped me learn how to configure my own questions in Qualtrics. - Warm	1,00	228	2,21	1,226	,081
	2,00	228	2,88	1,092	,072
The question tour has helped me learn how to configure my own questions in Qualtrics. - Energetic	1,00	228	2,83	1,270	,084
	2,00	228	3,32	1,247	,083
The question tour has helped me learn how to configure my own questions in Qualtrics. - Aggressive	1,00	228	1,66	1,089	,072
	2,00	228	2,13	1,235	,082
The question tour has helped me learn how to configure my own questions in Qualtrics. - Exciting	1,00	228	2,60	1,295	,086
	2,00	228	3,20	1,206	,080

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
The question tour has helped me learn how to configure my own questions in Qualtrics. - Warm	Equal variances assumed	6,021	,015	-6,172	454	,000	-,671	,109	-,885	-,457
	Equal variances not assumed			-6,172	448,010	,000	-,671	,109	-,885	-,457
The question tour has helped me learn how to configure my own questions in Qualtrics. - Energetic	Equal variances assumed	,500	,480	-4,129	454	,000	-,487	,118	-,719	-,255
	Equal variances not assumed			-4,129	453,850	,000	-,487	,118	-,719	-,255
The question tour has helped me learn how to configure my own questions in Qualtrics. - Aggressive	Equal variances assumed	6,231	,013	-4,305	454	,000	-,469	,109	-,684	-,255
	Equal variances not assumed			-4,305	446,984	,000	-,469	,109	-,684	-,255
The question tour has helped me learn how to configure my own questions in Qualtrics. - Exciting	Equal variances assumed	4,032	,045	-5,090	454	,000	-,596	,117	-,827	-,366
	Equal variances not assumed			-5,090	451,714	,000	-,596	,117	-,827	-,366

Hypothesis 3.1:

Group Statistics

	Condition	N	Mean	Std. Deviation	Std. Error Mean
What is your overall perceived brand attitude of 'Halo Insurance'?	1	106	3,75	1,094	,106
	3	104	2,84	,915	,090

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
What is your overall perceived brand attitude of 'Halo Insurance'?	Equal variances assumed	2,901	,090	6,592	208	,000	,918	,139	,644	1,193
	Equal variances not assumed			6,603	202,944	,000	,918	,139	,644	1,192

Hypothesis 3.2:

Group Statistics

	Condition	N	Mean	Std. Deviation	Std. Error Mean
What is your overall perceived brand attitude of 'Halo Insurance'?	2	124	3,85	,902	,081
	4	122	3,34	,934	,085

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
What is your overall perceived brand attitude of 'Halo Insurance'?	Equal variances assumed	1,197	,275	4,293	244	,000	,503	,117	,272	,733
	Equal variances not assumed			4,291	243,366	,000	,503	,117	,272	,733

Hypothesis 4.1:

Group Statistics

	Condition	N	Mean	Std. Deviation	Std. Error Mean
Library information description	1	106	3,89	1,237	,120
	3	104	2,86	1,354	,133

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Library information description	Equal variances assumed	8,482	,004	5,763	208	,000	1,031	,179	,678	1,384
	Equal variances not assumed			5,758	205,545	,000	1,031	,179	,678	1,384

Hypothesis 4.2:

Group Statistics

	Condition	N	Mean	Std. Deviation	Std. Error Mean
Library information description	2	124	3,96	1,171	,105
	4	122	3,15	1,244	,113

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Library information description	Equal variances assumed	5,033	,026	5,272	244	,000	,812	,154	,509	1,116
	Equal variances not assumed			5,269	242,579	,000	,812	,154	,509	1,116

Hypothesis 5.1:

Group Statistics

	Condition	N	Mean	Std. Deviation	Std. Error Mean
I expect the quality of 'Halo Insurance' to be...	1	106	3,98	,976	,095
	3	104	3,03	,990	,097

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
I expect the quality of 'Halo Insurance' to be...	Equal variances assumed	,106	,745	7,021	208	,000	,952	,136	,685	1,220
	Equal variances not assumed			7,020	207,767	,000	,952	,136	,685	1,220

Hypothesis 5.2:

Group Statistics

	Condition	N	Mean	Std. Deviation	Std. Error Mean
I expect the quality of 'Halo Insurance' to be...	2	124	3,89	,788	,071
	4	122	3,65	,961	,087

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
I expect the quality of 'Halo Insurance' to be...	Equal variances assumed	9,655	,002	2,139	244	,033	,240	,112	,019	,460
	Equal variances not assumed			2,135	233,499	,034	,240	,112	,019	,461

Hypothesis 6.1:

Group Statistics

	Condition	N	Mean	Std. Deviation	Std. Error Mean
How likely is it that you would recommend 'Halo Insurance' to your friend?	1	106	3,48	1,181	,115
	3	104	2,54	,847	,083

