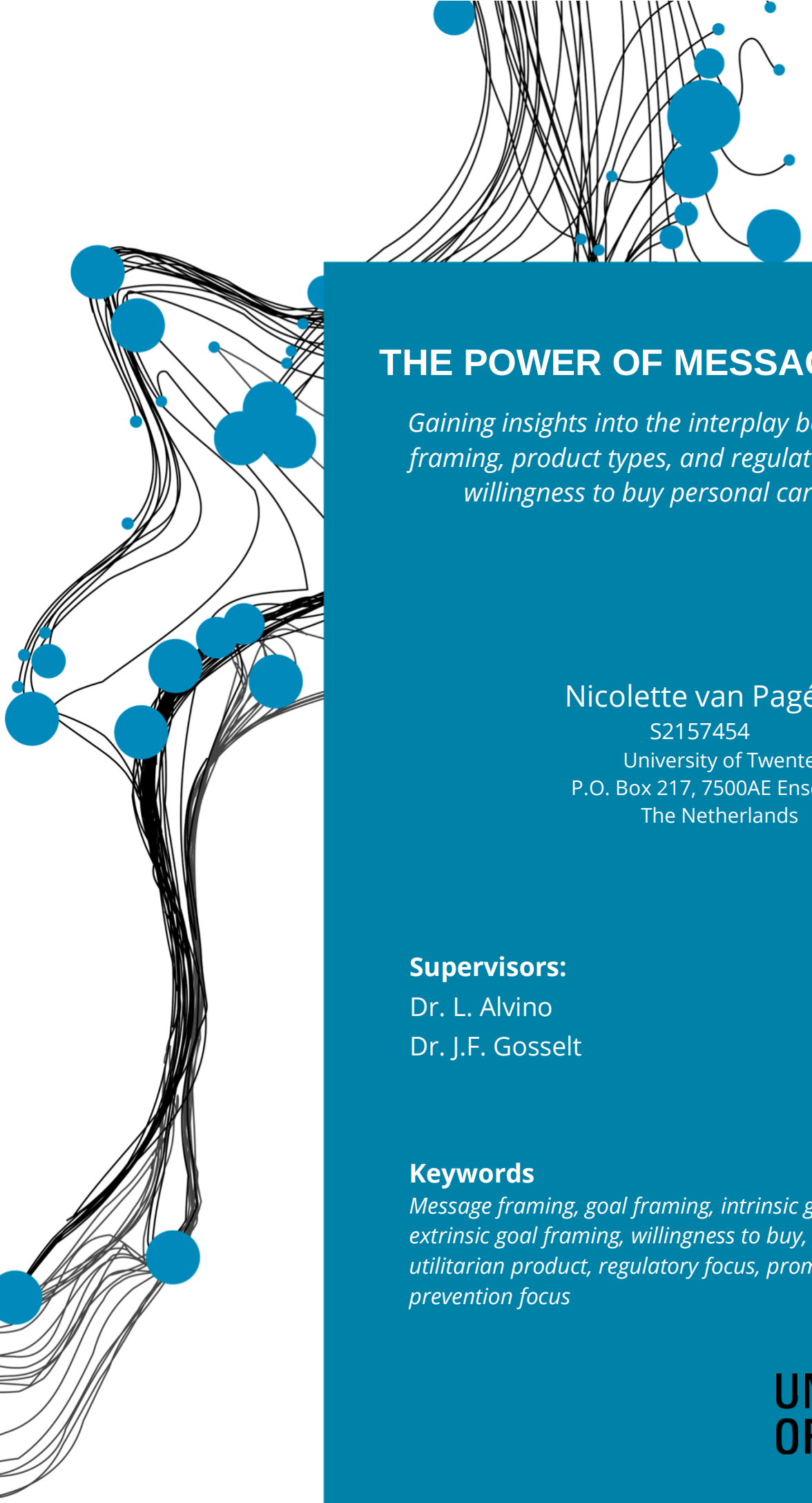

THE POWER OF MESSAGE FRAMING

Gaining insights into the interplay between message framing, product types, and regulatory focus on the willingness to buy personal care products.

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ii. ABSTRACT

Within the dynamic landscape of marketing persuasion, crafting advertisements that not only capture the attention of consumers but also drive them to undertake action is a challenging issue for marketers nowadays. In the realm of message framing extensive research is dedicated to understanding which types of message frames best appeal to individuals. One facet of message framing is goal framing, which is believed to evoke greater consumer responsiveness when the message aligns with consumers' personal goals. Research on goal framing, specifically intrinsic and extrinsic goal framing, in the marketing and persuasion context, is scarce and requires more attention. Therefore, this research broadens the existing body of literature by exploring the effects of different types of goal frames (intrinsic and extrinsic goal framing) and products (utilitarian and hedonic) on a customer's willingness to buy personal care products. Additionally, the moderating role of regulatory focus (promotion versus prevention) is examined in terms of its impact on the relationship between goal framing and product type concerning to the willingness to buy. Hence, the central question that this research addresses is: "*To what extent do different types of message framing (intrinsic goal framing and extrinsic goal framing) and different product types (hedonic and utilitarian) influence the willingness to buy personal care products in online advertising? And how does an individual's regulatory focus (promotion versus prevention) influence this relationship?"*. In doing so, this paper addresses suggestions from extant literature to examine the effects of message framing on different types of products and advances the literature on goal framing within the field of marketing and persuasion (Lee & Pounders, 2019). A quantitative research methodology was employed, involving the creation and distribution of a pre-test and main questionnaire. The main questionnaire utilized a within-subjects design and included 249 participants in the experiment. Furthermore, this research links Communication Science and Business Administration by analyzing consumer responses to various advertisements, ultimately demonstrating the most effective communication strategies in the realm of marketing. Specifically, findings reveal that intrinsically framed advertisements evoke a higher willingness to buy than extrinsically framed advertisements for both utilitarian and hedonic products. This indicates that intrinsic goal frames are more effective than extrinsic goal frames. Besides, utilitarian products exhibited a greater willingness to buy compared to hedonic products. Ultimately, no empirical evidence was found for the moderating role of regulatory focus on the relationship between product types, frame types, and their combined influence on willingness to buy. This study carries theoretical and practical implications. First, it addresses several calls from existing literature, such as exploring the impact of intrinsic and extrinsic goal framing not just on utilitarian products but also on hedonic products. Furthermore, this study enriches the body of literature on marketing persuasion through its exploration of the role of goal framing in this domain. On a practical level, this study offers crucial insights for marketers and organizations about the underlying mechanisms that drive consumer's decision-making in purchasing. Specifically, it sheds light on the most effective type of goal framing to encourage product purchases and identifies which framing works best for utilitarian and hedonic product categories.

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1. INTRODUCTION

In today's world where everything can be bought online and where social media plays a critical role in advertising, customers enjoy having more and better choices than ever when making an online purchase (Chen & Li, 2009). Attracting and persuading customers to buy your product is therefore an essential task for marketers. An article in the American business magazine *Forbes* (Gross, 2017) reveals a striking side of consumer behavior. It states that the subconscious mental process guides up to 95 percent of our purchasing decisions. In fact, Harvard Business School professor Gerald Zaltman claimed that "*The unconscious mind is the real driver of consumer behavior*" and "*Understanding consumers is largely a matter of understanding how the unconscious mind operates*" (Harvard Business School, 2003). An example of how we are daily exposed to this kind of unconscious behavior becomes clear when doing groceries and finding ourselves standing in front of the dairy aisle. Would you buy the yogurt that contains 20 percent fat or the yogurt that is 80 percent fat-free? Researchers found that people are more likely to choose the product that is 80 percent fat-free instead of the product containing 20 percent fat (Levin et al., 1998). Although the two types of yogurts are identical, the mind cannot easily recognize that they are the same (Kahneman & Tversky., 1985). This way of shaping a message of information to affect consumer response without changing the arguments is referred to as message framing (Tversky & Kahneman, 1985; Gursoy et al., 2022).

1.1. Message framing

Over the years, there has been an increasing focus in the literature on message framing in terms of persuasion. Especially in green marketing, such as environmentally friendly or sustainable behavior, but also in social marketing and the context of politics and health. While recent research has demonstrated that the way a message is framed matters as it significantly increases the value perception of a product (Tiffany et al., 2020), research on message framing of product advertisements in the marketing persuasion context, is quite scarce (Lee & Pounders, 2019). Message framing is often considered in terms of gains and losses, referred to as valence framing, which implies that a message can either be presented in a positive and beneficial way (e.g., you can protect yourself from terrible diseases if you give up smoking) or in a negative way (e.g., you can get terrible diseases if you do not give up smoking), aiming to influence a reader's behavior or decision-making. Three valence framing types were introduced by Levin et al. (1998), which are *risky choice framing*, *attribute framing,* and *goal framing*. Risky choice framing, rooted in the fundamentals of Tversky & Kahneman (1981), implies a scenario that is either being framed in a risky (e.g., 10 percent chance of mortality) or riskless (e.g., 90 percent chance of survival) perspective (p. 152). Attribute framing considers one single attribute, often related to evaluating items. Examples include describing beef as either 75 percent lean or containing 25 percent fat (Levin et al., 1998, p.159). Finally, goal framing deals with the assumption that consumers will be more responsive to messages consistent with their own goals. Goal framing can be classified into *intrinsic* or *extrinsic* goal framing (Bunčić et al., 2021), whereas intrinsic goal framing

is concerned with achieving intrinsic goals, such as autonomy, health, and personal growth, whereas extrinsic goal framing focuses on the attainment of extrinsic goals, such as wealth and fame (Pelletier & Sharp, 2008).

1.2. Gaps in literature

Although it has been argued that intrinsic and extrinsic motives are important elements within message framing, alongside the way messages are framed (Pelletier & Sharp, 2008), Lee & Pounders (2019) are the first authors to research these message frames in the domain of marketing persuasion. While their research primarily focused on utilitarian products, which are often linked to functionality and basic needs (Tiffany et al., 2020), they suggested that forthcoming research should also explore the implications of goal framing on hedonic products. In the literature, hedonic products can be distinguished as the opposite of utilitarian products and are often associated with luxury goods (Tiffany et al., 2020). Research within the marketing persuasion literature thus shows an absence of focus on intrinsic and extrinsic goal framing (Lee & Pounders, 2019). While there are studies within message framing that examine both utilitarian and hedonic product categories or characteristics, these investigations focus on types of message framing other than intrinsic and extrinsic goal framing. In addition, these studies mainly focus on product categories such as food (Botti et al., 2011; Werle et al., 2015; Kusamasondjaja, 2019), household products (Micu & Chowdhury, 2010) and apps and electronic devices (Shen, 2015; Chang, 2012). Therefore, involving another product category, such as personal care products, would extend the research domain. Personal care products are intimately connected to consumers' daily routines, lifestyles, and well-being, making them a relevant and relatable product category for investigation on the persuasive impact of advertising strategies. Within the personal care product category distinctions can be made between utilitarian and hedonic product categories. For instance, deodorant and toothpaste are considered utilitarian (Drolet et al., 2007; Lim & Ang, 2008), whereas perfume and perfumed products are considered hedonic (Ryu et al., 2006).

1.3. Dispositional factors

Finally, it is argued that dispositional factors, such as individual differences have the potential to elicit different responses to persuasive messages (Rothman & Updegraff, 2010; Bertolotti & Catellani, 2014), it should therefore be taken into account that this may have implications for the scope and outcomes of this research. That is, individual differences could impact the outcomes of the prospective relationships examined for the present study. As acknowledged in the literature, an aspect concerning individual differences posited to influence an individual's information processing is referred to as regulatory focus (Higgins, 1997). Regulatory focus assumes that an individual is driven by either a prevention-or promotion-oriented motivation. There is the belief that individuals characterized by different regulatory focuses are likely to favor messages aligning with their beliefs of achieving goals (Higgins, 1997). Accordingly, within the scope of this study, it is reasonable to propose that an individual's regulatory

focus could influence the interplay between goal framing, product type and, their combined effect on willingness to buy, potentially serving as a moderator factor.

1.4. Research question

In line with these arguments and building upon existing literature this study seeks to bridge the identified gaps, including the limited research on goal framing in the realm of marketing persuasion, and the recommendation to explore the effects of goal framing across various product types. Based on the above, the focal question to be explored in this research is:

"*To what extent do different types of message framing (intrinsic goal framing and extrinsic goal framing) and different product types (hedonic and utilitarian) influence the willingness to buy personal care products in online advertising? And how does an individual's regulatory focus (promotion versus. prevention) influence this relationship?"*

1.5. Theoretical implications

This research aims to contribute to both theoretical and practical fields. First, it seeks to advance existing research in investigating the effect of intrinsic and extrinsic goal framing in the field of marketing persuasion (Lee & Pounders, 2019). Specifically, this dissertation stands out in that it serves both communication sciences and the marketing end of business administration, making its findings and contributory work relevant to both fields. That is, this study examines which communication strategies lead to a greater willingness to buy, thereby identifying the most effective approaches to goal framing in advertising. This enables to clarify how different communication styles – specifically, intrinsic, and extrinsic framing - impact consumer behavior and perception, which is a domain that business administration, especially the marketing side, is concerned with. Furthermore, this research will enrich the literature on message framing as no research has been conducted on intrinsic and extrinsic goal framing concerning hedonic products. In addition, this study advances existing literature on message framing and product types concerning their influence on consumer decision-making. Finally, the study adds value to the literature on regulatory focus by investigating its role into the relationship between goal framing and willingness to buy and product type on willingness to buy. Thereby it also offers insights on the moderating role of regulatory focus within the field of marketing persuasion.

1.6. Practical implications

Additionally, several practical implications will be offered to marketers and strategic decision-makers within organizations related to consumer behavior and advertising strategies. First, this research seeks to examine whether one of the goal frames significantly evokes a customer's willingness to buy. In addition, it will be examined whether consumers are more inclined to buy utilitarian or hedonic products. Furthermore, this study seeks to determine in what manner intrinsic and extrinsic goal

framing, in conjunction with a utilitarian and hedonic product type, influences a customer's willingness to buy. Through exploring the interplay of these two determinants, this study sheds light on the unique considerations that companies must consider when advertising hedonic and utilitarian products online. Moreover, including regulatory focus as a moderator, reflecting individual differences could provide valuable insights in consumer decision-making in product advertising. Finally, these results will provide valuable insights into the underlying psychological mechanisms that drive consumer behavior in an online context and these insights could advance marketers and companies in optimizing their marketing and message strategies.

1.7. Remainder of the thesis

The paper is structured as follows. The following section delves into the existing body of literature related to message framing, product types, willingness to buy, and regulatory focus. Definitions for these concepts are provided and existing theory is briefly discussed. Empirical findings from existing literature are discussed, hypotheses are subsequently drawn from these insights and a conceptual model is created. The third chapter outlines the research methodologies to be employed in this study (e.g., methods for sample selection, data collection, instrument selection, and data analysis). Next, chapter 4 reports any significant findings and striking observations. Chapter 5 provides a comprehensive discussion in which the results and implications of the study are reviewed. Additionally, after a concluding paragraph in which the focal points of the research are summarized, the paper ends with limitations and recommendations for future research.

2. THEORETICAL FRAMEWORK

2.1. Message framing: goal framing

Message framing, first identified by sociologist Goffman in 1974 (Ardèvol-Abreu, 2015) and later examined by Tversky & Kahneman (1981) as the "*framing effect*", refers to the concept that presenting the same information in different ways could lead to different responses. It is believed that an effective message should be formulated in such a way that it improves information processing and maximizes its influence on the reader's perception of the issue (Petty & Wegener, 1998, as cited in Pope et al., 2018). Several frames have emerged and received much attention in literature; the most well-known is valence framing. Valence framing entails messages that are framed in terms of gains, e.g., beneficial outcomes, and losses, e.g., negative outcomes (McDonald et al., 2021). Despite extensive exploration, consensus on the efficacy of positive or negative framing remains elusive. Levin et al. (1998) identified three valence frames, including goal framing, which emphasizes that consumers will be more responsive to messages that are aligned with their own goals (Lindenberg, 2022). Goal framing is argued to affect the persuasiveness of communication (Levin et al., 1998).

2.1.1. Intrinsic and extrinsic goal framing

Derived from Self-Determination Theory, goal framing can be categorized into intrinsic and extrinsic types (Lee & Pounders, 2019). Self-Determination Theory is concerned with the study of human motivation and aims to provide explanations of the origins and outcomes of human actions (Adams et al., 2017). It can be regarded as a motivational theory that deals with intrinsic and extrinsic attitudes (Deci & Ryan, 2020 as cited in Adams et al., 2017. Research suggests that intrinsic and extrinsic motivations are important elements in framing messages (Pelletier and Sharp, 2008). The concept of intrinsic goal framing emphasizes the inherent benefits associated with an action, concentrating on meeting the fundamental requirements of autonomy, skill, and interpersonal connection (Deci & Ryan, 2000). Conversely, extrinsic goal framing highlights the focus on achieving external rewards including physical appeal, monetary achievements, power, and social perception (Vansteenkiste et al., 2005). This was illustrated by using health and personal growth as examples of intrinsic motives and financial incentives, fame, and appearances as examples of extrinsic motives. Sheldon & Kasser (1995) found intrinsic goals to be associated with autonomous motives, driven by personal choice and inner value, and extrinsic goals with controlled motives, driven by external factors and pressure. A recent study demonstrated the focus on inner values of intrinsic goal framing by "*you can make the world a better place by recycling"* and highlighted the financial benefits of extrinsic goal framing by "*You can save money by recycling*" (Lee & Pounders, 2019, p.11). Following Vansteenkiste et al. (2009), many studies have shown that intrinsic goal framing has resulted in more favorable goal-related outcomes, such as psychical health and relational functioning (p.157). Nonetheless, it is essential to take into consideration that these results might be influenced by contextual factors and consumer characteristics (Bunčić et al., 2021).

2.1.2. Message framing alignment with online advertisement

In this digital area, with the rise of social media and e-commerce, creating persuasive online messages is crucial. E-commerce offers extensive product choices and comparisons (Chen & Li, 2009), making message framing's role in customer attraction more important than ever. It has become evident that the framing of messages holds a significant power (Kidd et al., 2019; Tiffany et al., 2020). Various widely used framing techniques, such as Cialdini's scarcity appeal "*only a few items left in stock*" (Cialdini, 2001), or valence frames such as "*save x amount of money*" are used in online shopping. As mentioned by Lee & Pounders (2019), intrinsic and extrinsic goal framing has not received an adequate amount of attention in the behavioral and advertising field. This lack of focus makes it challenging to provide clear insights about goal framing in online advertisements. Nevertheless, in their study, they found a match between intrinsic goal framing and independent self-construal as moderator leading to greater attraction to the advertisement and an increased purchase intention (Lee & Pounders, 2019).

2.2. Willingness to buy

Willingness to buy is a terminology used to describe a consumer's readiness or inclination to purchase a product or service. In addition, it is often used to predict consumer behavior and evaluate the effectiveness of advertisements (Lee & Pounders, 2019). With the growing integration of online shopping into our daily lives, extensive research has focused on the determinants that drive consumers' willingness to purchase products (Chen & Li, 2009; Britwum & Yiannaka, 2019). For example, evidence was found that factors like perceived reputation, perceived risk, and ease of use appear to positively associate with consumer's willingness to buy in e-commerce (Chen & Li, 2009). Conversely, a negative relationship was found between a consumer's skepticism toward product advertising and purchase intentions (Chang & Cheng, 2015). According to Ajzen & Fishbein (as cited in Chen & Li, 2009), a direct association exists between willingness to buy and a consumer's purchase decision. Therefore, analyzing willingness to buy as an independent variable could provide valuable insights into whether specific strategies increase a customer's inclination to purchase a product or service.

2.3. Message framing and willingness to buy

Message framing is argued to be an important communication strategy in persuasion (Tiffany et al., 2020). Significant effects of perceived product value on purchase intention have been observed, with message framing partially mediating this relationship (Tiffany et al., 2020). In other words, message framing may positively impact the perceived value of a product which in turn may also positively impact one's purchase intention. As mentioned before, the literature lacks consensus on the most effective valence frame for persuasive purposes. Research that involved intrinsic and extrinsic cues in a product advertisement of ready-to-eat salads found that both techniques significantly increased purchase intentions (Chronpracha et al., 2020). Other research demonstrated that intrinsic goal framing,

compared to extrinsic goal framing, resulted in significantly higher purchase intention when the participant's independent self-construal (e.g., highlighting the term "*yourself*" in ads) was more accessible (Lee & Pounders, 2019). Moreover, a recent study on goal framing and customer intentions on purchasing gourmet meal kits showed that intrinsic goal framing increases purchase intentions (Leung et al., 2022). Hence, as aforementioned by Vansteenkiste et al., (2008), the majority of research shows similar observations that intrinsic goal framing, relative to extrinsic goal framing, generates more favorable results. Although there is scarce evidence of the effects of intrinsic and extrinsic goal framing in the context of marketing persuasion, many previously performed studies have demonstrated that intrinsic goal framing results in more desirable outcomes (Vansteenkiste et al., 2008). Hence, it is argued that intrinsic goal framing is more persuasive, compared to extrinsic goal framing (Pope & Pelletier., 2021). It may therefore be plausible to suggest that intrinsic goal framing, compared to extrinsic goal framing, has a stronger positive relation on the willingness to buy. Therefore, the following hypothesis is formulated:

> ***H1****: Willingness to buy is higher when intrinsic goal framing is displayed compared to extrinsic goal framing.*

2.4. Product type: utilitarian versus hedonic products

Research suggests that the nature of a product is likely to influence consumers' perceptions (Langan et al., 2017). As for the types of products, two stand out, both of which also contradict each other. Products that are perceived as a necessity, or that provide and fulfill instrumental, functional, or practical utility are considered as utilitarian products (Lu et al., 2016). Besides, it has been argued that consumers are inclined to assess utilitarian products on their reliability, price, and effectiveness in meeting their needs as well (Solomon, 1994). Examples of utilitarian products are furniture, shampoo, and cookware. Controversially, hedonic products are perceived as creating pleasure, enjoyment, sensation, and creating experience (Lu et al., 2016). They are acquired with the intent of pursuing social status or expressing one's identity (Alba & Willems, 2013). These include luxury items, such as designer sunglasses, perfume, entertainment products, or experiences such as holidays. Hedonic products, as opposed to utilitarian products and their practical benefits, are evaluated rather on the emotional attractiveness and perceived value they evoke (Hirschman & Holbrook, 1982). Nagle et al. (2016) argue that it should be noted that for utilitarian and hedonic products a customer's perception may depend on the product category. Hence, consumers do not evaluate all products in the same way. They explain this using an example of buying furniture and shampoo. Choosing and buying furniture, on the one hand, may be based to a greater extent on its durability and functionality, while buying shampoo, on the other hand, may be based more on how effective the shampoo is at cleaning and caring for their hair (p. 54).

2.5. Product type and willingness to buy

The relationship between product type and willingness to buy is complex as to whether a person is more likely to buy a utilitarian or hedonic product depends on many factors. Research showed that the value perception of a product has a significant effect on the purchase intention (Tiffany et al., 2020). As in the context of this study products are categorized as being utilitarian or hedonic in nature. This implies that utilitarian products are expected to be bought when there is a practical need that needs to be fulfilled, and the other way around, hedonic products are likely to be bought when consumers want to pamper themselves, want to treat themselves to a pleasurable experience (Voss et al., 2003) or for status consumption (O'Cass & McEwen, 2006). It is argued that the buying process of utilitarian products is primarily driven by rational buying motives, while conversely hedonic products are primarily driven by emotional motives (Sloot et al., 2005). A study by Okada (2005) found that consumers tend to have a higher preference for hedonic products compared to utilitarian products when each is presented separately. However, in the case of presenting these products jointly, consumers choose the utilitarian over the hedonic product. Moreover, several researchers claim that it is more challenging to justify hedonic purchases than utilitarian purchases, causing consumers to be more reserved towards hedonic products (Kivetz & Zheng, 2017; Jing et al., 2019). In addition, Sloot et al. (2005) argue that the absence of a utilitarian product, such as household products, affects household functioning and therefore decreases consumers' propensity to delay a purchase. Keeping in mind that there are many factors involved in consumer decision-making for utilitarian and hedonic products, but reasoning from the aforementioned perspective, the following hypothesis is formulated:

> ***H2****: Willingness to buy is higher when utilitarian product is displayed compared to a hedonic product.*

2.6. The relation between product type and goal framing

Several studies have shown that intrinsic goal framing, relative to extrinsic goal framing, generates more positive outcomes (Vansteenkiste et al., 2008). Other research found that intrinsic goal framing led to higher autonomous motivation (Vansteenkiste et al., 2006), which is considered a human's basic need (Utvaer, 2014). In addition, in a study on goal framing (intrinsic versus extrinsic) and product type it was found that message persuasiveness and purchase intention were increased by applying an intrinsic goal framing on a utilitarian product (Lee & Pounders, 2019). Hence, it is plausible to suggest that applying an intrinsic goal frame to a utilitarian product produces a more positive outcome than an extrinsic goal frame. Based on this, the following hypothesis has been established:

> ***H3****: Willingness to buy utilitarian products is higher when intrinsic goal framing is displayed compared to extrinsic goal framing.*

By contrast, research shows opposite findings when it comes to hedonic product types. As an example, research by Truong (2010) on the consumption of luxury goods (e.g., hedonic) investigated the relation between conspicuous consumption, which they refer to as the proposition of the consumption of highly conspicuous goods to gain social status and show wealth by rich people, and personal aspirations which they categorize as intrinsic or extrinsic. It was found that consumers driven by extrinsic goals were especially interested in conspicuous behavior when buying luxury brands. Intrinsic aspirations even showed a negative relation towards conspicuous consumption behavior (Truong, 2010). In other words, it can be inferred from this study that respondents were triggered by extrinsic values to buy hedonic products. This could be explained by recent research by Yang et al. (2022) that argued that hedonic (versus utilitarian) brands are more prone to communicate signals associated with extrinsic rewards, such as social identity and value expression. Moreover, the study by Shao et al. (2019) found that respondents who were extrinsically motivated showed a greater preference for luxury products, respectively, compared to intrinsically motivated respondents. This reinforces previously conducted research that found a direct positive relationship between individuals' extrinsic motivation and luxury consumption (Han et al., 2010). In other words, these researchers suggest that hedonic product types appeal more to one's extrinsic motivation. However, researchers argue that the relationship between product type and willingness to buy is complex since it depends on many factors, such as emotions, perceived value, but also message framing used by marketers (Holbrook & Hirschman, 1982; Voss et al., 2003; Lee et al., 2017). Based on the preceding arguments, it could be argued that extrinsic goal framing could evoke or stimulate motivation by consumers to buy a hedonic product. This will be translated into the following hypothesis:

> ***H4:*** *Willingness to buy hedonic products is higher when extrinsic goal framing is displayed compared to intrinsic goal framing.*

2.7. Regulatory focus

The concept of regulatory focus was introduced by Higgins (1997) and has received a lot of attention within the literature. Regulatory focus is concerned with an individual's information processing and underlying motivation and proposes that individuals have two distinct motivational orientations of self-regulatory focuses, which are prevention focus, and promotion focus (Higgins, 1997). A prevention focused attitude aims to avoid negative outcomes, such as pain and loss, while promotion focused attitudes aim at achieving positive outcomes, such as pleasure or excitement. The Regulatory Focus Theory posits that individual decision-making and shaping an approach toward goals is influenced by these two types of self-regulation. In addition, Werth & Foerster (2006) argue that advertisements matching a consumer's regulatory focus, produce more positive evaluations of the product than advertisements that do not correspond to a consumers' regulatory focus. Furthermore, it is shown that regulatory focus has significant implications in terms of consumer behavior, especially concerning the

independent variables in this research. One explanation for this is thatthank purchases and consumption of products with utilitarian and hedonic qualities may influence consumers' evaluation and use, as suggested by Higgins (2005) and Roy & Ng (2012. Additionally, the framing of intrinsic and extrinsic goals is noteworthy, as Vaughn (2016) identified a significant link between self-determination theory, which encompasses intrinsic and extrinsic attitudes, and regulatory focus.

2.8. The moderating role of regulatory focus

Studies suggest that individual differences may play a role in the effectiveness of a persuasive message as those can lead to different responses from recipients on message frames (Rothman & Updegraff, 2010; Bertolotti & Catellani, 2014). Within the literature, this is also referred to as dispositional factors, which implies that an individual's behavior and thoughts can be influenced by internal characteristics, traits, or attributes. Putting this in the context of message framing, Rothman & Updegraff (2010) argue that dispositional factors are likely to shape an individual's responses towards framed messages. This was later confirmed by a study conducted by Covey and colleagues (2014) who conducted a literature review on various dispositional factors that appeared to moderate the persuasiveness of message framing, as highlighted by other studies. They found that regulatory focus can be considered to be one of the more reliable moderators compared to other dispositional factors analyzed in their research.

2.8.1. Regulatory focus on the relationship between goal framing and willingness to buy

It is argued that regulatory focus has an impact on the desired outcomes individuals choose to pursue (Higgins et al., 2020). Individuals exhibiting a promotion focus are found to direct their attention towards their ideal self, aligning their actions with personal ideals and aspirations, which is driven by the promotion system that is grounded in the pursuit of the need for growth and nurturance (Haws et al., 2010; Higgins et al., 2020). Intrinsic goal framing, which appeals to one's internal values, such as personal growth and well-being, emphasizes the inherent value and personal benefits in an advertisement (Deci & Ryan, 2000). Consequently, promotion focused individuals may therefore find intrinsic goals especially attractive and, as a result, should exhibit a stronger willingness to buy when products are framed this way. In contrast, the prevention system is grounded in the pursuit of safety and security needs, leading prevention focused individuals to prioritize the 'ought to be' self (Higgins et al., 2020). This orientation drives them to satisfy others' expectations and fulfilling relevant obligations (Wang et al., 2021). Whereas intrinsic goal framing was aimed at one's inherent values, extrinsic goal framing, on the other hand, focuses on external outcomes, such as external validation and recognition (e.g., wealth, fame, image) (Vansteenkiste et al., 2010). As a consequence, individuals with a prevention focused orientation should demonstrate a heightened willingness to buy products when presented with frames emphasizing extrinsic goals. Following this reasoning, the following hypotheses are established:

H5: *When intrinsic goal framing is displayed, promotion (versus prevention) focused individuals are expected to express a higher willingness to buy.*

H6: *When extrinsic goal framing is displayed, prevention (versus promotion) focused individuals are expected to express a higher willingness to buy.*

2.8.2. Regulatory focus on the relationship between product types and willingness to buy

As outlined by Higgins (2020), the promotion system leans towards decision-making guided by feelings. In addition, promotion focused individuals are directed by seeking gains and are focused on achieving personal growth, pleasure, excitement, and advancement (Higgins, 1997). Consequently, their inclination is towards products that embody these qualities. Hedonic products, that are perceived as creating pleasure, sensation, and experience, should therefore induce a higher willingness to buy for promotion focused individuals. In contrast, the prevention system favors decision-making based on reasons and is guided by the focus on avoiding losses (Higgins, 2020). Individuals with a prevention focus would thus choose reliable products that uphold safety and act as a defense against threats (Higgins, 2020). Utilitarian products, as opposed to hedonic products, are perceived as a necessity rather than recreation (Roy & Ng, 2011). In addition, utilitarian products, aimed at fulfilling basic needs and argued to be functional and practical in nature (Voss et al., 2003), should therefore generate feelings of confidence and security for prevention focused individuals. This should result in the assumption that prevention focused individuals should express a greater willingness to buy compared to their promotion focused counterparts. Subsequently, the following hypotheses are stated as follows:

H7: *The impact of hedonic products on willingness to buy will be stronger when regulatory focus is promotion focused (versus prevention).*

H8*: The impact of utilitarian products on willingness to buy will be stronger when regulatory focus is prevention focused (versus promotion).*

2.8.3. Regulatory focus and the interplay of product types and goal framing on willingness to buy

In addition to the previously stated moderation hypotheses, it would be particularly intriguing to explore whether regulatory focus alters the interplay between product types and goal framing on the willingness to buy. As previously discussed, it is expected that individuals with a prevention focus should exhibit a greater willingness to buy utilitarian products and respond more positively to extrinsically framed advertisements. Conversely, it was hypothesized that promotion focused individuals are inclined to show a greater willingness to buy hedonic products, as well as for intrinsically framed advertisements. Expanding on this, it may be likely that the hypotheses for prevention and promotion focused individuals also hold for the interplay of the product type with the goal frame. While this seems

plausible, it could be that the interplay of product type and frame type might result in varying outcomes for these two groups of regulatory focus. Hence, rather than proposing specific hypotheses, a broader overarching hypothesis is proposed, suggesting that regulatory focus moderates the aforementioned interplay between product type and goal frame type on willingness to buy. Should a significant interaction be discovered between this interplay on willingness to buy, further details will be elaborated upon in the results section. Subsequently, the following hypothesis arises:

> ***H9:*** *Regulatory focus (prevention versus promotion) moderates the relationship between the interplay of product type and goal framing on willingness to buy.*

2.9. Conceptual framework

The above-proposed hypotheses can be visualized in the conceptual model below. Additionally, table 1 provides an overview of the hypothesized relationships among the variables in this research.

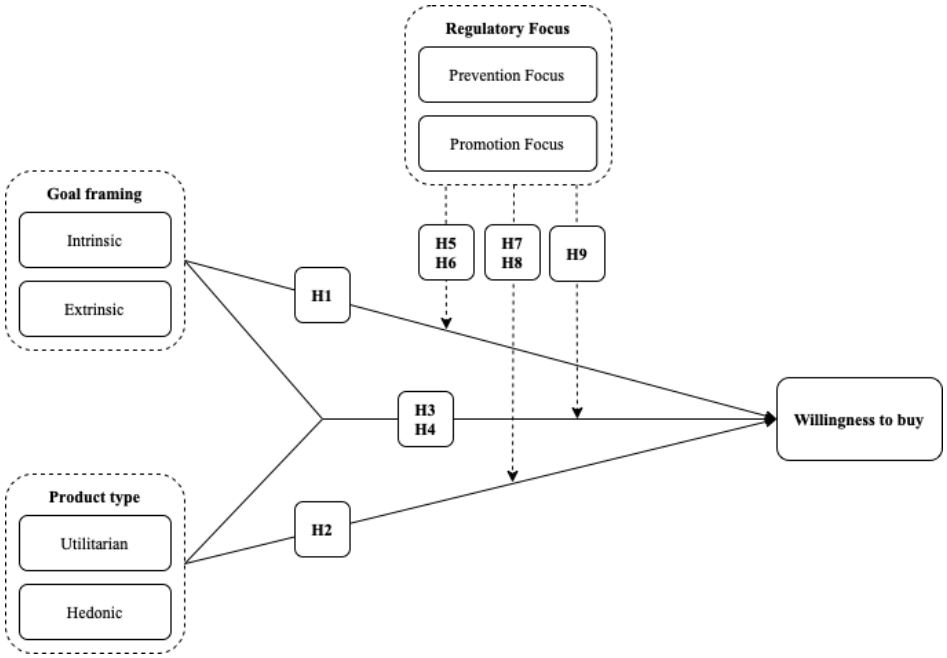

Fig. 1 – Proposed conceptual model

Table 1 – Overview hypotheses

	Hypotheses
H1	Willingness to buy is higher when intrinsic goal framing is displayed compared to extrinsic goal framing.
H2	Willingness to buy is higher when utilitarian product is displayed compared to a hedonic product.
H3	Willingness to buy utilitarian products is higher when intrinsic goal framing is displayed compared to extrinsic goal framing.
H4	Willingness to buy hedonic products is higher when extrinsic goal framing is displayed compared to intrinsic goal framing.
H5	When intrinsic goal framing is displayed, promotion (versus prevention) focused individuals are expected to express a higher willingness to buy.
H6	When extrinsic goal framing is displayed, prevention (versus promotion) focused individuals are expected to express a higher willingness to buy.
H7	The impact of hedonic products on willingness to buy will be stronger when regulatory focus is promotion focused (versus prevention).
H8	The impact of utilitarian products on willingness to buy will be stronger when regulatory focus is prevention focused (versus promotion).
H9	Regulatory focus (prevention versus promotion) moderates the relationship between the interplay of product type and goal framing on willingness to buy.

3. METHODOLOGY

3.1. Research design

This research was carried out based on a 3 (goal framing: intrinsic versus extrinsic versus no framing) x 2 (product type: hedonic versus utilitarian) within-subjects design. This implies that the same respondents test each condition of the variables in the experiment. Although perspectives vary on the best approach for a methodological design, numerous researchers have contended that within-subjects designs generally offer greater internal validity and statistical power (Labdin & Shaffer, 2009; Bysbaert, 2019; Egele et al., 2021). This stems from its ability to reduce noise in the data (Price et al., 2015). In other words, since the same participants are involved in all experimental conditions, individual differences and external influences affect all conditions equally, instead of only a subset of conditions (Birnbaum, 1999; Simkus, 2023). Here, individual differences and external factors refer to elements such as a person's mood or other situational variables. For instance, when a cheerful individual only completes a questionnaire under condition A and a less cheerful individual under condition B, the conditions are not equally influenced by these mood differences. A within-subjects design ensures that each participant's contextual factors are consistently present across all conditions, leading to more balanced and reliable comparisons.

3.2. Method

A quantitative data method was applied for several reasons. First, quantitative data methods allow for larger samples. This enables more reliable results that can be generalized to a broader population (Steckler et al., 1992). In other words, the insights derived from consumers' responses to different advertisements, specifically concerning different product types and goal framing strategies and their combined effects, apply to a broader population when applying a quantitative research method. In addition, addressing the research question requires the division of the question into testable hypotheses. Quantitative methods are particularly suited for this, especially as quantitative methods have the ability to identify and analyze potential patterns between the determinants of goal framing and product types on willingness to buy in this research. Finally, as is highlighted by Sukamolson (2007), quantitative data is known to yield results that are more reliable and accurate.

The quantitative research method in this study was based on online surveys using Qualtrics. These were distributed to measure the level of willingness to buy based on intrinsic and extrinsic goal framing and on hedonic and utilitarian products. To do so, several advertisements were created for hedonic and utilitarian products. To extract proper outcomes from the experiment, it was necessary to test which examples could be used for the variables in the experiment, this was tested through a preliminary test.

3.3. Pre-testing

Performing a preliminary test was required for product types to detect and rectify any potential issues with the questionnaire before its distribution to the target audience (Reynolds et al., 1993). In the context of this research, pre-testing validates whether examples of hedonic and utilitarian products that will be presented evoke the same meaning from respondents.

3.3.1. Product selection

As previously mentioned, a large body of research has mainly focused on product categories such as food, household products, and electronic products when exploring utilitarian or hedonic attributes in contexts other contexts than intrinsic or extrinsic goal framing. Therefore, selecting a different product category that has been less explored offers significant added value. Personal care products are less frequently mentioned in the message framing literature, adding this category would therefore enrich the current literature. Seven personal care products, classified as either utilitarian or hedonic, were selected from research that categorizes these products under these specific types. These products were chosen for their universal appeal, that is, they are suitable for consumers of all genders. These products are summarized in Table 2 and were used in the pre-test. How these products were presented in conjunction with the scale questions can be viewed in Appendix A (see Table 1, Fig. 3 and 4).

Table 2 – Utilitarian and hedonic products within the personal care category

Utilitarian	Reference	Hedonic	Reference
Hair removers (razors)	*Cervellon & Carey (2014)*	Perfume	*Ryu et al. (2006)*
Toothpaste	*Drolet et al. (2007)*	Bath bombs	*Strumpman (2016)*
Soap bar	*Lim & Ang (2008)*	Body oil	*Cervellon & Carey (2014)*
Deodorant	*Lim & Ang (2008)*	Toner	*(Barker (1998))*
Sunscreen	*Drolet et al. (2007)*	Scented body lotion	*Grewal et al. (2011)*
Facial cleanser	*Lu et al. (2016)*	Perfumed shower gel	*Barker (1998)*
(Hair styling gel/spray)	*Danesi (2018)*	Facial mask	*Barker (1998)*

3.3.2. Product type scale

Respondents were presented with the utilitarian and hedonic products from Table 2 above. They were asked to indicate the extent to which specific characteristics of hedonic products apply to the hedonic products and likewise to assess the extent to which utilitarian characteristics apply to the utilitarian products. This was carried out using the hedonic/utilitarian (HED/UT) scale developed by Voss et al. (2003). This validated scale measures the hedonic and utilitarian dimensions of products and exists of five items representing characteristics of utilitarian products and five items representing characteristics of hedonic products. Respondents were asked to rate utilitarian and hedonic products on a 7-point Likert scale according to the items that are summarized in Table 3 below, where utilitarian products are evaluated by the adjectives that are considered utilitarian product characteristics (left column). Similarly, hedonic products are judged by the adjectives considered hedonic product characteristics

(right column) (Voss et al., 2003). Based on the Likert scale with 7 dimensions, when an adjective for the utilitarian (hedonic) dimensions has a score higher than 4 (the neutral value) it is assumable that the product is considered utilitarian (hedonic) on that specific dimension.

Table 3 – Items for measuring product type (Voss et al., 2003)

Utilitarian	Hedonic
Ineffective/effective	Not fun/fun
Unhelpful/helpful	Dull/exciting
Not functional/functional	Not delightful/delightful
Unnecessary/necessary	Not thrilling/thrilling
Impractical/practical	Enjoyable/unenjoyable

3.4. Results pre-test

The preliminary survey can be viewed in Appendix A. For pre-testing a sample size of at least 30 participants is found to be more reliable as it achieves a reasonably high power to detect problems compared to lower sample sizes (Perneger et al., 2015). Ultimately a total of 36 participants took part in the preliminary test. 3 responses were incomplete, thus the final sample consisted of 33 respondents. This sample is divided into 15 males and 18 females and is thus quite equally distributed. The sample largely consists of Dutch individuals (n=26) and most participants fall into the age category of 18-24 years (n=27). Two-thirds indicated to be a student (n=22). After data collection, the reliability of the HED/UT scale was measured using Cronbach's alpha for utilitarian and hedonic dimensions (see Appendix B). A Cronbach's Alpha of at least 0.70 is widely considered desirable (Taber, 2018). Both utilitarian and hedonic dimensions scored above 0.70, namely $\alpha = 0.902$ and $\alpha = 0.932$, respectively. Hence, Cronbach's alpha reflects that the HED/UT scale from Voss et al. (2003) is a reliable measurement for this pre-test.

3.4.1. Utilitarian products based on means

A total mean score of the dimensions was calculated for each product. See Figures 3-8 (Appendix B) for an overview of the means for utilitarian products. Findings suggest that all utilitarian products were clearly seen as utilitarian as all utilitarian products scored higher than 4 on each dimension. See Table 6 below for the products scoring the highest on the utilitarian dimensions (toothpaste, deodorant, sunscreen). These products were also most often indicated to be used regularly by participants. Taking the mean of all utilitarian dimensions together shows that toothpaste scores highest among all utilitarian products (M = 6.097).

Table 6 – Overview mean scores of utilitarian products per utilitarian dimension

#	Product	Statistic	Effectiveness	Helpfulness	Functionality	Necessity	Practicality	Total
1	**Toothpaste**	Mean	5.9697	6.0606	6.1818	6.4545	5.8182	6.0970
		St.dev	1.51007	1.39058	1.35680	1.09233	1.44600	1.10467
2	**Deodorant**	Mean	5.9697	6.0000	5.7576	5.7576	5.9697	5.8909
		St.dev	1.28659	1.39194	1.39262	1.45839	1.26206	1.09441
3	**Sunscreen**	Mean	6.1212	6.3030	5.5152	6.0000	4.7576	5.7394
		St.dev	1.21854	.98377	1.67931	1.25000	1.75054	1.06944

3.4.2. Hedonic products based on means

Findings regarding hedonic products were less obvious compared to utilitarian products as only 4 (out of 7) products obtained a score higher than 4 (see Appendix B, Figures 9-14). This implies that respondents did not inherently perceive body oil, toner, and facial masks as hedonic. As is the case with utilitarian products, products with the highest scores on the hedonic dimensions (perfume, perfumed shower gel, bath bomb), except for bath bombs, were also most often indicated to be used regularly. For bath bombs, nobody indicated to using them regularly. As can be seen in Table 7 below, perfume obtained the highest mean scores for all hedonic dimensions compared to bath bombs and perfumed shower gel. Moreover, perfume stands out with a mean score of 5.1091 for all hedonic dimensions together.