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
How likely is it that you would recommend 'Halo Insurance' to your friend?	Equal variances assumed	18,385	,000	6,636	208	,000	,943	,142	,663	1,223
	Equal variances not assumed			6,657	190,526	,000	,943	,142	,663	1,222

Hypothesis 6.2:

Group Statistics

	Condition	N	Mean	Std. Deviation	Std. Error Mean
How likely is it that you would recommend 'Halo Insurance' to your friend?	2	124	3,60	1,011	,091
	4	122	3,07	1,010	,091

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
How likely is it that you would recommend 'Halo Insurance' to your friend?	Equal variances assumed	,443	,506	4,121	244	,000	,531	,129	,277	,785
	Equal variances not assumed			4,121	243,945	,000	,531	,129	,277	,785

Hypothesis 7.1:

Group Statistics

	Condition	N	Mean	Std. Deviation	Std. Error Mean
I would become a customer of 'Halo Insurance'.	1	106	3,41	1,225	,119
	3	104	2,56	,933	,091

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
I would become a customer of 'Halo Insurance'.	Equal variances assumed	11,823	,001	5,636	208	,000	,848	,150	,551	1,145
	Equal variances not assumed			5,650	196,014	,000	,848	,150	,552	1,144

Hypothesis 7.2:

Group Statistics

	Condition	N	Mean	Std. Deviation	Std. Error Mean
I would become a customer of 'Halo Insurance'.	2	124	3,41	1,141	,102
	4	122	2,91	1,044	,095

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
I would become a customer of 'Halo Insurance'.	Equal variances assumed	2,610	,107	3,594	244	,000	,501	,140	,227	,776
	Equal variances not assumed			3,597	242,758	,000	,501	,139	,227	,776

Hypothesis 8.1:

Group Statistics

	Condition	N	Mean	Std. Deviation	Std. Error Mean
I expect the price level of 'Halo Insurance' to be...	1	106	3,34	1,022	,099
	3	104	2,87	1,043	,102

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
I expect the price level of 'Halo Insurance' to be...	Equal variances assumed	,000	,989	3,327	208	,001	,474	,143	,193	,755
	Equal variances not assumed			3,326	207,679	,001	,474	,143	,193	,755

Hypothesis 8.2:

Group Statistics

	Condition	N	Mean	Std. Deviation	Std. Error Mean
I expect the price level of 'Halo Insurance' to be...	2	124	3,19	,968	,087
	4	122	3,01	,932	,084

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
I expect the price level of 'Halo Insurance' to be...	Equal variances assumed	2,492	,116	1,530	244	,127	,185	,121	-,053	,424
	Equal variances not assumed			1,530	243,876	,127	,185	,121	-,053	,424

Hypothesis 9.1:

Group Statistics[a]

	What is your nationality? - Selected Choice	N	Mean	Std. Deviation	Std. Error Mean
What is your overall perceived brand attitude of 'Halo Insurance'?	German	122	3,49	,752	,068
	Danish	84	3,65	1,375	,150

a. CONDCOLOR = 1,00

Independent Samples Test[a]

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
What is your overall perceived brand attitude of 'Halo Insurance'?	Equal variances assumed	50,119	,000	-1,093	204	,276	-,163	,149	-,457	,131
	Equal variances not assumed			-,989	117,313	,325	-,163	,165	-,489	,163

a. CONDCOLOR = 1,00

Hypothesis 9.2:

CONDCOLOR = 2,00

Group Statistics[a]

	What is your nationality? - Selected Choice	N	Mean	Std. Deviation	Std. Error Mean
What is your overall perceived brand attitude of 'Halo Insurance'?	German	122	3,44	,739	,067
	Danish	86	3,33	1,367	,147

a. CONDCOLOR = 2,00

Independent Samples Test[a]

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
What is your overall perceived brand attitude of 'Halo Insurance'?	Equal variances assumed	77,378	,000	,795	206	,427	,117	,147	-,173	,407
	Equal variances not assumed			,723	120,050	,471	,117	,162	-,204	,438

a. CONDCOLOR = 2,00

Hypothesis 10.1:

Group Statistics[a]

	What is your nationality? - Selected Choice	N	Mean	Std. Deviation	Std. Error Mean
Library information description	German	122	3,39	1,216	,110
	Danish	84	3,73	1,400	,153

a. CONDCOLOR = 1,00

Independent Samples Test[a]

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Library information description	Equal variances assumed	4,302	,039	-1,858	204	,065	-,341	,183	-,703	,021
	Equal variances not assumed			-1,811	161,678	,072	-,341	,188	-,713	,031

a. CONDCOLOR = 1,00

Hypothesis 10.2:

Group Statistics[a]

	What is your nationality? - Selected Choice	N	Mean	Std. Deviation	Std. Error Mean
Library information description	German	122	3,57	1,246	,113
	Danish	86	3,33	1,560	,168

a. CONDCOLOR = 2,00

Independent Samples Test[a]