Table 7 – Overview mean scores of hedonic products per hedonic dimension.

#	Product	Statistic	Fun	Excitement	Delightfulness	Thrillness	Enjoyment	Total
1	**Perfume**	Mean	4.7879	5.1515	5.4848	4.0000	6.1212	5.1091
		St.dev	1.67253	1.27772	1.25303	1.52069	.96039	0.97094
2	**Bath bombs**	Mean	4.5455	4.3636	4.0303	3.5152	4.4848	4.1879
		St.dev	1.95402	1.63589	1.38033	1.48158	1.66060	1.43086
3	**Perfumed**	Mean	4.1212	3.9697	4.6061	3.1515	5.2727	4.2242
	showergel	St.dev	1.61550	1.57092	1.51944	1.39466	1.44206	1.24575

3.4.3. One sample t-test

In addition, a one-sample t-test was performed to analyze whether the means were significantly different from the mean value, which for this research is 4 (see Fig. 15, Appendix B). For utilitarian products a significant score was visible for toothpaste ($t = 10.905$, $p < 0.001$), deodorant ($t = 9.925$, $p < 0.001$), and sunscreen ($t = 9.343$, $p < 0.001$). For hedonic products, perfume stands out with the most and greatest significance on the dimensions ($t = 6.562$, $p < 0.001$). Bath bombs ($t = 0.754$, $p = 0.456$) and perfumed shower gel ($t = 1.034$, $p = 0.154$) did not score a significant p-value to draw any conclusions.

3.5. Main survey

The findings of the pre-test revealed that toothpaste is perceived as the most utilitarian and perfume as the most hedonic. Therefore, the remainder of this study was carried out using these products. Advertisements were created by incorporating product images of toothpaste and perfume alongside intrinsically and extrinsically goal framed messages. The survey was divided into several sections. First, respondents were asked to answer socio-demographic questions, followed by several control questions. Subsequently, respondents were presented with the advertisements, three for each selected product. One with an intrinsic goal frame, one with an extrinsic goal frame, and an advertisement containing no frame. Respondents were requested to indicate their willingness to buy the product featured in the advertisement. Following this, respondents were presented with a scale measuring Regulatory Focus and tasked with filling out its 10 questionnaire items. Finally, Voss et al.'s (2003) product dimensions measurement from the pre-test was applied as an additional manipulation check. Respondents were asked to respond according to a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree). Survey distribution was accomplished through the utilization of distribution channels, such as social media, email, survey swap, and related platforms. Subsequently, the data was cleaned and imported into SPSS Statistics (version 28). In the following paragraphs, further details will be provided on the measurements of the variables in this study.

3.6. Socio-demographic and control variables

In order to account for possible variables that could influence the outcome of the research, several demographic control variables were considered using measurements from existing literature. These were nationality, age (Stantcheva, 2022), gender, highest achieved level of education (Sánchez-Bravo et al., 2020), current employment status (Marques et al., 2015), marital status (Hughes, 2022) and level of income (Pitas & Zou, 2023). In addition to the socio-demographic questions, several manipulative control questions were asked to the respondents. These are "*Do you use personal care products?*", "*Do you buy personal care products?*", "*Do you buy personal care products for others (e.g., gifts, family members)?",* "*Do you think it is important to take care of yourself?*", "*Are you the primary decision-maker when it comes to purchasing personal care products for yourself or your household?*". Finally, respondents were asked to indicate which displayed personal care products they regularly use.

3.7. Goal framing

For creating the advertisement messages, intrinsic and extrinsic goal frames employed in prior experiments were utilized. Since toothpaste was selected from the pre-test to be used as the utilitarian product in this study, the goal frames designed for toothpaste (intrinsic: "*healthier gums, stronger teeth for you*"; extrinsic: "*whiter, brighter smile for you*") in the study by Lee & Pounders (2019) was used. For perfume, the intrinsic goal frame from Lee & Pounders (2019) "*feel happy about how you look and*

feel" was slightly adjusted into "*feel happy about how you smell and feel*". For extrinsic goal framing, previous literature has emphasized the verbs *attractive* and *impress others* (Vansteenkiste et al., 2005; Lee & Pounders, 2019). Building upon this and considering the feature of perfume, the message "*look attractive and impress others*" has been adapted to "*smell attractive and impress others*". In order to measure the effect of intrinsic and extrinsic goal framing on the willingness to buy, advertisements without any specific message were also created. This served as a form of manipulation to determine the effectiveness of intrinsic and extrinsic goal framing. Table 8 provides an overview of the advertisements that were designed for employment in the main survey.

3.7.1. Manipulation goal framing

To evaluate the success of the goal framing manipulation, and to check whether respondents were paying attention to the survey, participants were asked about the focus of the advertisements. For toothpaste, participants were asked to indicate the focus of the advertisetment by dragging a slider, where 1 represents "*healthier teeth/health*" and 7 represents "*brighter smile/physical appearance*". Likewise, for perfume, participants are asked to do the same, here 1 represents "*to feel happy*" and 7 represents "*to impress others*". Hence, a desirable answer for the extrinsic framed advertisement for the perfume '*smell attractive and impress others"* would be 7 "*to impress others*". Likewise, the focus for the intrinsic framed advertisement for perfume "*feel happy about how you smell and feel*" would be 1 "*to feel happy*". This way, participants that fail to pay attention to the questionnaire will be exposed and therefore removed. This manipulation check was derived from Lee & Pounders (2019). For perfume, the original check from Lee & Pounders (2019) that was focused on losing weight: " *1= to be healthy for yourself; 7= to impress others*" was adjusted accordingly to the context of this research. Participants that give more than one undesired answer (e.g., numbers that deviate from the desired 1 (5,6,7) or 7 (1,2,3)) will be deleted from the sample.

3.8. Measuring willingness to buy

According to Ghali-Zinoubi (2021), reliable items for measuring willingness to buy can be derived from the studies of Dodds et al. (1991) and Sweeney et al. (1999). These items are: "*I would consider buying this product at this store*", "*I will purchase this product at this store*", and "*There is a strong likelihood that I will buy this product at this store*". For this study, these items were used, albeit modified slightly by leaving out "*at this store*". As suggested by Sweeney et al. (1999), these items were measured using a 7-point Likert scale. Being anchored with 1 strongly disagree and 7 strongly agree.

Table 8 – Overview of advertisements for the survey

Utilitarian product: Toothpaste	Hedonic product: Perfume
	
Advertisement 1 - No frame	Advertisement 4 - No frame
	
Advertisement 2 – Intrinsic goal framing	Advertisement 5 – Intrinsic goal framing
	
Advertisement 3 – Extrinsic goal framing	Advertisement 6 - Extrinsic goal framing

3.9. Measuring regulatory focus

To measure whether respondents are more guided by a prevention focus or promotion focus, an existing scale was applied to measure individuals' self-regulation tendencies. A study by Haws et al. (2010) reviewed and assessed five measures of regulatory orientation (e.g., RFQ (Higgins et al., 2001); BIS/BAS scales (Carver & White, 1994); Selves Questionnaire (Brockner et al., 2002); Lockwood Scale (Lockwood & Kunda, 2004) as cited by Haws et al., 2010). They tested these scales for theoretical coverage, internal consistency, homogeneity, and stability and found that there is an inconsistency between the measurements on these criteria items (Haws et al., 2010). As a result, they offer an alternative composite measurement scale constructed from the RFQ, BIS/BAS, and Lockwood scales. This revised scale is thus constructed by items from pre-existing scales that measure regulatory focus. This scale is displayed in Table 1 (Appendix C). This scale will also be anchored using a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree).

3.9.1. Regulatory focus as a dichotomous variable

In agreement with de Vries et al. (2016), this research takes the position that an individual can theoretically have both promotion and prevention focuses, but it is believed that individual behavior is mainly guided by the most dominant focus. In other words, even though a person can theoretically contain both focuses, it is assumed that one dominates. Therefore, in the context of this study, regulatory focus was computed into a binary variable after data collection. In line with existing research related to regulatory focus, this was done using a median split method (Lockwood et al., 2002; Cheng et al., 2021). The median was taken from the data and all values below the median were attributed to prevention focus and values at and above the median were attributed to promotion focus. Despite the treatment of regulatory focus as a dichotomous variable in this study, the regulatory focus score was also utilized in the analyses, providing a more detailed picture, and enhancing the credibility of the results.

3.10. Repeated measures factorial ANOVA

Geffen & Pitman (2019) argue that an appropriate quantitative method for examining how multiple variables interact with a single variable for the same person would be one with a repeated measures factorial design. Two important characteristics are defined for this method, namely (1) factoriality, which implies that there are at least two independent variables each containing two or more levels (Geffen & Pitman, 2019). In the context of this study, goal framing and product type are the two independent variables, each contain three (no frame, intrinsic, extrinsic) and two (utilitarian, hedonic) levels, respectively. The other feature is repeated measures, this means that each participant undergoes exposure to all combinations, involving every independent variable across all levels (Cohen, 2008). Repeated measures are obtained when the same variable is measured repeatedly (Park et al., 2009). Given that all participants were subjected to advertisements containing all combinations of goal framing

and product types, the research design also corresponds with this feature, implying that the design of this study is appropriate for this repeated measures factorial design.

3.11. Moderation with Hayes PROCESS analysis

A commonly used method for testing for moderation is a linear regression model. Specifically, a simple regression tests the impact of an independent variable X on a dependent variable Y. A moderator (W), also referred to as the interaction effect, is statistically tested through the interaction of X and W on Y (Hayes, 2018). Hayes (2012) created the so-called PROCESS model, which is a computational tool for SPSS that covers many of the analytical problems scientists, within the field of behavioral sciences, face in the area of mediation, moderation, and conditional process analyses. Hereby, he facilitates researchers with a statistic tool that may relieve researchers of complications in analyses. In addition, the PROCESS tool is able to relate factorial ANOVA to moderated multiple regression in the event of categorical independent variables as it has the ability to recognize dichotomous variables (product type: utilitarian, hedonic; framing: intrinsic, extrinsic) (Hayes, 2018). Since the hypotheses for the moderation effects are primarily based on whether and how regulatory focus moderates the relationship between intrinsic and extrinsic goal framing on willingness to buy, and because no framing functioned as a manipulation variable for the first hypotheses, no framing will not be considered in the moderation analysis. Figures 1 and 2 (Appendix C) illustrate the conceptual and statistical model for the moderation in this research, based on Hayes (2017). When the interaction X*W yields a significant outcome, there is a moderation effect present.

3.11.1. Within-subjects design

Since the design of this analysis is within-subjects, the dependent and independent variables are not stand-alone values, but attached (e.g., one value for WTB_utilitarian_intrinsic, WTB_utilitarian_extrinsic, WTB_hedonic_intrinsic, WTB_hedonic_extrinsic). Therefore, a separate file was created where all these variables were put under each other in a column called "*WTB*" (e.g., 249 values for WTB_utilitarian_intrinsic, followed by 249 values for WTB_utilitarian_extrinsic, etc.). Thus, a 249*4=996 row data file was created containing respondents' IDs from 1-249 for each within-subjects variable. This method enabled separation of the independent and dependent variables from each other into a stand-alone variable for willingness to buy, product type, and frame type. Additionally, two columns were created, one for product type and one for frame type. When an advertisement contained a utilitarian product, its value was set to 0, and when it contained a hedonic product, its value was set to 1. The same was done for framing type, intrinsic framing was set to 0, and extrinsic framing was set to 1. For example, WTB_utilitarian_intrinsic was translated into 0 for product type and 0 for frame type, the same was done for the other advertisements, this can be seen in Table 5 below. Doing this enables the creation of separate independent variables, which are needed to perform regression

analysis, especially to see how the moderator regulatory focus impacts the relationship between the independent variables and dependent variable.

Table 5 – Coding of the advertisements

WTB	Product type	Frame type
WTB_utilitarian_intrinsic	0	0
WTB_utilitarian_extrinsic	0	1
WTB_hedonic_intrinsic	1	0
WTB_hedonic_extrinsic	1	1

3.12. Sample

Within the literature, there is no consensus on how many participants are required for an appropriate sample size. A frequently used sample size formula, established by Yamane (as cited in Israel, 1992), assumes a confidence level of 95 percent and a P of 0.05 and is stated as follows: $n = N/1+N(e)^2$. Here n is sample size, N is population size and e refers to the level of precision. It assumes that population sizes larger than 100,000 people require a sample size of 400 individuals to meet the requirement of the confidence level and p-value. Following Cohen (as cited in VanVoorhis & Morgan, 2007), in the case of a research design for detecting differences, a sample size of 30 participants per variable should lead to a power of 80 percent given a medium to large effect size. In the context of this research, this implies 30 multiplied by 6 variables, namely 2 for product (utilitarian and hedonic), 3 for goal frame (intrinsic, extrinsic, no frame), and 1 for willingness to buy, resulting in a minimum required sample size of 180 participants.

3.12.1. Demographics

The main questionnaire can be viewed in Appendix D and ultimately engaged 294 respondents who fully completed the questionnaire. All demographics can be viewed in Figure 1-13 of Appendix E. Of these, 40 respondents were removed as they filled in more than one non-preferred response to the four control questions included in the survey (e.g., "*What is the focus of this advertisement?*"). This implied that these participants did not fully pay attention, which could lead to untruthful responses that may affect the results. Thereafter, the assumption of extreme outliers was tested on the dependent variable willingness to buy. Five cases appeared to have extreme outliers on the dependent variable and were removed from the sample. As a consequence, the final number of respondents for this study is 249. The sample is divided into 92 males and 155 females. It would have been more desirable if gender had been distributed more evenly. The sample is mainly covered by Dutch participants (n = 161), which is 64,7 percent of the sample, followed by Belgian (n = 23), American (n = 14), German (n = 9), and others (n = 42). Most participants fall into the 18-24 category (n=136) and 24-34 category (n = 57). Moreover, the sample appears to be composed of highly educated individuals, namely 138 with a bachelor's degree

and 69 with a graduate degree or higher. Furthermore, a large part of the respondents are students (n = 120) or are employed (n = 111). 244 participants indicated to use personal care products and 238 to buy them. In addition, 241 participants think it is important to take care of yourself, 6 were neutral and 2 indicated that it is not important. Finally, all but 2 respondents reported using at least one of the personal care products (toothpaste = 47; perfume = 4; both toothpaste and perfume = 196; none = 2).

3.13. Reliability analysis

Reliability analyses are performed for the scales used in the survey and can be viewed in Figures 16-25 (Appendix E). Achieving high reliability is important for the validity and trustworthiness of a scale's measurements. Cronbach's Alpha measures the internal consistency of the items of the scales, indicating whether the scales are suitable for their purpose (Taber, 2018). Therefore, Cronbach's alpha of 0.7 is a minimum requirement for reliability analysis to assume a validated scale (Taber, 2018). First, the HED/UT scale which was also used in the pre-test to verify that participants viewed toothpaste as a utilitarian product and perfume as a hedonic product, was tested. The Cronbach's alpha reflected that both hedonic items ($\alpha = 0.939$) and utilitarian items ($\alpha = 0.886$) within the scale fit for this research with this sample. There were six advertisements in total each measuring the willingness to buy on three items. These 18 items (6*3) obtained a high Cronbach's alpha ($\alpha = 0.928$). The computed variables, thus the total willingness to buy per advertisement also scored a high Cronbach's alpha ($\alpha = 0.940$).

The regulatory focus scale in this research consists of ten items and is divided into two subscales that each contains five items to measure promotion and prevention focus (Haws, 2010). The Cronbach's alpha for the promotion focus items ($\alpha = 0.496$) and prevention focus items ($\alpha = 0.552$) showed that there was a lack of internal validity. For the promotion focus items, Cronbach's alpha scores above 0.7 ($\alpha = 0.738$) if the first item is deleted. Prevention focus, on the contrary, did not show a sufficient Cronbach's alpha after one item deletion. Only after 3 items were removed a sufficient Cronbach's alpha ($\alpha = 0.781$) emerged. This implies that only two items of the prevention focus scale were valid. To get a better understanding of why the scale items initially did not meet the reliability requirements, an exploratory factor analysis was executed. This also required testing the underlying structure of the set of variables. This was done through a Kaiser-Meyer-Olkin (KMO) test, prior to a factor analysis. As outlined by Kaiser and Rice (1974) it is preferable to assess Kaiser's criterion not only by agreeing to a score higher than 0.5 but rather by adhering to their proposed table pleading for a score around 0.6-0.7. KMO is found to be 0.675 ($p < 0.001$) (Fig. 26, Appendix E). Hence, the items were suitable for factor analysis. Figure 27 (Appendix E) shows the component matrix of the factor analysis. It is argued that a loading of at least 0.32 can be assumed to be a good rule of thumb (Tabachnick & Fidel, 2007). The component matrix showed that each item has a score of at least 0.32 for one of the three components. The first five items belong to promotion focus, this is also reflected by items 2,3,4,5 that fall into component 1. This indicates that they are measuring the same construct. Item 1, by contrast,

did not score an appropriate loading for component 1, but it did for component 2. In other words, it seems as if item 1 is measuring prevention focus instead of promotion focus. Furthermore, item 6 and item 7 deviated from the promotion and prevention focus measurement and seemed to measure another unknown factor as item 6 load was very high in component 4 and item 7 in component 3. Finally, Item 10 showed a cross-loading as the item loads >0.32 for both components 1 and 2, indicating that it is not dominantly measuring a single item. The loadings of the first item in measurement component 2 (prevention) 1 and the last item measuring both components 1 and 2 could be explained by the possible suggestion of reversed worded items, causing confusion (Kam, 2023).

Since the two items of the prevention focus subscale measure the intended construct effectively, they are relevant and crucial. Hence, the overall content validity will be enhanced by including these items instead of relying on one subscale. The median for regulatory focus is 5.1667 (see Fig. 28, Appendix E). This implies that all values below 5.1667 will be labeled with 0 "*prevention focus"* and labels from 5.1667 and higher with 1 "*promotion focus*". Figures 28-34 (Appendix E) show the distribution and socio-demographic information for prevention and promotion focused participants in this study.

3.14. Assumptions testing

To check whether respondents in this study also viewed the products as utilitarian and hedonic, the HED/UT scale was applied again. This reflected that, as in the pre-test, toothpaste was perceived as a utilitarian product and perfume as a hedonic product (see Fig. 14 and 15 Appendix E). Thereafter data was first checked on randomness, to confirm that the advertisements in the survey were randomly displayed to the participants. This was done through a run test in SPSS. The null hypothesis states that there is a non-random pattern in the data sequence. Hence, the p-values should be higher than 0.05 to assume randomness. Figures 35a-35c (Appendix E) show the output of the run test for the median, mean, and mode for willingness to buy for each advertisement. All variables, except for willingness to buy utilitarian product with intrinsic goal framing, score a value higher than 0.05. Since the p-value is higher than 0.05 for the other advertisements it implies that the null hypothesis stating that there is a non-random pattern or structure in the data sequence, is rejected. In other words, based on these findings it can be argued that the sample contains random data.

3.14.1. Assumptions Repeated measures factorial ANOVA

Different beliefs are held about the assumptions that should be met prior to repeated measures analysis. In addition to the previously mentioned features, research by Park et al. (2009) argues that for within-subject designs, the assumptions of multivariate normal distribution of the dependent variables in the model, and the assumption of sphericity must be met (Park et al., 2009). The multivariate normal distribution can be checked through several methods. First, Kolmogorov-Smirnov's test of normality is performed for all six willingness to buy variables. The null hypothesis states that the data is normally

distributed. In other words, the p-value should be higher than 0.05 in order not to reject the null hypothesis. Findings show non-normality as the statistics are significant at the 1 percent level for all variables (see Fig. 37, Appendix E) According to Garson (2012), in the presence of a large sample size, even minor deviations from normality might still register as statistically significant through the Kolmogorov-Smirnov test. It is therefore advisable to rely on alternative methods, such as the visual representation of Q-Q plots and the value of skew and kurtosis, of assessment for a more comprehensive analysis (Field, 2013). Subsequently, skewness and kurtosis were tested. Here many researchers follow the rule of thumb provided by Curran et al. (1996) that assumes a distribution to be approximately normal when the skewness falls within the range of -2 and 2, and the kurtosis is within the range of -7 to 7. All variables score a kurtosis and skewness between -1 and 1, indicating that data is normally distributed (see Fig. 36, Appendix E). In addition, Q-Q plots were created, and they indeed show that the data is approximately normally distributed as they closely follow the 45-degree line of normality (Fig.38a-38f, Appendix E). Despite the anomalous result of the Kolmogorov-Smirnov analysis, it may be assumed that the data is approximately normally distributed. To test for sphericity, Mauchly's test is performed (see Figure 39, Appendix E). The null hypothesis for the sphericity condition states that sphericity is present, thus that the variances of the differences between all combinations are equal. Findings show significant p-values ($p<0.001$) for the within-subject effects, indicating that the null hypothesis is rejected, and no sphericity is detected. To account for this violation, the correction factor Greenhouse-Geisser was recommended to use (Park et al., 2009). Epsilon shows values close to 1, which indicates that the observed variables in the covariance matrix are close to sphericity. To mitigate the risk of Type 1 errors and enhance statistical power, it is recommended to employ the Bonferroni method in the repeated-measures analyses (Park et al., 2009).