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Library information description	Equal variances assumed	20,318	,000	1,273	206	,204	,248	,195	-,136	,632
	Equal variances not assumed			1,225	156,404	,222	,248	,203	-,152	,648

a. CONDCOLOR = 2,00

Hypothesis 11.1:

Group Statistics[a]

	What is your nationality? - Selected Choice	N	Mean	Std. Deviation	Std. Error Mean
I would become a customer of 'Halo Insurance'.	German	122	2,98	,904	,082
	Danish	84	3,45	1,409	,154

a. CONDCOLOR = 1,00

Independent Samples Test[a]

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
I would become a customer of 'Halo Insurance'.	Equal variances assumed	33,778	,000	-2,959	204	,003	-,477	,161	-,795	-,159
	Equal variances not assumed			-2,738	129,586	,007	-,477	,174	-,822	-,132

a. CONDCOLOR = 1,00

Hypothesis 11.2:

Group Statistics[a]

	What is your nationality? – Selected Choice	N	Mean	Std. Deviation	Std. Error Mean
I would become a customer of 'Halo Insurance'.	German	122	2,98	,949	,086
	Danish	86	3,12	1,376	,148

a. CONDCOLOR = 2,00

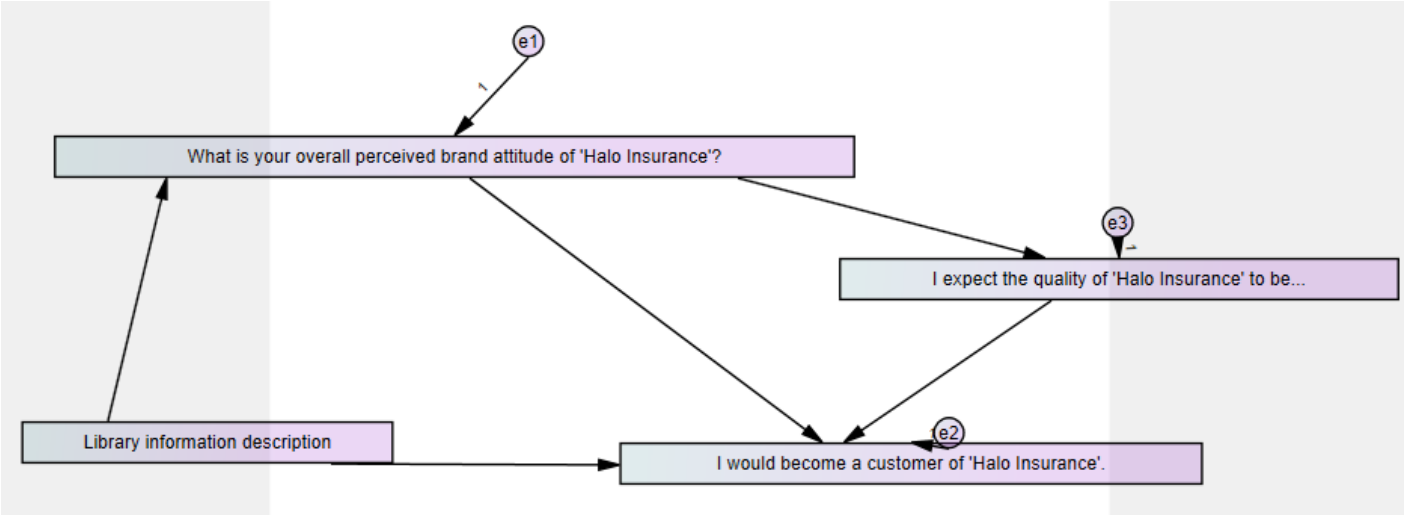
Independent Samples Test[a]

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
I would become a customer of 'Halo Insurance'.	Equal variances assumed	36,321	,000	-,874	206	,383	-,141	,161	-,459	,177
	Equal variances not assumed			-,822	140,474	,413	-,141	,171	-,480	,198

a. CONDCOLOR = 2,00

Appendix 6:

Output: Structural Equation Model



SEM Model: Relationship between Logo Affect, Brand Attitude, Purchase Intent and Perceived Quality

Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Q17	<---	Library_Information	,538	,026	20,441	***	
Q18	<---	Q17	,746	,028	26,458	***	
Q21	<---	Q17	,711	,058	12,173	***	
Q21	<---	Library_Information	,051	,034	1,517	,129	
Q21	<---	Q18	,154	,052	2,953	,003	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Q17	<---	Library_Information	,692
Q18	<---	Q17	,779
Q21	<---	Q17	,644
Q21	<---	Library_Information	,060
Q21	<---	Q18	,134

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Library_Information	1,767	,117	15,083	***	
e1	,557	,037	15,083	***	
e3	,387	,026	15,083	***	
e2	,480	,032	15,083	***	