3.14.2. Assumptions Hayes PROCESS

Several assumptions need to be taken into account in order to perform moderation analysis. As the PROCESS model extends the traditional Ordinary Least Square (OLS) regression, errors should meet the standard assumptions of the OLS regression (Hayes, 2012). First, residuals should be normally distributed. This was done by plotting the residuals in a histogram and checking whether they follow a bell-shaped distribution. Figures 42 and 43 (Appendix E) show these visual representations. From the histogram and P-P Plot, it can be seen that the residuals are normally distributed. Furthermore, OLS assumes linearity between the independent and dependent variables before testing the moderation effect, this was also tested through visual inspection of the residuals. Figure 40 (Appendix E) shows the scatter diagram, and data seems to have a horizontal orientation, indicating that the relationship among all variables in the model is linear (Clement & Garcia, 2022). Next, there should be independence of errors, that is, information from one participant should not have an impact on or influence information about another participant. Independence can be tested through the Durbin-Watson statistic which states that independence may be assumed met when values are between 1.5 and 2.5 (Clement & Garcia, 2022).

The test statistic in Figure 41 (Appendix E) shows that independence may be assumed since the value of 2.188 falls between 1.5 and 2.5. Furthermore, residuals should meet the assumption of homoscedasticity which implies that the error in the relationship between the independent variable(s) and the dependent variable is roughly the same across all levels of the independent variables (Clement & Garcia, 2022). Homoscedasticity is tested through visual inspection of a residual plot and employing Levene's statistic. The null hypothesis states that there is equal variance among the data. Hence, p-values above 0.05 are desirable for assuming homogeneity of variances. The diagram (Fig. 41, Appendix E) shows that the residuals fit a rectangular shape, however, the dots do not seem to be entirely randomly scattered. Therefore, Levene's test of homogeneity of variance is executed (see Fig. 44 and 45, Appendix E). For product types, Levene's statistics do not yield significant outcomes, implying that the variance among the variables is equal, thus homoscedasticity is assumed. However, for the framing types, Levene's statistics are significant. This suggests that the assumption of homoscedasticity is not satisfied for goal framing types. To proceed with the analysis, robust standard errors can be used to overcome the violation of the homoscedasticity assumption. In the model of Hayes, a built-in feature called heteroscedasticity-consistent inference, accounts for this violation. Although testing for multicollinearity is not a strict OLS assumption, this will also be tested. Multicollinearities exist when independent variables are correlated. This can be tested by looking at the tolerance or VIF statistics. When tolerance is above 0.1 and VIF below 10, no multicollinearity can be assumed (Clement & Garcia, 2022). Figure 46 (Appendix E) shows that no multicollinearity exists in the model. This indicates that, despite of homoscedasticity which can be overcome by creating robust standardized errors, all assumptions are met, and we have justification for employing regression analysis.

4. RESULTS

This section presents the findings of the study. Particularly, the findings of the repeated measures ANOVA and Hayes PROCESS analysis are presented. Supplementary data can be found in Appendix F.

4.1. Hypothesis testing using repeated Measures ANOVA

The test results for the first four hypotheses can be found in Appendix F and in Tables 9,10 and 11 below. Figure 3 (Appendix F) shows the multivariate test of the independent variables product type, frame type, and their interaction effect. The figure shows that according to the first test, Pillai's Trace, 8.5 percent of the variance in willingness to buy is explained by product type, 38.1 percent of the variance in willingness to buy is explained by framing type, and 9.4 percent of the variance of willingness to buy is explained by the interaction effect of product type and framing type. In other words, product type and framing as well as their interaction are important factors influencing participant's willingness to buy.

The first hypothesis states that one's willingness to buy is higher when intrinsic goal framing is displayed compared to extrinsic goal framing. The pairwise comparisons in Table 9 below demonstrate that the mean difference for intrinsic goal framing is significantly higher than for extrinsic ($M = 0.649$, $p < 0.001$) and no goal framing ($M = 0.821$, $p < 0.001$). Therefore, there is reason to believe that willingness to buy is higher when intrinsic goal framing is displayed compared to extrinsic goal framing. The first hypothesis is thus supported. In addition, the mean score for willingness to buy utilitarian products was compared against the mean score for willingness to buy hedonic products. Table 10 below shows that utilitarian products yield a significantly higher mean difference compared to hedonic products ($M = 0.385$, $p < 0.001$). This gives evidence to reject the null hypothesis and to accept the alternative hypothesis that the willingness to buy is higher when utilitarian products are displayed compared to hedonic products. Table 11 below, shows the pairwise comparison for the interaction effect of product type and goal framing. It was argued that the willingness to buy utilitarian products is higher when intrinsic goal framing is displayed, compared to extrinsic goal framing. As can be seen, for the utilitarian product type, willingness to buy obtained a significantly higher mean difference for intrinsic goal framing compared to extrinsic goal framing ($M = 0.767$, $p < 0.001$) and no framing ($M = 1.129$, $p < 0.001$). Therefore, there is evidence to reject the null hypothesis and accept Hypothesis 3. Finally, it was hypothesized that the willingness to buy hedonic products is higher when extrinsic goal framing is displayed, compared to intrinsic goal framing. Contrary to what has been hypothesized, the pairwise comparison shows that there is no evidence to reject the null hypothesis, since the mean difference is significantly negative for extrinsic goal framing, compared to intrinsic goal framing ($M = -0.531$, $p < 0.001$). Here, no significant difference was found for the comparison with no framing. Hence, no significant evidence is found to support Hypothesis 4.

Table 9 – Pairwise comparisons Repeated measures ANOVA

(I)Framing	(J)Framing	Mean difference (I-J)	St. Error	Sig.[b]
No Frame	Intrinsic	-.821*	.067	<.001
	Extrinsic	-.172*	.048	.001
Intrinsic	No frame	.821*	.067	<.001
	Extrinsic	.649*	.067	<.001
Extrinsic	No frame	.172*	.048	.001
	Intrinsic	-.649*	.067	<.001

*. The mean difference is significant at the .05 level.
b. Adjustment for multiple comparisons: Bonferroni

Table 10 – Pairwise comparisons Repeated measures ANOVA

(I)Product	(J)Framing	Mean difference (I-J)	St. Error	Sig.[b]
Utilitarian	Hedonic	.385*	.080	<.001
Hedonic	Utilitarian	-.385*	.080	<.001

*. The mean difference is significant at the .05 level.
b. Adjustment for multiple comparisons: Bonferroni

Table 11 – Pairwise comparisons Repeated measures ANOVA

Product type	(I)Framing	(J)Framing	Mean difference (I-J)	St. Error	Sig.[b]
Utilitarian	No Frame	Intrinsic	-1.129*	.097	<.001
		Extrinsic	-.361*	.080	<.001
	Intrinsic	No frame	1.129*	.097	<.001
		Extrinsic	.767*	.092	<.001
	Extrinsic	No frame	.361*	.080	<.001
		Intrinsic	-.767*	.092	<.001
Hedonic	No frame	Intrinsic	-.514*	.091	<.001
		Extrinsic	.017	.048	1.000
	Intrinsic	No frame	.514*	.091	<.001
		Extrinsic	.531*	.084	<.001
	Extrinsic	No frame	-.017	.048	1.000
		Intrinsic	-.531*	.084	<.001

*. The mean difference is significant at the .05 level.
b. Adjustment for multiple comparisons: Bonferroni

4.2. Hypothesis testing using Hayes PROCESS

4.2.1. Moderation testing of regulatory focus and frame type

Hayes PROCESS was first performed to test for a moderation effect of regulatory focus on frame type and subsequently on product type. See Table 12 below for the results of regulatory focus type (e.g., prevention = 0, promotion = 1) on the relationship between goal framing and willingness to buy. The model summary reflects that 6.08 percent of the variance in the dependent variable willingness to buy

is explained by the model. A significant effect was found for goal framing on willingness to buy (b = -0.5218, s.e. = 0.1095, p <0.001) and regulatory focus type on willingness to buy (b = 0.3708, s.e. = 0.1169, p = 0.0016). On the 5 percent significance level, however, no evidence could be found for an interaction effect of regulatory focus and goal framing on the willingness to buy, since the null hypothesis could not be rejected (b = -0.3051, s.e. = 0.1801, p = 0.0906). At the 10 percent significance level, by contrast, the interaction effect would turn significant. This indicates that at the 10 percent level, regulatory focus acts as a moderator in the relationship between goal framing and willingness to buy. As can be seen in Table 12 below, the conditional effects of the focal predictor at values of the moderator show that when the regulatory focus is 0, thus prevention focus, the effect is -0.5218 (p < 0.001) and when the regulatory focus is 1, thus promotion focus, the effect is -0.8269 (p < 0.001) when the frame moves from intrinsic to extrinsic goal framing. This is also visualized in Graph 1 below, which shows that promotion focused individuals have a higher willingness to buy intrinsic (0) and extrinsic (1) framed products than promotion prevention focused individuals. However, it should be noted that this difference is relatively small. Thus, building upon this, promotion focused individuals have a higher willingness to buy for both intrinsic and extrinsic goal framing. These findings support hypothesis 5 that promotion focused individuals strengthen the relationship between intrinsic goal framing and willingness to buy. In sum, reversed findings were found for Hypothesis 6. Specifically, not prevention focused, but promotion focused individuals are found to increase the relationship between extrinsic goal framing and willingness to buy. In addition, moderation for the continuous regulatory focus score was tested; these results can be found in Figure 7 of Appendix F. The model summary reflects that 6.94 percent of the variance in the dependent variable willingness to buy is explained by the model. The regulatory focus score has a significant effect on willingness to buy (b = 0.3376, p <0.001), but the frame type does not yield a significant effect on willingness to buy (b = 0.5117, p = 0.4216). In addition, no significant interaction effect was found on the 5 percent level of significance (b = - 0.2274, p = 0.0686). However, similarly to the findings with binary values of regulatory focus, there appears to be a significant moderation effect of regulatory focus score on the relationship between goal framing and willingness to buy at the 10 percent significance level. The conditional effects of the focal predictor at values of the moderators at the 16^{th}, $50^{th,}$ and 84^{th} percentiles are shown at the bottom of Figure 7 (Appendix F). Figure 8 (Appendix F) visualizes the conditional data in a graph. It shows that intrinsic goal frames generate a higher willingness to buy for high scores of regulatory focus. The same holds for extrinsic goal frames, however, the effect is not as great as for intrinsic goal frames. Thus, the findings of the regulatory focus score align with the findings of the binary regulatory focus variables.

4.2.2. Moderation testing of regulatory focus and product type

Subsequently, the moderating role of regulatory focus on product types was tested. First regulatory focus types were tested. The explained variance in willingness to buy by this model is 4.34 percent.

Results (see Table 13 below) show that regulatory focus has no significant effect on the willingness to buy (b=0.2439, p = 0.0565) neither does the interaction effect of regulatory focus and product type have a significant effect (b=-0.0514, p = 0.7782). In addition, the continuous score of regulatory focus was also tested as a moderator. Figure 10 (Appendix F) shows the Hayes PROCESS output. 5.16 percent of the model explains the variance of willingness to buy. Regulatory focus as a continuous variable significantly impacts the willingness to buy (b= 0.2614, p = 0.0026), but there is no significant evidence for the interaction effect (b = -0.0749, p = 0.5497). In other words, there is no significant evidence to assume that regulatory focus moderates the effect between product type and willingness to buy. Although, at the bottom of Figure 10, it can be seen that prevention focus negatively (positively) affects the willingness to buy hedonic (utilitarian) products (b = -0.5287, p = < 0.001), and promotion focus also negatively (positively) affects the willingness to buy hedonic (utilitarian) products (b = -0.5801, p < 0.001) this cannot be assumed since there is no significant interaction effect. Therefore, Hypotheses 7 and 8 are not supported.

Table 12 – Hayes PROCESS output for regulatory focus type on frame type

Outcome variable: WTB						
Model summary	R	R^2	F	df1	df2	Sig.[b]
	.2467	**.0608**	**21.855**	**3.000**	**992.000**	**0.000**
Model	**Coeff**	**SE**	**t**	**P**	**LLCI**	**ULCI**
Constant	4.4161	.0736	60.000	.0000	4.2949	4.5373
Frame Type	-.5218	.1095	-4.7640	.0000	-.7022	-.3415
RF Type	.3708	.1169	3.1715	.0016	.1783	.5632
Frame Type * RF Type	-.3051	.1801	-1.6938	.0906	-.6016	-.0085
Conditional effects of the focal predictor at values of the moderator						
RF Type	**Effect**	**SE**	**t**	**p**	**LLCI**	**ULCI**
0	-.5218	.1095	-4.7640	.0000	-.7022	-.3415
1	-.8269	.1430	-5.7836	.0000	-1.0623	-.5915

Graph 1 – Impact of regulatory focus on relationship between frame type and willingness to buy

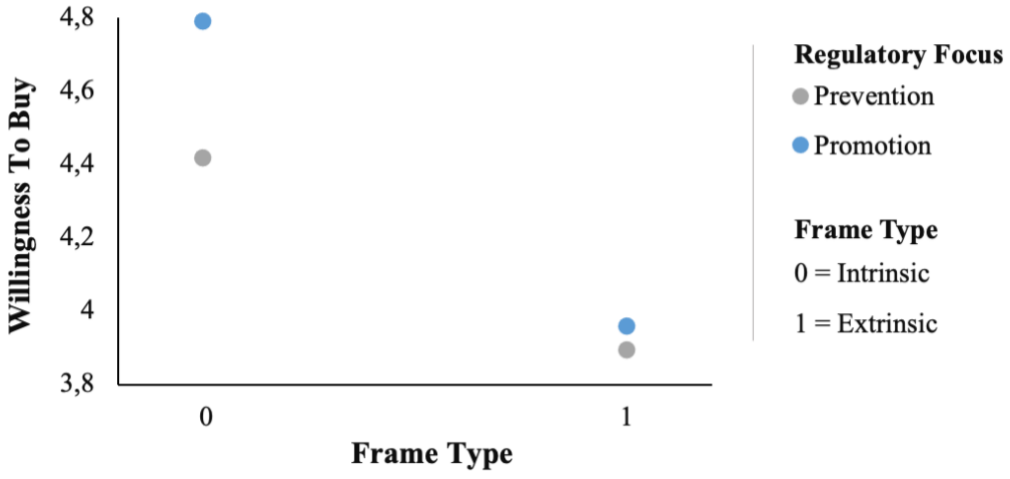

Table 13 – Hayes PROCESS output for regulatory focus type on product type

Outcome variable: WTB						
Model summary	R	R^2	F	df1	df2	Sig.[b]
	.2083	**.0434**	**15.5254**	**3.000**	**992.000**	**0.000**
Model	**Coeff**	**SE**	**t**	**P**	**LLCI**	**ULCI**
Constant	4.4195	.0793	55.7088	.0000	4.2889	4.5502
Product Type	-.5287	.1095	-4.8295	.0000	-.7090	-.3485
RF Type	.2439	.1277	1.9096	.0565	.0336	.4542
Product Type * RF Type	-.0514	.1824	-.2818	.7782	-.3517	.2489
Conditional effects of the focal predictor at values of the moderator						
RF Type	**Effect**	**SE**	**t**	**p**	**LLCI**	**ULCI**
0	-.5287	.1095	-4.8295	.0000	-.7436	-.3139
1	-.5801	.1459	-3.9767	.0001	-.8664	-.2939

4.2.3. Moderation testing of regulatory focus on the interplay of product type and frame type

Regarding the last hypothesis, it was tested whether there is any interaction effect present between regulatory focus and the interplay of product type and frame type on the willingness to buy. When moderation is tested on the interaction of two independent variables, it is often referred to as a "*three-way interaction*". Here, it explored how the moderator influences the already existing interaction between two independent variables. This three-way interaction is typically associated with Model 3 in Hayes PROCESS (Hayes, 2012). The Hayes PROCESS output for this analysis can be viewed in Table 14 below. The model summary shows that 10.11 percent of the variance in willingness to buy is explained by the model. Furthermore, it is shown that product type ($b = -0.5502$, s.e. = 0.0857, $p < 0.001$) and frame type ($b = -0.6493$, s.e. = 0.857, $p < 0.001$) significantly impact willingness to buy. Note here, that the negative coefficient for product type reflects a hedonic product compared to a utilitarian product, and likewise for frame type the negative coefficient reflects the extrinsic goal frame compared to the intrinsic goal frame. These findings thus support previous findings that a utilitarian product, and intrinsic goal framing yield a higher willingness to buy compared to their counterparts. For regulatory focus promotion focus is compared to prevention focus. Findings also show that regulatory focus type significantly impacts the willingness to buy ($b = 0.2182$, s.e. = 0.0883, $p = 0.0136$). However, no significant evidence was found for an interaction effect between the interplay of product type and frame type ($b = 0.3439$, s.e. = 0.3531, $p = 0.3303$). This indicates an absence of a moderating effect.

Finally, in addition to the dichotomous variable, the continuous regulatory focus score was tested for moderation. See Figure 11, Appendix F for details. The model shows that 11.03 percent of the variance in willingness to buy is explained by the model. In line with the previous analysis, it was found that product type ($b = -0.5502$, s.e. = 0.854, $p < 0.001$), frame type ($b = -0.6493$, s.e. = 0.0854, $p < 0.001$), and regulatory focus score ($b = -.2239$, s.e. = 0.0612, $p = 0.003$), significantly impact the

willingness to buy when evaluated individually. Furthermore, neither an interaction effect was found of regulatory focus on the interplay of product and frame type (b = 0.2675, s.e. = 0.2447, p = 0.2749). In sum, no scientific support was found for supporting Hypothesis 9. The findings of all hypotheses are briefly summarized in Table 16.

Outcome variable: WTB						
Model summary	R	R^2	F	df1	df2	Sig.[b]
	.3179	**.1011**	**19.8093**	**7.0000**	**988.000**	**0.000**
Model	**Coeff**	**SE**	**t**	**P**	**LLCI**	**ULCI**
Constant	4.2463	.0428	99.1326	.0000	4.1758	4.3168
Product Type	-.5502	.0857	-6.4224	.0000	-.6912	-.4092
Frame Type	-.6493	.0857	-7.5787	.0000	-.7903	-.5082
Int_1: Product*Frame	.2356	.1713	1.3751	.1694	-.0465	.5177
RF Type	.2128	.0883	2.4720	.0136	.0729	.3636
Int_2: Product*RF	-.0514	.1766	0.2911	.7711	-.3421	.2393
Int_3: Frame*RF Type	-.3051	.1766	-1.7279	.0843	-.5958	-.0144
Int_4: Product*Frame*RF Type	.3439	.3531	.9740	.3303	-.2374	.9253

Table 14 – Hayes PROCESS output for regulatory focus on interplay product and frame type

4.3. Socio-demographic variables

To control for socio-demographic factors, linear regression analyses were performed with product type and goal framing as independent variables on willingness to buy (see Fig. 11 and 12, Appendix E). Subsequently, the categorical demographic variables were transformed into dummy variables and incorporated into the regression analysis. Some categories within the control variables seem to show a significant effect on the willingness to buy. Notably, these are age: "*65 or older*" compared to "*25-34*"; gender: "*other*" compared to "*male*"; marital status: "*other*" compared to "*in a relationship*"; employment status: "*retired*" compared to "*student*". What these all have in common is that they have a very low frequency (see Descriptives, Appendix D). It thus seems that the categories of the control variables with a few cases obtain significance compared to the reference category. Since the significant categories are unbalanced compared to the other categories, these significances are not taken into consideration. Moreover, the slope (b coefficient) and p-value significance level for product type (b = -0.550, p < 0.001) and goal framing (b = -0.649, p < 0.001) remained unchanged with the inclusion of demographic variables. This indicates that the demographic control variables do not have an impact on the relationship between product type and goal framing on willingness to buy. Therefore, no further attention will be paid to the demographic variables.

Table 16 – Overview of hypotheses results

	Hypotheses	
H1	Willingness to buy is higher when intrinsic goal framing is displayed compared to extrinsic goal framing.	**Accepted**
H2	Willingness to buy is higher when utilitarian product is displayed compared to a hedonic product.	**Accepted**
H3	Willingness to buy utilitarian products is higher when intrinsic goal framing is displayed compared to extrinsic goal framing.	**Accepted**
H4	Willingness to buy hedonic products is higher when extrinsic goal framing is displayed compared to intrinsic goal framing.	**Rejected**
H5	When intrinsic goal framing is displayed, promotion (versus prevention) focused individuals are expected to express a higher willingness to buy.	**Rejected**
H6	When extrinsic goal framing is displayed, prevention (versus promotion) focused individuals are expected to express a higher willingness to buy.	**Rejected**
H7	The impact of product type on willingness to buy will be moderated by regulatory focus (prevention versus promotion).	**Rejected**
H8	The impact of utilitarian products on willingness to buy will be stronger when regulatory focus is prevention focused (versus promotion).	**Rejected**
H9	Regulatory focus (prevention versus promotion) moderates the relationship between the interplay of product type and goal framing on willingness to buy.	**Rejected**

5. DISCUSSION

After a thorough analysis and in-depth examination of the variables, this section presents a comprehensive discussion of the findings of this thesis. First, the findings of the pre-test and main analysis are discussed, followed by appointing the relevance of these findings. Thereafter the research concludes with a summary of the findings. Finally, as with any research, limitations are addressed and recommendations for opportunities in future research are offered.

5.1. Discussion of the findings

5.1.1. Hypothesis 1-4

For the purpose of testing which products would be the most suitable for the main analysis, a preliminary test was conducted. The pre-test findings showed that toothpaste best represents the utilitarian product category and perfume best represents the hedonic product category for personal care products. As a result, the advertisements for the main analysis were created with toothpaste and perfume as the featured products. Findings support Hypothesis 1 and show that the willingness to buy is higher when intrinsic goal framing is displayed compared to extrinsic goal framing. This result reaffirms earlier conclusions made by several studies that intrinsic goal framing generates more favorable results relative to extrinsic goal framing (Vansteenkiste et al., 2008; Leung et al., 2022). Hence, as Pope & Pelletier (2021) have suggested, intrinsic goal framing is more persuasive compared to extrinsic goal framing. Subsequently, consistent with earlier observations, it was found that the willingness to buy is higher when a utilitarian product is displayed compared to a hedonic product (Sloot et al., 2005; Kivetz & Zheng, 2017; Jing et al., 2019). This finding supports Hypothesis 2 and indicates that consumers show a greater preference for utilitarian products over hedonic products. Additionally, this study found support for Hypothesis 3 that willingness to buy utilitarian products is higher when intrinsic goal framing is displayed compared to extrinsic goal framing. This result validates Lee & Pounders (2019) previous findings on the effectiveness of intrinsic goal framing relative to extrinsic goal framing on utilitarian products. In addition, the following hypothesis was formulated in response to previous authors' inquiry into whether intrinsic goal framing, as opposed to extrinsic goal framing, also turns out to be more effective for hedonic products (Lee & Pounders, 2019). It was hypothesized that the willingness to buy hedonic products is higher when the advertisement is extrinsically framed. Findings however show significant evidence for intrinsic goal framing to generate a higher willingness to buy for hedonic products, compared to extrinsic goal framing. Hence, no support was found for Hypothesis 4. Thereby the call of Lee & Pounders (2019) can be answered by intrinsic goal framing indeed holding a higher willingness to buy, thus effectiveness in the realm of purchasing utilitarian and hedonic goods. This contrary finding can be attributed to research that found that intrinsic goal framing possesses more dominant effectiveness over extrinsic goal framing (Vansteenkiste et al., 2008). In addition, advertisements not containing any type of goal frame were added as a manipulation to discern the true influence of intrinsic or extrinsic goal framing on the willingness to buy a product. The results reveal

that the products that were advertised without any frame exhibited a lower willingness to buy compared to those with intrinsic and extrinsic goal framing. This aligns with the views of researchers like Holbrook & Hirschman (1982), Voss et al. (2003), and Lee et al. (2017), who argued that the relationship between product type and willingness to buy is complex and influenced by factors such as emotions, perceived value, and message framing.

5.1.2. Hypothesis 5-9

Results show no significant impact of regulatory focus on the relationship between goal framing on willingness to buy at the 5 percent level. However, at the 10 percent level of significance, regulatory focus does significantly impact this relationship. Results reveal that when intrinsic and extrinsic goal framing is displayed, promotion (versus prevention) focused individuals express a higher willingness to buy, however, the difference is marginal. In other words, at the 10 percent level, Hypothesis 5, which argued that the relationship between intrinsic goal framing and willingness to buy was strengthened by promotion focused individuals (versus prevention), receives confirmation, but at the 5 percent level of significance, there is no scientific support for this hypothesis. In addition, the findings for the continuous regulatory focus variable (regulatory focus score) yielded similar findings as the dichotomous variable regulatory focus type. These findings immediately show a lack of support for Hypothesis 6, which argued that a prevention focus (versus prevention) strengthens the relationship between extrinsic goal framing and willingness to buy. It thus appears that a promotion focused orientation exerts a stronger influence on the willingness to buy for both intrinsic and extrinsic goal framing. At the 10 percent level of significance, these findings support previously stated research (Covey et al., 2014), which suggests that regulatory focus is a reliable moderator on the persuasiveness of message framing, however, this reliability is not maintained at the 5 percent significance level. This suggests that at the 5 percent significance level, regulatory focus does not appear to influence the relationship between intrinsic and extrinsic goal framing on willingness to buy. It is unclear why exactly these links are absent, nonetheless, it may be that regulatory focus is not an as important individual difference as was expected. Nevertheless, the diminished reliability of the prevention ($\alpha = 0.552$) and promotion ($\alpha = 0.496$) subscale, which led to the removal of items, might have weakened the results of the regression coefficients.

Furthermore, it was argued that regulatory focus also plays a role on the relationship between product types (utilitarian and hedonic) on willingness to buy. Specifically, it was hypothesized that the impact of hedonic products on willingness to buy will be stronger when the regulatory focus is promotion focused (versus prevention) and the other way around, that the impact of utilitarian products on willingness to buy will be stronger when the regulatory focus is prevention focused (versus promotion). Findings, however, show no significant evidence for the moderating role of regulatory focus on the relationship between product types and willingness to buy. As a consequence, Hypotheses 7 and 8 were rejected. A possible explanation for the rejection of this hypothesis might be that other

factors have a stronger impact on willingness to buy utilitarian or hedonic products than a consumer's regulatory focus. In addition, methodological constraints, such as the reliability of the scales used (Podsakoff et al., 2003) as mentioned before, may have caused this nonsignificant result. Results should therefore be considered with care.

Finally, it was tested whether regulatory focus moderates the interplay of product type and frame type on willingness to buy. Findings for the binary regulatory focus type and continuous regulatory focus score did not find significant evidence for supporting Hypothesis 9. Since no significant moderation was found between the stand-alone variables on willingness to buy (Hypotheses 5,6,7, and 8), this finding is not surprising. Hence, although the regulatory focus was argued to be a reliable moderator (Covey et al., 2014), this study demonstrated that regulatory focus does not significantly influence participant's willingness to buy either utilitarian or hedonic products on the 5 percent level of significance, nor does it affect the willingness to buy an intrinsically or extrinsically framed product and the interplay between these product types and frame types.

Several control variables were considered during the analysis. These were nationality, age, gender, level of education, employment status, marital status, and level of income. Findings reflect that the effect of product type and goal framing on willingness to buy remained consistent after the inclusion of these variables. This means that the impact of these control variables on the willingness to buy is so small that it can be neglected.

In sum, the findings above show that utilitarian products, relative to hedonic products, generate a higher willingness to buy among the participants of this study. Furthermore, for personal care product advertisements, applying an intrinsic goal frame leads to a higher willingness to buy. Specifically, when comparing utilitarian and hedonic products, there seems to be a preference for intrinsically framed advertisements. In addition, it is shown that it is valuable to apply an intrinsic or extrinsic frame instead of no message at all, as the framed advertisements yielded a higher willingness to buy. On a 5 percent level of significance, this study did not find any moderation effects of regulatory focus. It should be noted, however, that on the 10 percent level, there is a moderation effect visible for regulatory focus on the relationship between goal framing and willingness to buy. Here it was found that promotion focus strengthens this relationship not only for intrinsic but also for extrinsic goal framing.

These findings offer relevant implications for academics, as well as practical implications for marketers and companies in a way to improve their advertisement strategies. The findings of the research support previous findings that intrinsic goal framing is more effective than extrinsic goal framing. In addition, although no goal framing was used as a manipulation, findings showed that intrinsic and extrinsic goal framing are more effective. Thereby these findings contribute to the literature on message framing and marketing persuasion as well as to the practical field, as it indicates that employing a goal framed message is more effective than not applying any message in an advertisement. Specifically, an intrinsically framed advertisement is found to be more effective. Furthermore, this research also showed support for utilitarian products to yield a higher willingness to

buy, relative to hedonic products. Indicating that consumers are more willing to buy products that fulfill their basic and practical needs. In addition, since no interaction effect was found for the role of regulatory focus on the relation between goal framing and willingness to buy and product type and willingness to buy, this research shows that this dispositional factor does not exert an effect within the context of this research. This could lead to opportunities to investigate whether other dispositional factors do have an interaction effect.

5.2. Conclusion

This research aimed to analyze how consumers respond to advertisements comprising message framing (intrinsic and extrinsic goal framing), particularly within the scope of utilitarian and hedonic products. Specifically, the following research question was explored "*To what extent do different types of message framing (intrinsic goal framing and extrinsic goal framing) and different product types (hedonic and utilitarian) influence the willingness to buy personal care products in online advertising? And how does an individual's regulatory focus (promotion versus prevention) influence this relationship?"*. Several hypotheses were established to answer this research question. These were systematically tested using quantitative methods comprising a sample of 294 participants. Addressing this focal question, this study builds upon existing literature that emphasizes the role of goal framing in consumer persuasion. (Lee & Pounders, 2019). Prior research has often highlighted how intrinsic goal framing led to more preferred outcomes (Vansteenkiste et al., 2008). Findings show support for this notion as it was found that the willingness to buy is higher when intrinsic goal framing is displayed relative to extrinsic goal framing. Although some researchers suggested that hedonic products are more preferred (O'Cass & McEwen, 2006), various authors have advocated for utilitarian products to be generally more desired, compared to hedonic products (Sloot et al., 2005; Kivetz & Zheng, 2017; Jing et al., 2019). The latter was echoed in the findings of the study as the willingness to buy was found to be higher when utilitarian products were displayed compared to hedonic products. In addition, it was found that willingness to buy utilitarian products is higher when intrinsic goal framing is displayed, compared to extrinsic goal framing. Although existing research found a relationship between hedonic products and external rewards (Truong, 2010). The outcomes revealed the opposite, indicating that intrinsic goal framing, rather than extrinsic goal framing, resulted in a greater willingness to buy. This provides additional support to previous findings on the effectiveness of intrinsic goal framing. Additionally, While Covey and colleagues (2014) identified regulatory focus as a reliable moderator among various dispositional factors, the findings of this research did not support this claim as the study revealed the absence of a moderation effect. Namely, regulatory focus did not moderate the impact of goal framing on willingness to buy on the 5 percent significance level. On the 10 percent significance level, promotion (versus prevention) focused individuals expressed a higher willingness to buy not only for intrinsic but also for extrinsic goal framing. Furthermore, no significant evidence was found for regulatory focus as a moderator on the impact of product type on willingness to buy. Lastly, no moderation effect was

observed for the interplay of product type and frame type on willingness to buy. Thus, this study calls into question the belief that regulatory focus is a strong and reliable moderator. Nevertheless, it should be noted that a possible reason for this might stem from the regulatory focus scale not being used to its full potential due to the exclusion of multiple items.

In the realm of this study, consumers are found to have a higher willingness to buy utilitarian products relative to hedonic products. Furthermore, it was demonstrated that intrinsic and extrinsic goal framing significantly enhance the willingness to buy utilitarian as well as hedonic products in comparison to the absence of framing. This underscores the importance of message framing in advertising. Specifically, intrinsic goal framing emerged as the most effective approach, leading to the greatest increase in willingness to buy for both product types. Finally, it was observed that regulatory focus does not influence the relationship between product types and frame types, either individually or collectively, in terms of influencing the willingness to buy.

This study provided valuable managerial and academic contributions. Theoretically, this research responded to several calls from the literature to pay more attention to intrinsic and extrinsic goal framing in the scope of marketing persuasion. Moreover, it advanced existing literature by extending the comparison of these mechanisms of goal framing beyond utilitarian products by adding hedonic product categories within the research design. Thereby, this study bridged Communication Science and Business Administration as it explored how different communication strategies, particularly goal framing, affect consumer behavior and decision-making in the context of advertising. In addition, it has shed light on which products evoke a higher willingness to buy. This study also enriches the understanding of the role of regulatory focus in marketing, specifically that it did not moderate the relationship between goal framing, product type, and willingness to buy. Practically, this study offered insights for marketers and strategic decision-makers in advertising within organizations. It investigated which goal framing techniques most effectively evoked a customer's willingness to buy, and whether consumers preferred utilitarian or hedonic products. The study examined the combined influence of goal framing and product type on willingness to buy, highlighting the importance of these factors in advertising strategies. Including regulatory focus, the study provided deeper insights into consumer decision-making, contributing to the optimization of marketing and message strategies in an online context.

5.3. Limitations and recommendations

Despite the valuable insights gained in this research, it is important to acknowledge certain limitations that offer avenues for future research. First, the sample size comprised 249 individuals, which is argued to yield lower statistical power than a minimum required sample size of 400 for a population larger than 100,000 individuals. However, as aforementioned, researchers have a different view on the minimum required sample size and some researchers argue that in the context of this study, a sample size of 180 individuals is appropriate for 80 percent power. From this perspective, this limitation is mitigated.

Another possible limitation of this research concerns the nationality of respondents. The majority, namely 161 participants, indicated to have Dutch nationality. Given that English may not be the first language of the participants this could include issues related to language proficiency, which may affect the precision and clarity of the results of the survey items and instructions. However, as noted by Salomone (2022), in general, the Dutch population is considered to have a high English proficiency. Additionally, in a report by Education First (2019), The Netherlands even scores highest on English proficiency compared to 46 other countries, which minimizes the constraint on language proficiency of the majority of Dutch participants. Nevertheless, future research could employ a similar study in Dutch. Furthermore, it would have been more desirable if the division between males and females was more equally distributed. Nevertheless, this did not impact the results, as no significant observations were found for the influence of gender on willingness to buy. Some annotations need to be made regarding choices made in the methodology of this research which might have led to some bias. First, a limitation regarding the design of this study must be acknowledged. The inclusion of three manipulative questions in the questionnaire, such as "*What is the focus of this advertisement?"* could have caused potential bias, especially considering the within-subject design of the experiment. This design may have resulted in participants becoming aware of the experiment's objectives, potentially influencing their responses and behaviors. According to Labdin & Shaffer (2009), such awareness, caused by a within-subject design, could be a threat to the internal validity of the study. However, it is worth noting that within-subjects designs do not necessarily make the research objective clear. In fact, as demonstrated in the work of Egele et al. (2021) within- and between- subjects analyses were found to yield similar outcomes, indicating that within-subjects designs do not always make it clear what the experiment is about. Nevertheless, future research should carefully select the study's design and it is recommended to explore whether results vary with a between-subjects design, where participants are exposed to only one condition, mitigating the bias that could arise from a within-subjects design. Secondly, employing the HED/UT scale, in a way that only utilitarian tests utilitarian products for utilitarian dimensions and hedonic products for hedonic dimensions, could imply a risk of bias. Given that the products were categorized as hedonic or utilitarian within the existing literature, the HED/UT scale was employed as an additional control measure to verify whether participants indeed associated utilitarian attributes with the utilitarian product and hedonic attributes with the hedonic product. While the results align with established literature, it is advisable for future research to implement the scale in its entirety to prevent bias. Another limitation within this research was caused by the Regulatory focus scale (Haws et al., 2010) which did not obtain a significant Cronbach's alpha for the prevention subscale, indicating insignificant reliability. Results should therefore be considered with caution. Including all items of the prevention scale would give unreliable results, but excluding all items of the subscale would perhaps give a distorted reflection of the participant's regulatory focus. Therefore, despite the limitations involved, an effort was made to retain as many items as possible to ensure the scale's reliability. All remaining items obtained a sufficient Cronbach's alpha, ensuring their reliability for assessing an

individual's regulatory focus. This leads to the advice to employ an alternative scale for measuring regulatory focus within this domain. Furthermore, it is suggested for future research to explore the contexts in which this regulatory focus scale is (not) appropriate to utilize. Another facet requires consideration. It is important to be cautious when generalizing the findings regarding utilitarian and hedonic products. While this research categorizes products as either utilitarian or hedonic for the sake of conceptual clarity and experimental control and participants were found to perceive toothpaste as utilitarian and perfume as hedonic, it should be kept in mind that this perception may depend on the product category (Nagle et al., 2016) and the notion that some products may exhibit both utilitarian and hedonic features (Batra & Ahtola, 1991). Therefore, future studies should consider this with care when selecting products in their research. Accordingly, it is encouraged to explore this research design with products from other categories. For instance, an example would be the comparison between designer or branded products, such as bags and sunglasses, and their brandless counterparts, which are often perceived as embodying a more utilitarian characteristic. Furthermore, since regulatory focus did not significantly impact the relation between product type and willingness to buy, examining whether this finding also holds for other product categories is recommended. Besides, considering other factors or individual differences as a possible moderation or mediation effect would advance future research on this topic. Ultimately, this study reaffirms the findings of previous research that intrinsic goal framing is more effective than extrinsic goal framing. That leads to the suggestion to investigate whether intrinsic goal framing is still as effective and powerful when it is compared to pricing offers. For instance, it is worth considering if using intrinsic goal framing in an advertisement might be more advantageous compared to a price promotion.

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7. APPENDIX A – PRELIMINARY TEST

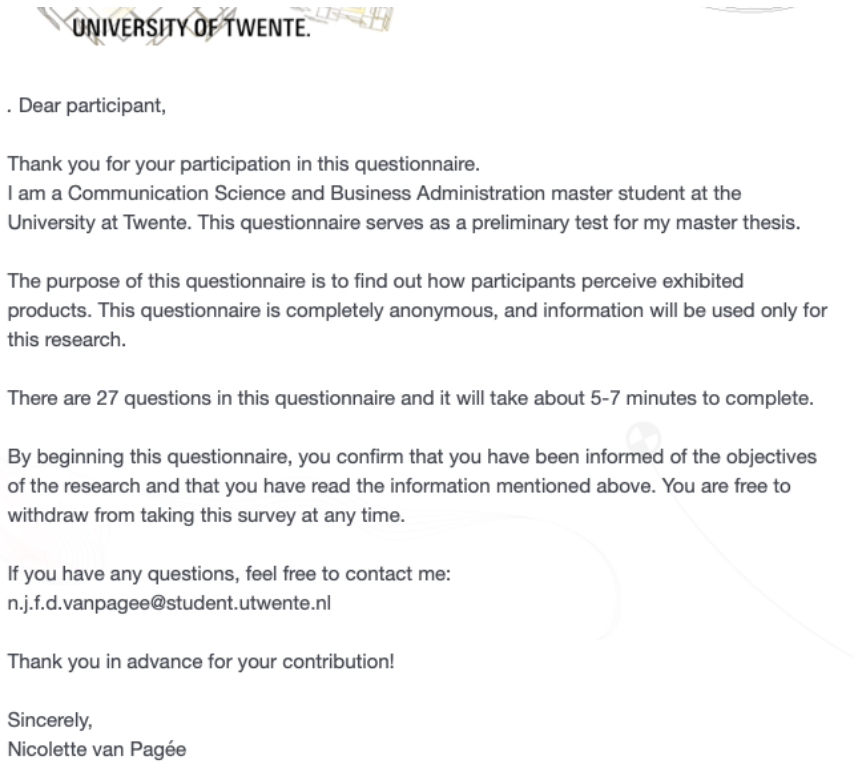


Fig. 1 - Preliminary test introduction

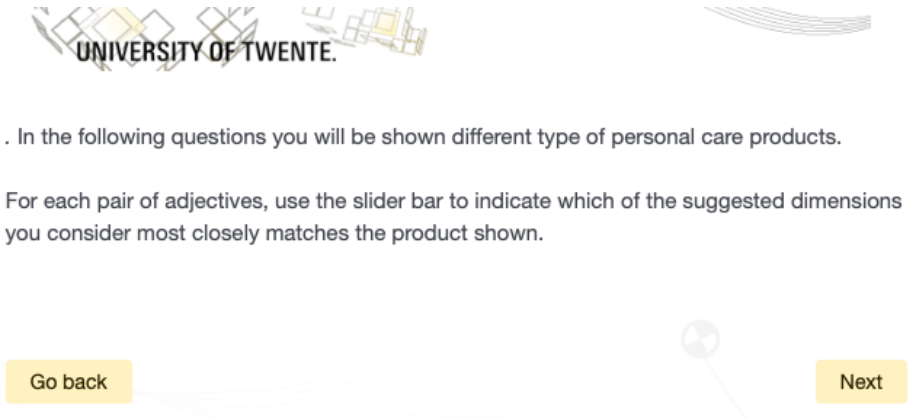


Fig. 2 - Preliminary test introduction

Table 1 – Overview personal care products used in the pre-test - utilitarian (hedonic) products in left (right) column

Utilitarian products	Hedonic products
1 - Razor	**1 - Perfume**
	
2 - Toothpaste	**2 - Bathbomb**
	
3 - Soapbar	**3 - Body oil**
	

4 - Deodorant	4 - Toner
	
5 - Sunscreen	**5 - Scented bodylotion**
	
6 - Facial cleanser	**6 - Perfumed shower gel**
	

7 - Hairstyling gel/spray	7 - Facial mask
	

Razor

Please indicate to what extent you would allocate the following adjectives towards the displayed product.

1 represents the first dimension (ineffective) and 7 represents the opposite dimension (effective) and so on.

1 2 3 4 5 6 7

Ineffective/Effective

Unhelpful/Helpful

Not functional/Functional

Unnecessary/Necessary

Impractical/Practical

Fig.3 – Scale questions for utilitarian products

Perfume

Please indicate to what extent you would allocate the following dimensions towards the displayed product.

1 represents the first dimension (not fun) and 7 represents the opposite dimension (fun) and so on.

1 2 3 4 5 6 7

Not fun/Fun

Dull/Exciting

Not delightful/Delightful

Not thrilling/Thrilling

Unenjoyable/Enjoyable

Fig. 4 – Scale questions for hedonic products

8. APPENDIX B – PRELIMINARY TEST ANALYSIS

8.1. Reliability analysis

Reliability Statistics

Cronbach's Alpha	N of Items
.902	5

Fig. 1 – Reliability Statistics – Utilitarian dimensions

Reliability Statistics

Cronbach's Alpha	N of Items
.932	5

Fig. 2 – Reliability Statistics – Hedonic dimensions

8.2. Means utilitarian personal care products

Efectiveness

	N	Minimum	Maximum	Mean	Std. Deviation
Razor	33	1.00	7.00	5.6364	1.34206
Toothpaste	33	1.00	7.00	5.9697	1.51007
Soap bar	33	1.00	7.00	4.9697	1.68606
Deodorant	33	2.00	7.00	5.9697	1.28659
Sunscreen	33	3.00	7.00	6.1212	1.21854
Facial cleanser	33	2.00	7.00	5.0000	1.54110
Hair styling gel/spray	33	1.00	7.00	5.1212	1.47389
Valid N (listwise)	33				

Fig. 3 – Report effectiveness

Helpfulness

	N	Minimum	Maximum	Mean	Std. Deviation
Razor	33	1.00	7.00	5.6667	1.31498
Toothpaste	33	1.00	7.00	6.0606	1.39058
Soap bar	33	1.00	7.00	4.8788	1.67253
Deodorant	33	1.00	7.00	6.0000	1.39194
Sunscreen	33	3.00	7.00	6.3030	.98377
Facial cleanser	33	2.00	7.00	4.9091	1.56851
Hair styling gel/spray	33	1.00	7.00	5.1818	1.50944
Valid N (listwise)	33				

Fig. 4 – Report helpfulness

Functionality

	N	Minimum	Maximum	Mean	Std. Deviation
Razor	33	1.00	7.00	5.9697	1.15879
Toothpaste	33	1.00	7.00	6.1818	1.35680
Soap bar	33	1.00	7.00	4.4848	1.98622
Deodorant	33	1.00	7.00	5.7576	1.39262
Sunscreen	33	1.00	7.00	5.5152	1.67931
Facial cleanser	33	2.00	7.00	4.8182	1.50944
Hair styling gel/spray	33	2.00	7.00	5.1212	1.36376
Valid N (listwise)	33				

Fig. 5 – Report Functionality

Necessity

	N	Minimum	Maximum	Mean	Std. Deviation
Razor	33	2.00	7.00	5.4242	1.54172
Toothpaste	33	2.00	7.00	6.4545	1.09233
Soap bar	33	1.00	7.00	5.0606	1.99905
Deodorant	33	2.00	7.00	5.7576	1.45839
Sunscreen	33	1.00	7.00	6.0000	1.25000
Facial cleanser	33	1.00	7.00	3.9394	1.57994
Hair styling gel/spray	33	1.00	7.00	3.8182	1.87841
Valid N (listwise)	33				

Fig. 6 – Report Necessity

Practicality

	N	Minimum	Maximum	Mean	Std. Deviation
Razor	33	1.00	7.00	5.0000	1.71391
Toothpaste	33	1.00	7.00	5.8182	1.44600
Soap bar	33	1.00	7.00	3.9091	1.97427
Deodorant	33	2.00	7.00	5.9697	1.26206
Sunscreen	33	1.00	7.00	4.7576	1.75054
Facial cleanser	33	1.00	6.00	4.3939	1.22320
Hair styling gel/spray	33	2.00	7.00	4.8485	1.48158
Valid N (listwise)	33				

Fig. 7 – Report practicality

Total mean utilitarian products

	N	Minimum	Maximum	Mean	Std. Deviation
Mean_Razor	33	2.20	7.00	5.5394	.98296
Mean_toothpaste	33	2.20	7.00	6.0970	1.10467
Mean_soapbar	33	1.80	7.00	4.6606	1.48953
Mean_deodorant	33	2.80	7.00	5.8909	1.09441
Mean_sunscreen	33	3.40	7.00	5.7394	1.06944
Mean_facialcleanser	33	1.80	6.60	4.6121	1.31524
Mean_Hairstylinggelspray	33	1.60	7.00	4.8182	1.32038
Valid N (listwise)	33				

Fig. 8 – Report total mean of utilitarian products

8.3. Means hedonic personal care products

Fun

	N	Minimum	Maximum	Mean	Std. Deviation
Perfume	33	1.00	7.00	4.7879	1.67253
Bath bomb	33	1.00	7.00	4.5455	1.95402
Body oil	33	1.00	7.00	3.3636	1.47517
Toner	33	1.00	7.00	3.4545	1.48094
Scented body lotion	33	1.00	7.00	3.8788	1.63473
Perfumed shower gel	33	1.00	7.00	4.1212	1.61550
Facial mask	33	1.00	7.00	3.6667	1.97906
Valid N (listwise)	33				

Fig. 9 – Report fun

Excitement

	N	Minimum	Maximum	Mean	Std. Deviation
Perfume	33	2.00	7.00	5.1515	1.27772
Bath bomb	33	1.00	7.00	4.3636	1.63589
Body oil	33	1.00	7.00	3.4848	1.46033
Toner	33	1.00	7.00	3.3333	1.53433
Scented body lotion	33	1.00	7.00	3.8485	1.46033
Perfumed shower gel	33	2.00	7.00	3.9697	1.57092
Facial mask	33	1.00	7.00	3.6667	1.89846
Valid N (listwise)	33				

Fig. 10 – Report excitement

Delightfulness

	N	Minimum	Maximum	Mean	Std. Deviation
Perfume	33	2.00	7.00	5.4848	1.25303
Bath bomb	33	1.00	7.00	4.0303	1.38033
Body oil	33	2.00	7.00	4.0606	1.39058
Toner	33	1.00	7.00	3.4242	1.60137
Scented body lotion	33	1.00	7.00	4.1515	1.64167
Perfumed shower gel	33	2.00	7.00	4.6061	1.51944
Facial mask	33	1.00	6.00	3.6061	1.71281
Valid N (listwise)	33				

Fig. 11 – Report delightfulness

Thrillness

	N	Minimum	Maximum	Mean	Std. Deviation
Perfume	33	2.00	7.00	4.0000	1.52069
Bath bomb	33	1.00	7.00	3.5152	1.48158
Body oil	33	1.00	7.00	3.0909	1.60786
Toner	33	1.00	6.00	3.0303	1.28659
Scented body lotion	33	1.00	7.00	3.3030	1.57092
Perfumed shower gel	33	1.00	6.00	3.1515	1.39466
Facial mask	33	1.00	6.00	3.0000	1.71391
Valid N (listwise)	33				

Fig. 12 – Report thrillness

Enjoyment

	N	Minimum	Maximum	Mean	Std. Deviation
Perfume	33	4.00	7.00	6.1212	.96039
Bath bomb	33	1.00	7.00	4.4848	1.66060
Body oil	33	2.00	7.00	4.4545	1.56307
Toner	33	1.00	7.00	3.7879	1.55639
Scented body lotion	33	1.00	7.00	4.8182	1.57032
Perfumed shower gel	33	2.00	7.00	5.2727	1.44206
Facial mask	33	1.00	7.00	4.1515	2.03287
Valid N (listwise)	33				

Fig. 13 – Report enjoyment

Total mean hedonic products

	N	Minimum	Maximum	Mean	Std. Deviation
Mean_perfume	33	3.00	6.80	5.1091	.97094
Mean_Bathbomb	33	1.00	6.80	4.1879	1.43086
Mean_bodyoil	33	2.00	7.00	3.6909	1.26599
Mean_toner	33	1.00	6.20	3.4061	1.34674
Mean_scentedbodylotion	33	1.00	7.00	4.0000	1.41510
Mean_perfumedshowergel	33	2.00	6.40	4.2242	1.24575
Mean_facialmask	33	1.00	6.00	3.6182	1.64648
Valid N (listwise)	33				

Fig. 14 – Report total mean of hedonic products

8.4. One sample t-test

One-Sample Test

Test Value = 4

	t	df	Significance One-Sided p	Significance Two-Sided p	Mean Difference	95% Confidence Interval of the Difference Lower	95% Confidence Interval of the Difference Upper
Mean_toothpaste	10.905	32	<.001	<.001	2.09697	1.7053	2.4887
Mean_deodorant	9.925	32	<.001	<.001	1.89091	1.5028	2.2790
Mean_sunscreen	9.343	32	<.001	<.001	1.73939	1.3602	2.1186
Mean_perfume	6.562	32	<.001	<.001	1.10909	.7648	1.4534
Mean_Bathbomb	.754	32	.228	.456	.18788	-.3195	.6952
Mean_perfumedshowergel	1.034	32	.154	.309	.22424	-.2175	.6660

Fig. 15 – One-Sample Test

9. APPENDIX C – METHODOLOGY MAIN ANALYSIS

Table 1 – Composite regulatory focus scale (Haws et al., 2010)

Promotion Focus
1. When it comes to achieving things that are important to me, I find that I don't perform as well as I would ideally like to do. (R)[a]
2. I feel like I have made progress toward being successful in my life.[a]
3. When I see an opportunity for something I like, I get excited right away.[b]
4. I frequently imagine how I will achieve my hopes and aspirations.[c]
5. I see myself as someone who is primarily striving to reach my "ideal self"—to fulfill my hopes, wishes, and aspirations.[c]
Prevention Focus
1. I usually obeyed rules and regulations that were established by my parents.[a, d]
2. Not being careful enough has gotten me into trouble at times. (R)[a]
3. I worry about making mistakes.[b]
4. I frequently think about how I can prevent failures in my life.[c]
5. I see myself as someone who is primarily striving to become the self I "ought" to be—fulfill my duties, responsibilities and obligations.[c]

[a] RFQ measure.
[b] BIS/BAS scale measure.
[c] Lockwood scale measure.
[d] This item was reworded from the original question, "How often did you obey rules and regulations that were established by your parents?" so that the ten items could all use with the same "strongly disagree" to "strongly agree" response scale.
(R) = reverse scored.

'a,b,c' denotes the origin scale for the item, d refers to items that were rephrased to suit a Likert scale response format, and R refers to reverse score.

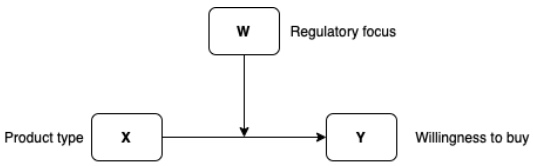


Fig. 1a – Conceptual model for moderation

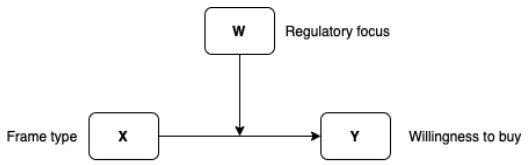


Fig. 1b – Conceptual model for moderation

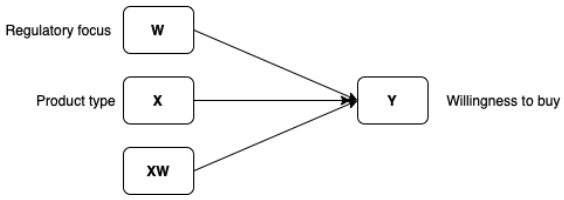


Fig. 2a – Statistical model for moderation

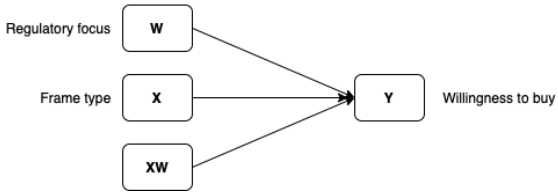


Fig. 2b – Statistical model for moderation

10. APPENDIX D – MAIN QUESTIONNAIRE

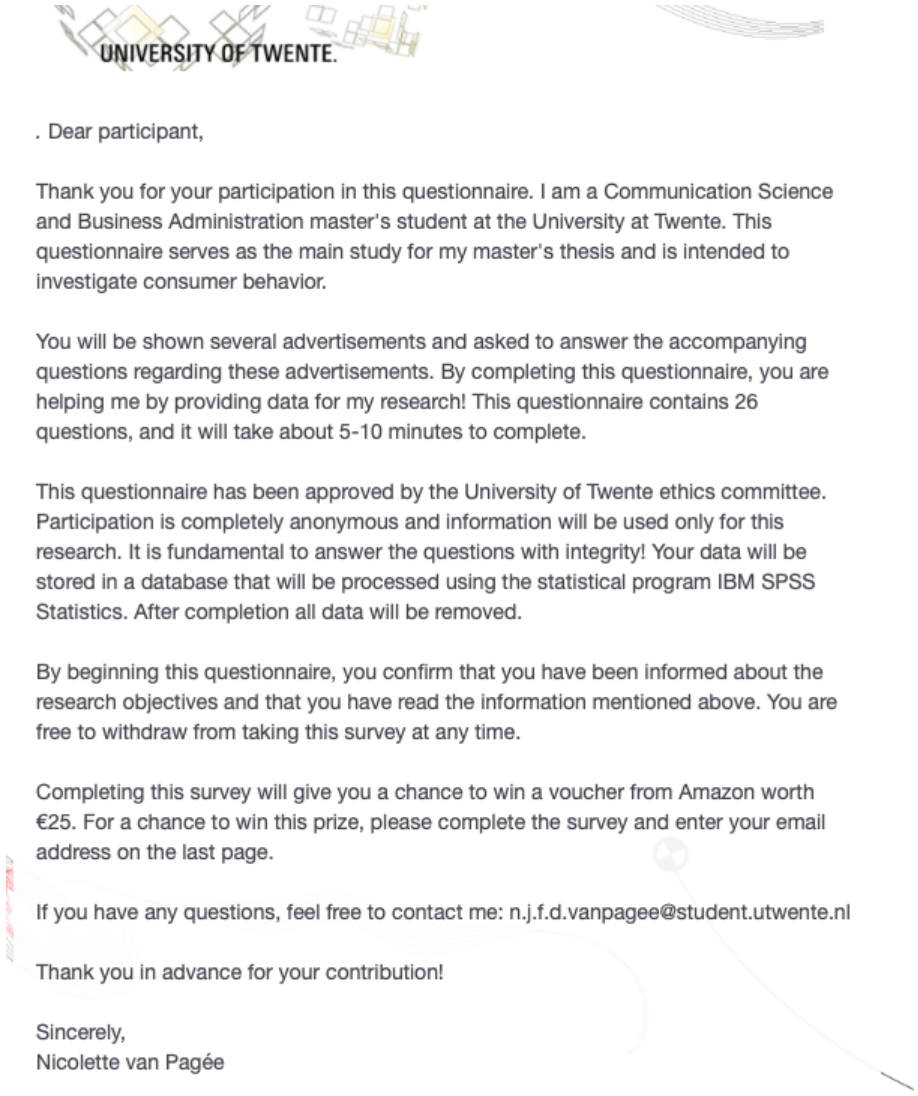


Fig. 1 - Demographic questions

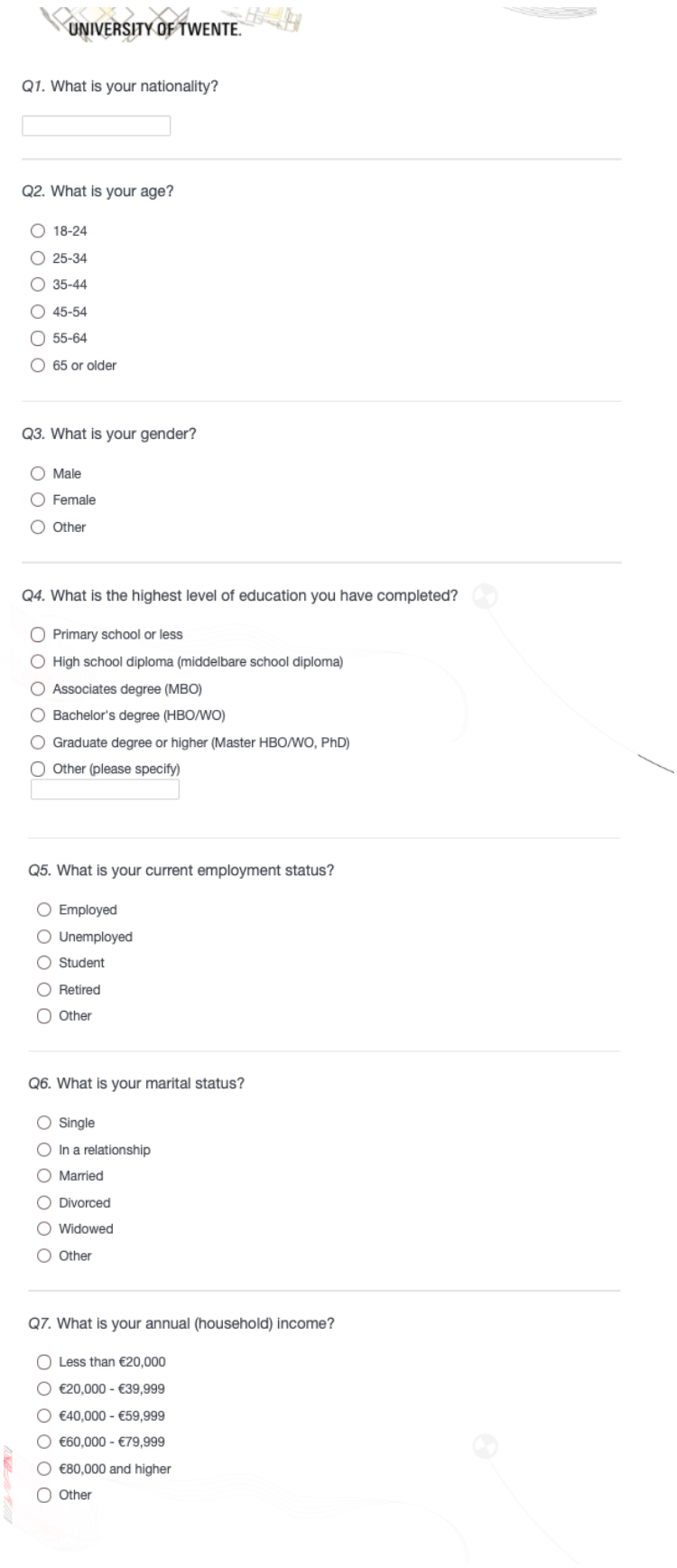


Fig. 2 - Demographic questions

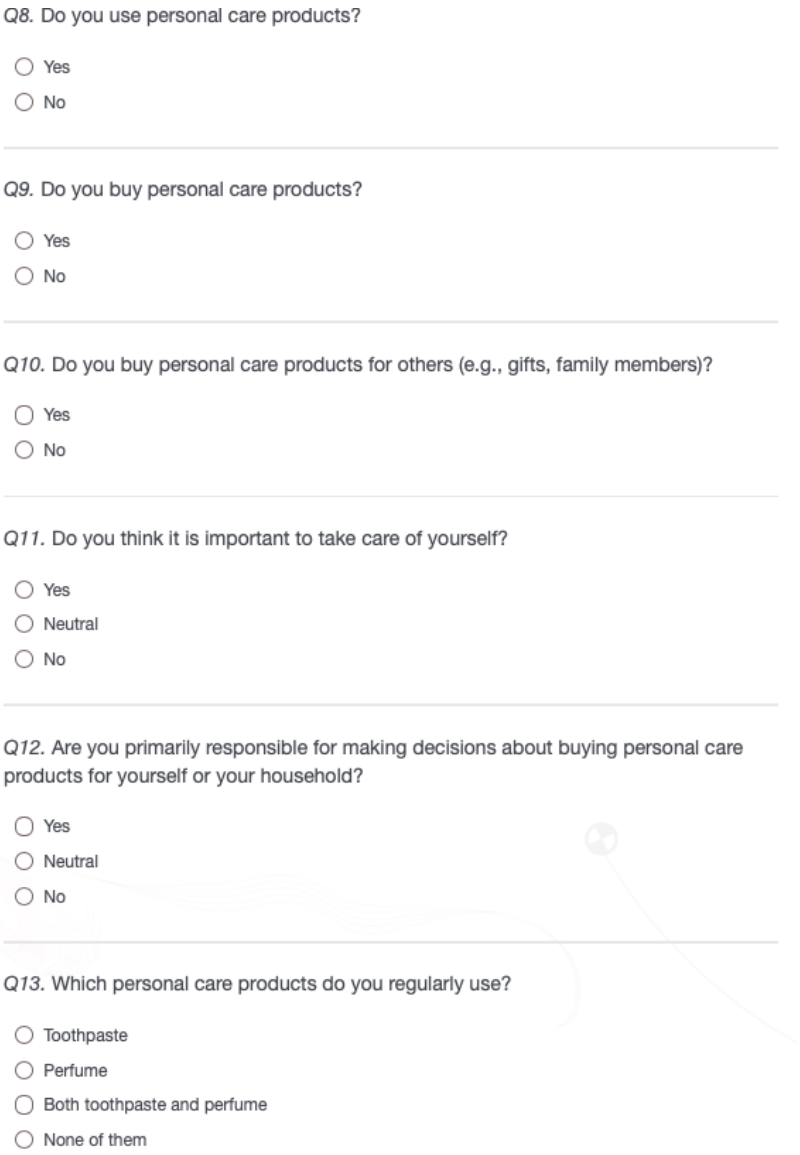


Fig. 3 - Control questions

. In the following questions you will be shown advertisements of personal care products.

Please indicate till what extent, from 1 (totally disagree) to 7 (totally agree) you would be willing to buy the displayed products.

Fig. 4 – Introduction to the main analysis

Toothpaste

Imagine being shown this product, please indicate to what extent you would buy this product by answering the following questions;

	1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Neutral	5 Somewhat agree	6 Agree	7 Strongly agree
I would consider buying this product	○	○	○	○	○	○	○
I will purchase this product	○	○	○	○	○	○	○
There is a strong likelihood that I will buy this product	○	○	○	○	○	○	○

Fig. 5 – WTB items for utilitarian product without frame

Imagine being shown this advertisement, please indicate to what extent you would buy this product by answering the following questions;

	1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Neutral	5 Somewhat agree	6 Agree	7 Strongly agree
I would consider buying this product	○	○	○	○	○	○	○
I will purchase this product	○	○	○	○	○	○	○
There is a strong likelihood that I will buy this product	○	○	○	○	○	○	○

Fig. 6 – WTB items for utilitarian product with intrinsic goal frame

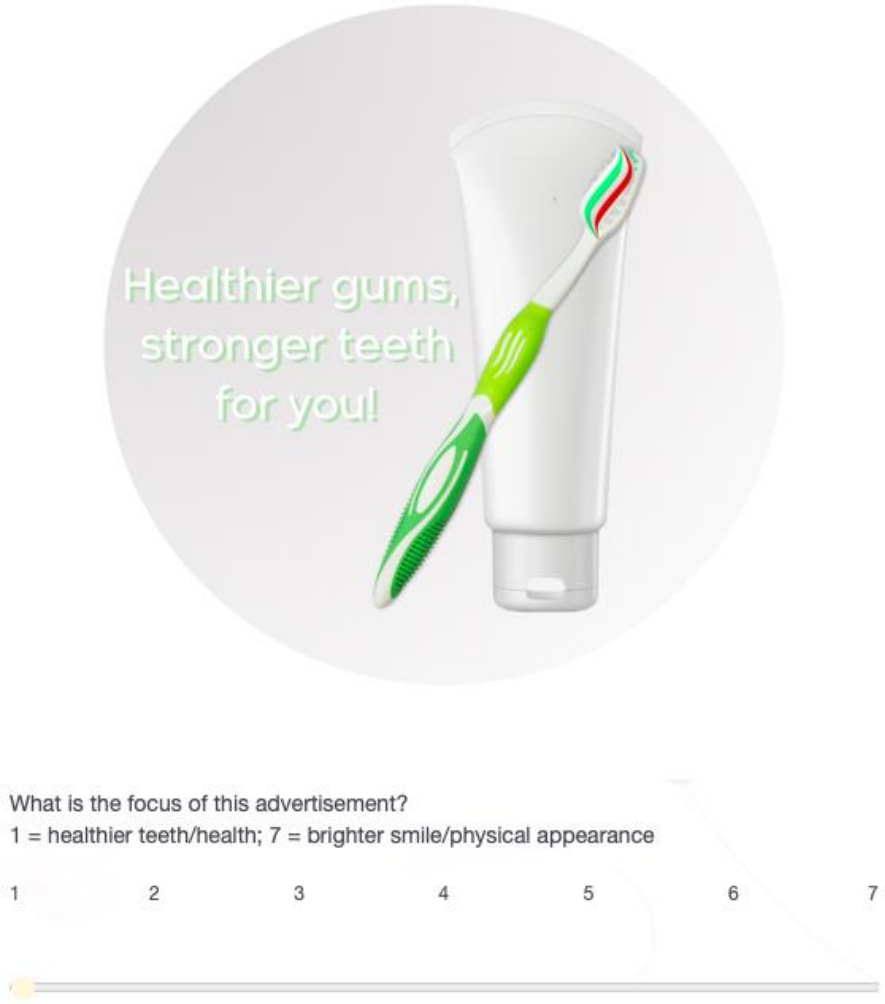


Fig. 7 – Manipulative control question

Imagine being shown this advertisement, please indicate to what extent you would buy this product by answering the following questions;

	1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Neutral	5 Somewhat agree	6 Agree	7 Strongly agree
I would consider buying this product	○	○	○	○	○	○	○
I will purchase this product	○	○	○	○	○	○	○
There is a strong likelihood that I will buy this product	○	○	○	○	○	○	○

Fig. 8 – WTB items for utilitarian product with extrinsic goal frame

What is the focus of this advertisement?
1 = healthier teeth/health; 7 = brighter smile/physical appearance

1 2 3 4 5 6 7

Fig. 9 – Manipulative control question

Perfume

Imagine being shown this product, please indicate to what extent you would buy this product by answering the following questions;

	1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Neutral	5 Somewhat agree	6 Agree	7 Strongly agree
I would consider buying this product	○	○	○	○	○	○	○
I will purchase this product	○	○	○	○	○	○	○
There is a strong likelihood that I will buy this product	○	○	○	○	○	○	○

Fig. 10 – WTB items for hedonic product without frame

Imagine being shown this advertisement, please indicate to what extent you would buy this product by answering the following questions;

	1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Neutral	5 Somewhat agree	6 Agree	7 Strongly agree
I would consider buying this product	○	○	○	○	○	○	○
I will purchase this product	○	○	○	○	○	○	○
There is a strong likelihood that I will buy this product	○	○	○	○	○	○	○

Fig. 11 – WTB items for hedonic product with intrinsic goal frame

What is the focus of this advertisement?
1 = to feel happy; 7 = to impress others

1 2 3 4 5 6 7

Fig. 12 – Manipulative control question

Imagine being shown this advertisement, please indicate to what extent you would buy this product by answering the following questions;

	1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Neutral	5 Somewhat agree	6 Agree	7 Strongly agree
I would consider buying this product	○	○	○	○	○	○	○
I will purchase this product	○	○	○	○	○	○	○
There is a strong likelihood that I will buy this product	○	○	○	○	○	○	○

Fig. 13 – WTB items for hedonic product with extrinsic goal frame

What is the focus of this advertisement?
1 = to feel happy; 7 = to impress others

1 2 3 4 5 6 7

Fig. 14 – Manipulative control question

Q24. Please answer the following statements

	1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Neutral	5 Somewhat agree	6 Agree	7 Strongly agree
When it comes to achieving things that are important to me, I find that I don't perform as well as I would ideally like to do.	○	○	○	○	○	○	○
I feel like I have made progress toward being successful in my life.	○	○	○	○	○	○	○
When I see an opportunity for something I like, I get excited right away.	○	○	○	○	○	○	○
I frequently imagine how I will achieve my hopes and aspirations.	○	○	○	○	○	○	○
I see myself as someone who is primarily striving to reach my "ideal self"—to fulfill my hopes, wishes, and aspirations.	○	○	○	○	○	○	○
I usually obeyed rules and regulations that were established by my parents.	○	○	○	○	○	○	○
Not being careful enough has gotten me into troubles at times.	○	○	○	○	○	○	○
I worry about making mistakes.	○	○	○	○	○	○	○
I frequently think about how I can prevent failures in my life.	○	○	○	○	○	○	○
I see myself as someone who is primarily striving to become the self I "ought" to be—fulfill my duties, responsibilities and obligations.	○	○	○	○	○	○	○

Fig. 15 – Regulatory focus questions

11. APPENDIX E – MAIN QUESTIONNAIRE ANALYSIS

Table 1 – Overview WTB variables for each advertisement.

Ad	Product	Frame	Computed variable
1	Toothpaste	N/A	WTB_Utilitarian_Noframe_Total
2	Toothpaste	'Healthier gums, stronger teeth for you!'	WTB_Utilitarian_Intrinsic_Total
3	Toothpaste	'Whiter, brighter smile for you!'	WTB_Utilitarian_Extrinsic_Total
4	Perfume	N/A	WTB_Hedonic_Noframe_Total
5	Perfume	'Feel happy about how you smell and feel!'	WTB_Hedonic_Intrinsic_Total
6	Perfume	'Smell attractive and impress others!'	WTB_Hedonic_Extrinsic_Total

11.1. Descriptives

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	American	14	5.6	5.6	5.6
	Aruban	1	.4	.4	6.0
	Asian	1	.4	.4	6.4
	Australian	2	.8	.8	7.2
	Austrian	1	.4	.4	7.6
	Bangladeshi	1	.4	.4	8.0
	Belgian	23	9.2	9.2	17.3
	British	3	1.2	1.2	18.5
	Caucasian	1	.4	.4	18.9
	Chinese	4	1.6	1.6	20.5
	Colombian	2	.8	.8	21.3
	Croatian	1	.4	.4	21.7
	Dutch	161	64.7	64.7	86.3
	French	1	.4	.4	86.7
	German	9	3.6	3.6	90.4
	Indian	1	.4	.4	90.8
	Iranian	1	.4	.4	91.2
	Irish	2	.8	.8	92.0
	Italian	2	.8	.8	92.8
	Luxembourgish	1	.4	.4	93.2
	Moroccan	2	.8	.8	94.0
	New Zealander	1	.4	.4	94.4
	Nigerian	1	.4	.4	94.8
	Polish	1	.4	.4	95.2
	Portuguese	2	.8	.8	96.0
	Romanian	1	.4	.4	96.4
	Scottish	2	.8	.8	97.2
	Spanish	3	1.2	1.2	98.4
	Swedish	1	.4	.4	98.8
	Taiwan	1	.4	.4	99.2
	Vietnamese	1	.4	.4	99.6
	Yemeni	1	.4	.4	100.0
	Total	249	100.0	100.0	

Fig. 1 - Nationality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18–24	136	54.6	54.6	54.6
	25–34	57	22.9	22.9	77.5
	35–44	17	6.8	6.8	84.3
	45–54	21	8.4	8.4	92.8
	55–64	16	6.4	6.4	99.2
	65 or older	2	.8	.8	100.0
	Total	249	100.0	100.0	

Fig. 2 - Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	92	36.9	36.9	36.9
	Female	155	62.2	62.2	99.2
	Other	2	.8	.8	100.0
	Total	249	100.0	100.0	

Fig. 3 - Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High school diploma (middelbare school diploma)	33	13.3	13.3	13.3
	Associates degree (MBO)	9	3.6	3.6	16.9
	Bachelor's degree (HBO/WO)	138	55.4	55.4	72.3
	Graduate degree or higher (Master HBO/WO, PhD)	69	27.7	27.7	100.0
	Total	249	100.0	100.0	

Fig. 4 – Level of education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employed	111	44.6	44.6	44.6
	Unemployed	10	4.0	4.0	48.6
	Student	120	48.2	48.2	96.8
	Retired	4	1.6	1.6	98.4
	Other	4	1.6	1.6	100.0
	Total	249	100.0	100.0	

Fig. 5 – Employment status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	107	43.0	43.0	43.0
	In a relationship	95	38.2	38.2	81.1
	Married	45	18.1	18.1	99.2
	Divorced	1	.4	.4	99.6
	Other	1	.4	.4	100.0
	Total	249	100.0	100.0	

Fig. 6 – Martial status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than €20,000	104	41.8	41.8	41.8
	€20,000 - €39,999	44	17.7	17.7	59.4
	€40,000 - €59,999	23	9.2	9.2	68.7
	€60,000 - €79,999	33	13.3	13.3	81.9
	€80,000 and higher	36	14.5	14.5	96.4
	Other	9	3.6	3.6	100.0
	Total	249	100.0	100.0	

Fig. 7 – Level of income

		Age						
		18-24	25-34	35-44	45-54	55-64	65 or older	Total
Gender	Male	52	20	4	8	7	1	92
	Female	83	36	13	13	9	1	155
	Other	1	1	0	0	0	0	2
Total		136	57	17	21	16	2	249

Fig. 8 – Gender by age

		Age						
		18-24	25-34	35-44	45-54	55-64	65 or older	Total
Level_of_education	High school diploma (middelbare school diploma)	28	2	1	1	1	0	33
	Associates degree (MBO)	4	0	0	4	1	0	9
	Bachelor's degree (HBO/WO)	77	35	5	8	11	2	138
	Graduate degree or higher (Master HBO/WO, PhD)	27	20	11	8	3	0	69
Total		136	57	17	21	16	2	249

Fig. 9 – Level of education by age

		Age						
		18-24	25-34	35-44	45-54	55-64	65 or older	Total
Employment_status	Employed	36	29	16	18	12	0	111
	Unemployed	5	4	0	1	0	0	10
	Student	95	24	1	0	0	0	120
	Retired	0	0	0	0	2	2	4
	Other	0	0	0	2	2	0	4
Total		136	57	17	21	16	2	249

Fig. 10 – Employment status by age

		Age						
		18-24	25-34	35-44	45-54	55-64	65 or older	Total
Marital_status	Single	70	26	3	6	2	0	107
	In a relationship	64	23	2	2	4	0	95
	Married	1	7	12	13	10	2	45
	Divorced	0	1	0	0	0	0	1
	Other	1	0	0	0	0	0	1
Total		136	57	17	21	16	2	249

Fig. 11 – Marital status by age

		Age						
		18-24	25-34	35-44	45-54	55-64	65 or older	Total
Annual_income	Less than €20,000	86	17	1	0	0	0	104
	€20,000 - €39,999	25	15	2	1	1	0	44
	€40,000 - €59,999	9	9	1	3	1	0	23
	€60,000 - €79,999	7	7	6	8	4	1	33
	€80,000 and higher	4	7	7	9	8	1	36
	Other	5	2	0	0	2	0	9
Total		136	57	17	21	16	2	249

Fig. 12 – Annual income by age

Q8_Do_you_use_PCP

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	244	98.0	98.0	98.0
	No	5	2.0	2.0	100.0
	Total	249	100.0	100.0	

Q9_Do_you_buy_PCP

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	238	95.6	95.6	95.6
	No	11	4.4	4.4	100.0
	Total	249	100.0	100.0	

Q10_Do_you_buy_PCP_for_others

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	183	73.5	73.5	73.5
	No	66	26.5	26.5	100.0
	Total	249	100.0	100.0	

Q11_Do_you_think_it_is_important_to_take_care_of_yourself

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	241	96.8	96.8	96.8
	Neutral	6	2.4	2.4	99.2
	No	2	.8	.8	100.0
	Total	249	100.0	100.0	

Q12_Primary_decision_maker_for_buying_PCPs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	180	72.3	72.3	72.3
	Neutral	42	16.9	16.9	89.2
	No	27	10.8	10.8	100.0
	Total	249	100.0	100.0	

Q13_Which_PCPs_do_you_use_regularly

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Toothpaste	47	18.9	18.9	18.9
	Perfume	4	1.6	1.6	20.5
	Both toothpaste and perfume	196	78.7	78.7	99.2
	None of them	2	.8	.8	100.0
	Total	249	100.0	100.0	

Fig. 13 a-f – Control questions

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
UT_EFFECTIVENESS	249	1	7	4.27	1.802
UT_HELPFULNESS	249	1	7	4.37	1.803
UT_FUNCTIONALITY	249	1	7	4.86	1.707
UT_NECESSITY	249	1	7	5.19	1.770
UT_PRACTICALITY	249	1	7	5.06	1.520
Valid N (listwise)	249				

Fig. 14 - Utilitarian items from HED/UT scale for toothpaste

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
HED_FUN	249	1	7	4.24	1.705
HED_EXCITENESS	249	1	7	4.22	1.569
HED_DELIGHTFULNESS	249	1	7	4.49	1.503
HED_THRILLNESS	249	1	7	3.63	1.484
HED_ENJOYMENT	249	1	7	4.68	1.649
Valid N (listwise)	249				

Fig. 15 - Hedonic items from HED/UT scale for perfume

11.2. Reliability statistics

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.886	.886	5

Fig. 16 – Cronbach's alpha of items from HED/UT scale – utilitarian items

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.939	.940	5

Fig. 17 – Cronbach's alpha of items from HED/UT scale – hedonic items

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.928	.928	18

Fig. 18 – Cronbach's alpha of items willingness to buy

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.799	.798	6

Fig. 19 – Cronbach's alpha of computed items willingness to buy

11.3. Regulatory focus

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.496	.550	5

Item Statistics

	Mean	Std. Deviation	N
When it comes to achieving things that are important to me, I find that I don't perform as well as I would ideally like to do.	3.76	1.536	249
I feel like I have made progress toward being successful in my life.	5.16	1.148	249
When I see an opportunity for something I like, I get excited right away.	5.43	1.098	249
I frequently imagine how I will achieve my hopes and aspirations.	5.24	1.252	249
I see myself as someone who is primarily striving to reach my "ideal self"—to fulfill my hopes, wishes, and aspirations.	4.97	1.321	249

Fig. 20 – Cronbach's alpha promotion focus scale items

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
When it comes to achieving things that are important to me, I find that I don't perform as well as I would ideally like to do.	20.80	13.075	-.166	.063	.738
I feel like I have made progress toward being successful in my life.	19.40	10.120	.295	.246	.427
When I see an opportunity for something I like, I get excited right away.	19.13	9.532	.421	.282	.355
I frequently imagine how I will achieve my hopes and aspirations.	19.32	8.050	.559	.439	.235
I see myself as someone who is primarily striving to reach my "ideal self"—to fulfill my hopes, wishes, and aspirations.	19.59	8.203	.482	.361	.285

Fig. 21 – Promotion focus scale items when item is deleted

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.552	.571	5

Item Statistics

	Mean	Std. Deviation	N
I usually obeyed rules and regulations that were established by my parents.	4.63	1.470	249
Not being careful enough has gotten me into troubles at times.	3.69	1.712	249
I worry about making mistakes.	4.97	1.500	249
I frequently think about how I can prevent failures in my life.	4.86	1.343	249
I see myself as someone who is primarily striving to become the self I "ought" to be—fulfill my duties, responsibilities and obligations.	4.81	1.351	249

Fig. 22 – Cronbach's alpha prevention focus scale items

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
I usually obeyed rules and regulations that were established by my parents.	18.33	15.352	.184	.075	.568
Not being careful enough has gotten me into troubles at times.	19.27	14.933	.134	.035	.616
I worry about making mistakes.	18.00	12.484	.463	.434	.402
I frequently think about how I can prevent failures in my life.	18.10	13.086	.488	.459	.399
I see myself as someone who is primarily striving to become the self I "ought" to be—fulfill my duties, responsibilities and obligations.	18.16	14.022	.374	.168	.464

Fig. 23 – Prevention focus scale items

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
I usually obeyed rules and regulations that were established by my parents.	14.64	10.643	.222	.073	.672
I worry about making mistakes.	14.31	8.294	.508	.432	.453
I frequently think about how I can prevent failures in my life.	14.41	8.864	.533	.459	.445
I see myself as someone who is primarily striving to become the self I "ought" to be—fulfill my duties, responsibilities and obligations.	14.47	10.105	.350	.149	.578

Fig. 24 – Prevention scale items (-1 item) when another item is deleted

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
I worry about making mistakes.	9.67	4.875	.531	.415	.511
I frequently think about how I can prevent failures in my life.	9.78	4.998	.640	.456	.369
I see myself as someone who is primarily striving to become the self I "ought" to be—fulfill my duties, responsibilities and obligations.	9.83	6.649	.311	.118	.781

Fig. 25 – Prevention scale items (-2 items) when another item is deleted

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.675
Bartlett's Test of Sphericity	Approx. Chi-Square	492.223
	df	45
	Sig.	<.001

Fig. 26 – KMO test

Component Matrix[a]

	Component 1	2	3	4
When it comes to achieving things that are important to me, I find that I don't perform as well as I would ideally like to do.	-.132	.541	.000	.092
I feel like I have made progress toward being successful in my life.	.596	-.368	-.052	.240
When I see an opportunity for something I like, I get excited right away.	.659	-.255	-.259	-.110
I frequently imagine how I will achieve my hopes and aspirations.	.819	-.091	-.057	-.116
I see myself as someone who is primarily striving to reach my "ideal self"—to fulfill my hopes, wishes, and aspirations.	.773	-.040	.167	.053
I usually obeyed rules and regulations that were established by my parents.	.001	.403	-.159	.828
Not being careful enough has gotten me into troubles at times.	.149	.250	.895	-.049
I worry about making mistakes.	.154	.777	-.214	-.239
I frequently think about how I can prevent failures in my life.	.238	.765	-.182	-.327
I see myself as someone who is primarily striving to become the self I "ought" to be—fulfill my duties, responsibilities and obligations.	.476	.472	.132	.247

Extraction Method: Principal Component Analysis.

a. 4 components extracted.

Fig. 27 – Factor analysis regulatory focus scale items

11.3.1. Descriptives regulatory focus

Statistics

RegulatoryFocus_6items

N	Valid	249
	Missing	0
Mean		5.1044
Median		5.1667

Fig. 28 - Median split method

		Age						
		18-24	25-34	35-44	45-54	55-64	65 or older	Total
Regulatory_focus_total	Prevention	77	29	12	13	12	2	145
	Promotion	59	28	5	8	4	0	104
Total		136	57	17	21	16	2	249

Fig. 29 – Regulatory focus by age

		Gender			
		Male	Female	Other	Total
Regulatory_focus_total	Prevention	54	90	1	145
	Promotion	38	65	1	104
Total		92	155	2	249

Fig. 30 – Regulatory focus by gender

		Level_of_education				
		High school diploma (middelbare school diploma)	Associates degree (MBO)	Bachelor's degree (HBO/WO)	Graduate degree or higher (Master HBO/WO, PhD)	Total
Regulatory_focus_total	Prevention	26	5	78	36	145
	Promotion	7	4	60	33	104
Total		33	9	138	69	249

Fig. 31 – Regulatory focus by level of education

		Employment_status					
		Employed	Unemployed	Student	Retired	Other	Total
Regulatory_focus_total	Prevention	64	6	68	4	3	145
	Promotion	47	4	52	0	1	104
Total		111	10	120	4	4	249

Fig. 32 – Regulatory focus by employment status

		Marital_status					
		Single	In a relationship	Married	Divorced	Other	Total
Regulatory_focus_total	Prevention	60	52	33	0	0	145
	Promotion	47	43	12	1	1	104
Total		107	95	45	1	1	249

Fig. 33 – Regulatory focus by marital status

		Annual_income						
		Less than €20,000	€20,000 – €39,999	€40,000 – €59,999	€60,000 – €79,999	€80,000 and higher	Other	Total
Regulatory_focus_total	Prevention	63	21	14	19	24	4	145
	Promotion	41	23	9	14	12	5	104
Total		104	44	23	33	36	9	249

Fig. 34 – Regulatory focus by annual income

11.4. Assumptions testing

11.4.1. Test of randomization

Runs Test

	WTB_Utilit_Noframe_Total	WTB_Utilit_Intr_Total	WTB_Utilit_Extr_Total	WTB_Hedonic_Noframe_Total	WTB_Hedonic_Intr_Total	WTB_Hedonic_Extr_Total
Test Value[a]	4.00	5.00	4.33	4.00	4.33	4.00
Cases < Test Value	111	103	117	117	113	118
Cases >= Test Value	138	146	132	132	136	131
Total Cases	249	249	249	249	249	249
Number of Runs	124	138	124	121	131	129
Z	-.005	2.123	-.134	-.516	.841	.489
Asymp. Sig. (2-tailed)	.996	.034	.894	.606	.401	.625

a. Median

Fig. 35a – Run test based on median

Runs Test 2

	WTB_Utilit_Noframe_Total	WTB_Utilit_Intr_Total	WTB_Utilit_Extr_Total	WTB_Hedonic_Noframe_Total	WTB_Hedonic_Intr_Total	WTB_Hedonic_Extr_Total
Test Value[a]	3.7764	4.9050	4.1379	3.7229	4.2369	3.7055
Cases < Test Value	111	103	117	117	113	118
Cases >= Test Value	138	146	132	132	136	131
Total Cases	249	249	249	249	249	249
Number of Runs	124	138	124	121	131	129
Z	-.005	2.123	-.134	-.516	.841	.489
Asymp. Sig. (2-tailed)	.996	.034	.894	.606	.401	.625

a. Mean

Fig. 35b – Run test based on mean

Runs Test 3

	WTB_Utilit_Noframe_Total	WTB_Utilit_Intr_Total	WTB_Utilit_Extr_Total	WTB_Hedonic_Noframe_Total	WTB_Hedonic_Intr_Total	WTB_Hedonic_Extr_Total
Test Value[a]	4.00	5.00	5.00	4.00	5.00[b]	4.00
Cases < Test Value	111	103	151	117	160	118
Cases >= Test Value	138	146	98	132	89	131
Total Cases	249	249	249	249	249	249
Number of Runs	124	138	132	121	121	129
Z	-.005	2.123	1.615	-.516	.778	.489
Asymp. Sig. (2-tailed)	.996	.034	.106	.606	.437	.625

a. Mode

b. There are multiple modes. The mode with the largest data value is used.

Fig. 35c – Run test based on mode

11.5. Assumptions Repeated Measures ANOVA

			Statistic	Std. Error
WTB_Utilit_Noframe_Total	Mean		3.7764	.09569
	95% Confidence Interval for Mean	Lower Bound	3.5880	
		Upper Bound	3.9649	
	5% Trimmed Mean		3.7544	
	Median		4.0000	
	Variance		2.280	
	Std. Deviation		1.50997	
	Minimum		1.00	
	Maximum		7.00	
	Range		6.00	
	Interquartile Range		1.67	
	Skewness		-.003	.154
	Kurtosis		-.359	.307
WTB_Utilit_Intr_Total	Mean		4.9050	.07615
	95% Confidence Interval for Mean	Lower Bound	4.7550	
		Upper Bound	5.0549	
	5% Trimmed Mean		4.9450	
	Median		5.0000	
	Variance		1.444	
	Std. Deviation		1.20162	
	Minimum		1.00	
	Maximum		7.00	
	Range		6.00	
	Interquartile Range		1.83	
	Skewness		-.378	.154
	Kurtosis		.297	.307
WTB_Utilit_Extr_Total	Mean		4.1379	.09305
	95% Confidence Interval for Mean	Lower Bound	3.9546	
		Upper Bound	4.3212	
	5% Trimmed Mean		4.1481	
	Median		4.3333	
	Variance		2.156	
	Std. Deviation		1.46836	
	Minimum		1.00	
	Maximum		7.00	
	Range		6.00	
	Interquartile Range		2.00	
	Skewness		-.208	.154
	Kurtosis		-.340	.307
WTB_Hedonic_Noframe_Total	Mean		3.7229	.09108
	95% Confidence Interval for Mean	Lower Bound	3.5435	
		Upper Bound	3.9023	
	5% Trimmed Mean		3.7149	
	Median		4.0000	
	Variance		2.066	
	Std. Deviation		1.43730	
	Minimum		1.00	
	Maximum		7.00	
	Range		6.00	
	Interquartile Range		2.00	
	Skewness		-.132	.154
	Kurtosis		-.348	.307
WTB_Hedonic_Intr_Total	Mean		4.2369	.08169
	95% Confidence Interval for Mean	Lower Bound	4.0760	
		Upper Bound	4.3979	
	5% Trimmed Mean		4.2669	
	Median		4.3333	
	Variance		1.662	
	Std. Deviation		1.28912	
	Minimum		1.00	
	Maximum		7.00	
	Range		6.00	
	Interquartile Range		1.33	
	Skewness		-.468	.154
	Kurtosis		.456	.307

WTB_Hedonic_Extr_Total	Mean		3.7055	.09166
	95% Confidence Interval for Mean	Lower Bound	3.5250	
		Upper Bound	3.8860	
	5% Trimmed Mean		3.6986	
	Median		4.0000	
	Variance		2.092	
	Std. Deviation		1.44642	
	Minimum		1.00	
	Maximum		7.00	
	Range		6.00	
	Interquartile Range		2.00	
	Skewness		-.128	.154
	Kurtosis		-.432	.307

Fig. 36 – Overview Skewness and Kurtosis for testing multivariate normal distribution

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
WTB_Utilit_Noframe_Total	.113	249	<.001	.967	249	<.001
WTB_Utilit_Intr_Total	.119	249	<.001	.965	249	<.001
WTB_Utilit_Extr_Total	.115	249	<.001	.964	249	<.001
WTB_Hedonic_Noframe_Total	.107	249	<.001	.969	249	<.001
WTB_Hedonic_Intr_Total	.162	249	<.001	.955	249	<.001
WTB_Hedonic_Extr_Total	.107	249	<.001	.969	249	<.001

a. Lilliefors Significance Correction

Fig. 37 – Test of normality by Kolmogorov-Smirnov

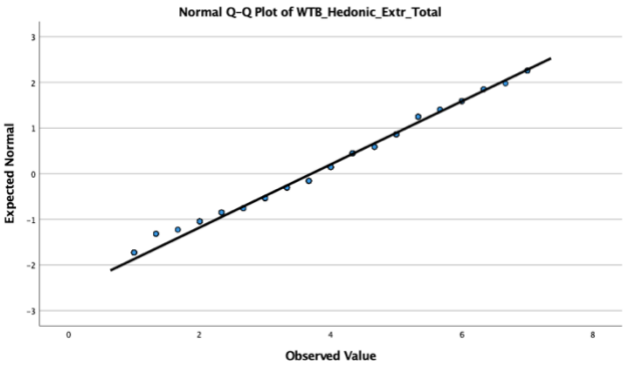


Fig. 38a

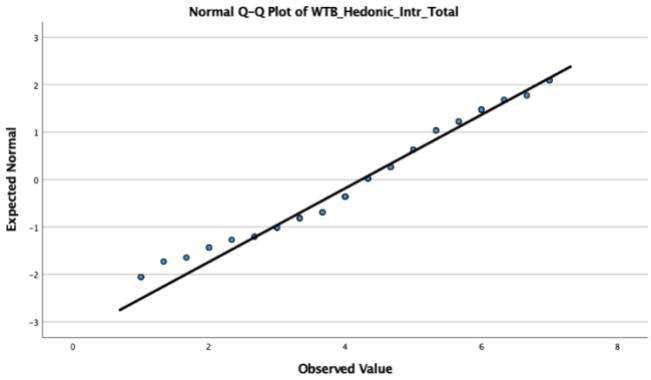


Fig. 38b

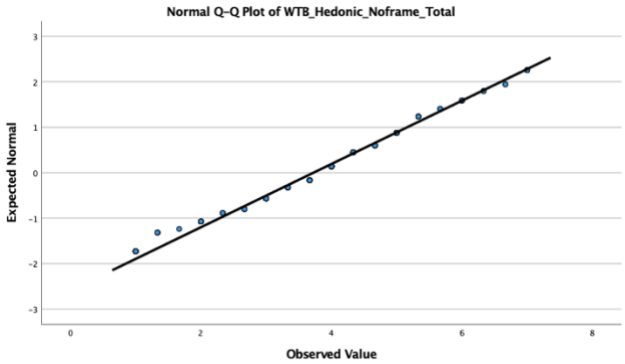


Fig. 38c

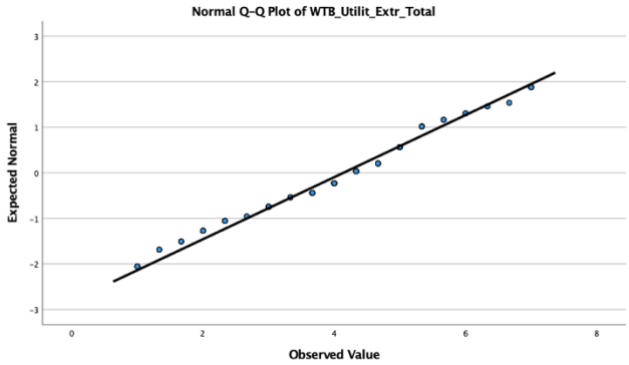


Fig. 38d

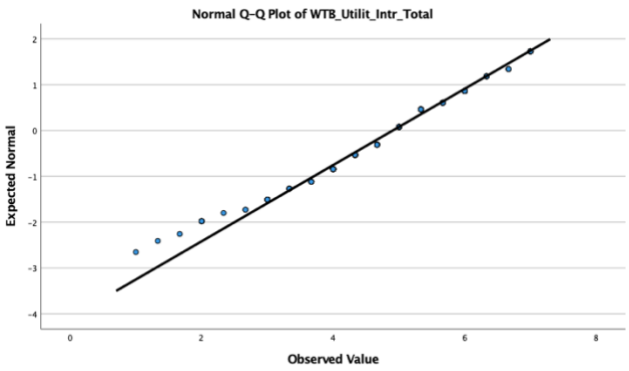


Fig. 38e

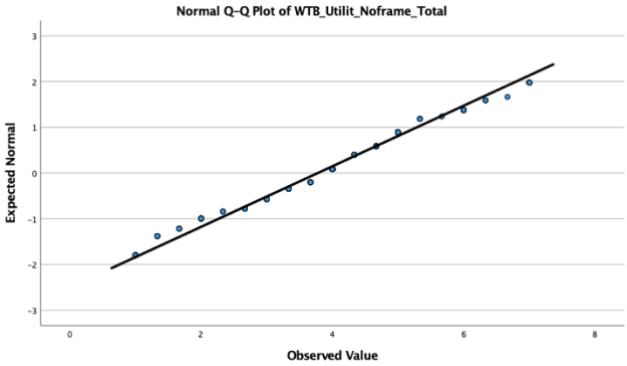


Fig. 38f

Fig 38a-38f – Normal Q-Q plots of the willingness to buy for each advertisement

Mauchly's Test of Sphericity[a]

Measure: MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b]		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Product_type	1.000	.000	0	.	1.000	1.000	1.000
Framing	.842	42.510	2	<.001	.863	.869	.500
Product_type * Framing	.831	45.646	2	<.001	.856	.861	.500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept
Within Subjects Design: Product_type + Framing + Product_type * Framing

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Fig. 39 – Mauchly's Test of Sphericity

11.6. Assumptions Hayes PROCESS

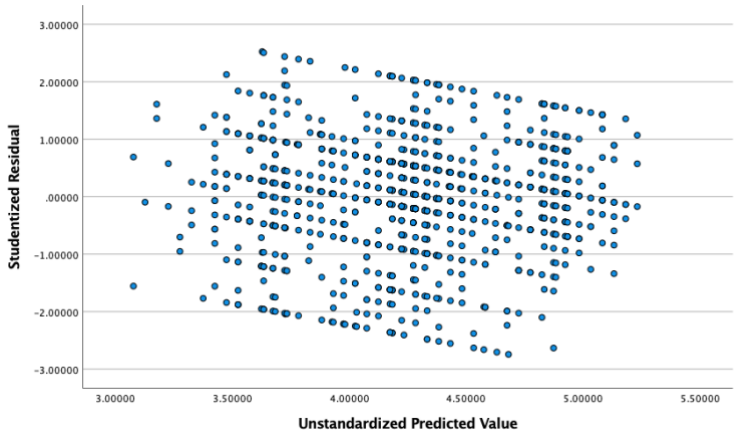


Fig. 40 – Scatterplot of residuals

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.323[a]	.104	.101	1.3470312	2.118

a. Predictors: (Constant), Prom/Prev, Frame_Type, Product_Type, RF_score

b. Dependent Variable: Willingness_to_buy

Fig. 41 – Independency testing through Durbin-Watson statistic

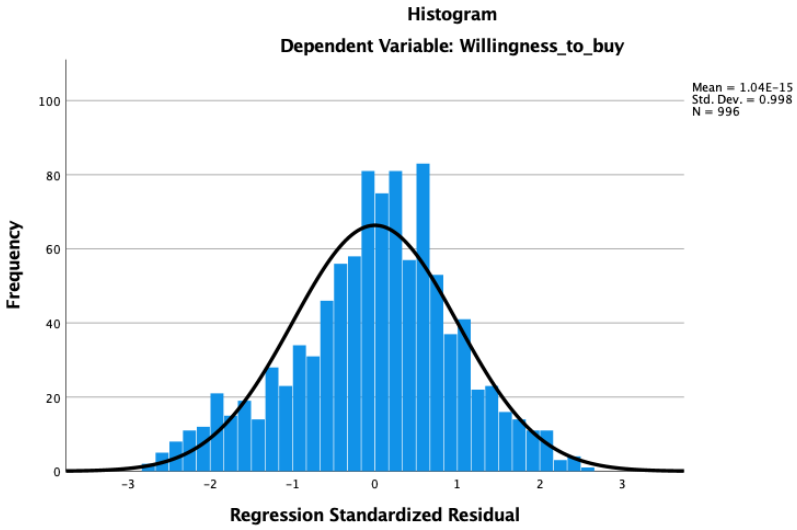


Fig. 42 – Normal distribution of residuals

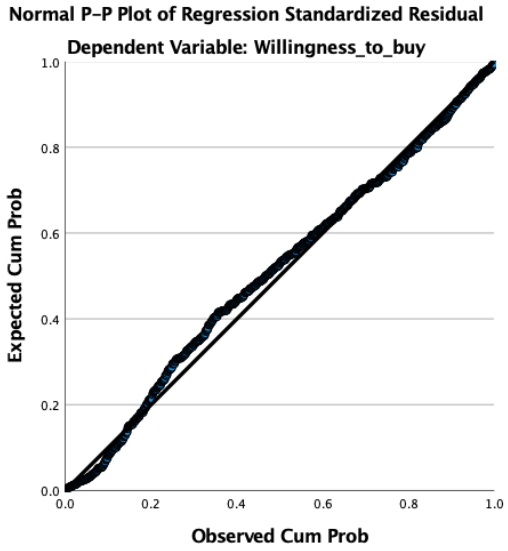


Fig. 43 – P-P Plot of regression standardized residuals

Descriptives

Willingness_to_buy

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Utilitarian	498	4.521419	1.3941884	.0624751	4.398671	4.644167	1.0000	7.0000
Hedonic	498	3.971218	1.3942560	.0624781	3.848464	4.093972	1.0000	7.0000
Total	996	4.246319	1.4204429	.0450085	4.157996	4.334641	1.0000	7.0000

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Willingness_to_buy	Based on Mean	.103	1	994	.749
	Based on Median	.036	1	994	.850
	Based on Median and with adjusted df	.036	1	993.997	.850
	Based on trimmed mean	.104	1	994	.747

Fig. 44 – Levene's test of homogeneity variance for product type

Descriptives

Willingness_to_buy

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Intrinsic	498	4.570950	1.2889960	.0577613	4.457464	4.684437	1.0000	7.0000
Extrinsic	498	3.921687	1.4719611	.0659602	3.792092	4.051282	1.0000	7.0000
Total	996	4.246319	1.4204429	.0450085	4.157996	4.334641	1.0000	7.0000

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Willingness_to_buy	Based on Mean	11.933	1	994	<.001
	Based on Median	10.820	1	994	.001
	Based on Median and with adjusted df	10.820	1	988.752	.001
	Based on trimmed mean	12.360	1	994	<.001

Fig. 45 – Levene's test of homogeneity variance for goal framing type

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	3.383	.449		7.533	<.001					
	Product_Type	-.550	.085	-.194	-6.445	<.001	-.194	-.201	-.194	1.000	1.000
	Frame_Type	-.649	.085	-.229	-7.606	<.001	-.229	-.235	-.229	1.000	1.000
	RF_score	.298	.096	.155	3.108	.002	.117	.098	.093	.361	2.766
	Prom/Prev	-.139	.144	-.048	-.968	.333	.076	-.031	-.029	.361	2.766

a. Dependent Variable: Willingness_to_buy

Fig. 46 – Table of multicollinearity

12. APPENDIX F – RESULTS HYPOTHESES

12.1. Repeated measures ANOVA output

Within-Subjects Factors

Measure: MEASURE_1

Product_type	Framing	Dependent Variable
Utilitarian	No frame	WTB_Utilit_Noframe_Total
	Intrinsic	WTB_Utilit_Intr_Total
	Extrinsic	WTB_Utilit_Extr_Total
Hedonic	No frame	WTB_Hedonic_Noframe_Total
	Intrinsic	WTB_Hedonic_Intr_Total
	Extrinsic	WTB_Hedonic_Extr_Total

Fig. 1 – Within – subjects Factors

Descriptive Statistics

	Mean	Std. Deviation	N
WTB_Utilit_Noframe_Total	3.7764	1.50997	249
WTB_Utilit_Intr_Total	4.9050	1.20162	249
WTB_Utilit_Extr_Total	4.1379	1.46836	249
WTB_Hedonic_Noframe_Total	3.7229	1.43730	249
WTB_Hedonic_Intr_Total	4.2369	1.28912	249
WTB_Hedonic_Extr_Total	3.7055	1.44642	249

Fig. 2 – Descriptive statistics

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.
product	Pillai's Trace	.085	22.932[b]	1.000	248.000	<.001
	Wilks' Lambda	.915	22.932[b]	1.000	248.000	<.001
	Hotelling's Trace	.092	22.932[b]	1.000	248.000	<.001
	Roy's Largest Root	.092	22.932[b]	1.000	248.000	<.001
framing	Pillai's Trace	.381	75.943[b]	2.000	247.000	<.001
	Wilks' Lambda	.619	75.943[b]	2.000	247.000	<.001
	Hotelling's Trace	.615	75.943[b]	2.000	247.000	<.001
	Roy's Largest Root	.615	75.943[b]	2.000	247.000	<.001
product * framing	Pillai's Trace	.094	12.740[b]	2.000	247.000	<.001
	Wilks' Lambda	.906	12.740[b]	2.000	247.000	<.001
	Hotelling's Trace	.103	12.740[b]	2.000	247.000	<.001
	Roy's Largest Root	.103	12.740[b]	2.000	247.000	<.001

a. Design: Intercept
Within Subjects Design: product + framing + product * framing

b. Exact statistic

Fig. 3 – Multivariate tests

Tests of Within-Subjects Effects

Measure: MEASURE_1

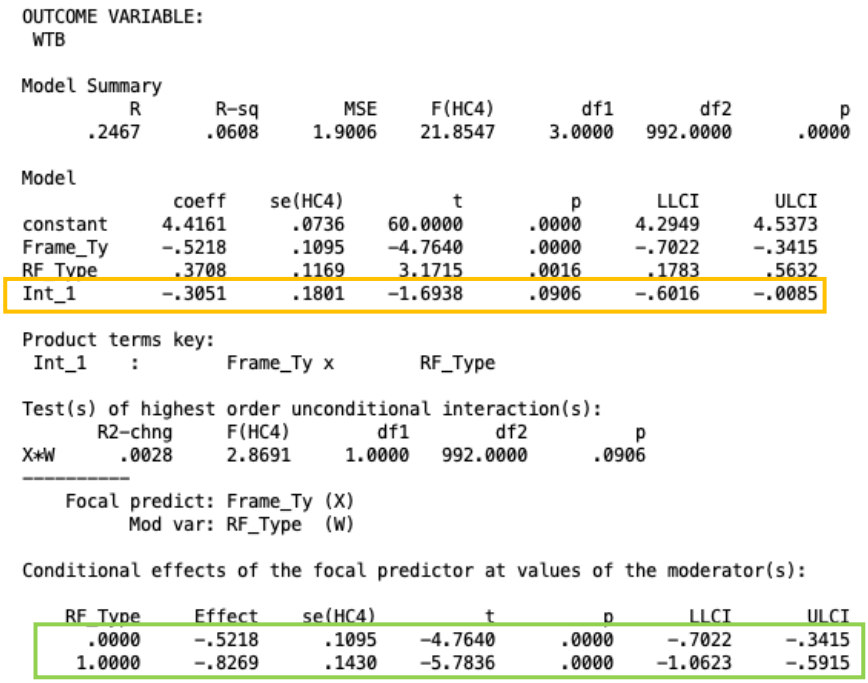
Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Product_type	Sphericity Assumed	55.261	1	55.261	22.932	<.001	.085
	Greenhouse-Geisser	55.261	1.000	55.261	22.932	<.001	.085
	Huynh-Feldt	55.261	1.000	55.261	22.932	<.001	.085
	Lower-bound	55.261	1.000	55.261	22.932	<.001	.085
Error(Product_type)	Sphericity Assumed	597.628	248	2.410			
	Greenhouse-Geisser	597.628	248.000	2.410			
	Huynh-Feldt	597.628	248.000	2.410			
	Lower-bound	597.628	248.000	2.410			
Framing	Sphericity Assumed	186.857	2	93.428	100.089	<.001	.288
	Greenhouse-Geisser	186.857	1.727	108.200	100.089	<.001	.288
	Huynh-Feldt	186.857	1.738	107.515	100.089	<.001	.288
	Lower-bound	186.857	1.000	186.857	100.089	<.001	.288
Error(Framing)	Sphericity Assumed	462.995	496	.933			
	Greenhouse-Geisser	462.995	428.285	1.081			
	Huynh-Feldt	462.995	431.013	1.074			
	Lower-bound	462.995	248.000	1.867			
Product_type * Framing	Sphericity Assumed	23.929	2	11.964	15.008	<.001	.057
	Greenhouse-Geisser	23.929	1.711	13.983	15.008	<.001	.057
	Huynh-Feldt	23.929	1.722	13.896	15.008	<.001	.057
	Lower-bound	23.929	1.000	23.929	15.008	<.001	.057
Error (Product_type*Framing)	Sphericity Assumed	395.405	496	.797			
	Greenhouse-Geisser	395.405	424.392	.932			
	Huynh-Feldt	395.405	427.050	.926			
	Lower-bound	395.405	248.000	1.594			

Fig. 4 – Test of Within-Subjects Effects

12.2. Hayes PROCESS output

Table 1 – explanation abbreviations

Abbreviation	Meaning	Computed variable
Frame_Ty	Frame type	Intrinsic = 0
		Extrinsic = 1
Product_Ty	Product type	Utilitarian = 0
		Hedonic = 1
RF_Type	Regulatory focus type	Prevention = 0
		Promotion = 1



```
OUTCOME VARIABLE:
 WTB

Model Summary
          R       R-sq        MSE      F(HC4)        df1        df2          p
      .2467      .0608     1.9006    21.8547     3.0000   992.0000      .0000

Model
              coeff    se(HC4)          t          p       LLCI       ULCI
constant     4.4161      .0736    60.0000      .0000     4.2949     4.5373
Frame_Ty     -.5218      .1095    -4.7640      .0000     -.7022     -.3415
RF_Type       .3708      .1169     3.1715      .0016      .1783      .5632
Int_1        -.3051      .1801    -1.6938      .0906     -.6016     -.0085

Product terms key:
 Int_1    :        Frame_Ty x        RF_Type

Test(s) of highest order unconditional interaction(s):
       R2-chng     F(HC4)        df1        df2          p
X*W      .0028     2.8691     1.0000   992.0000      .0906
----------
    Focal predict: Frame_Ty (X)
          Mod var: RF_Type  (W)

Conditional effects of the focal predictor at values of the moderator(s):

   RF_Type     Effect    se(HC4)          t          p       LLCI       ULCI
     .0000     -.5218      .1095    -4.7640      .0000     -.7022     -.3415
    1.0000     -.8269      .1430    -5.7836      .0000    -1.0623     -.5915
```

Fig. 5 – Hayes PROCESS output for Regulatory Focus Type on Frame Type

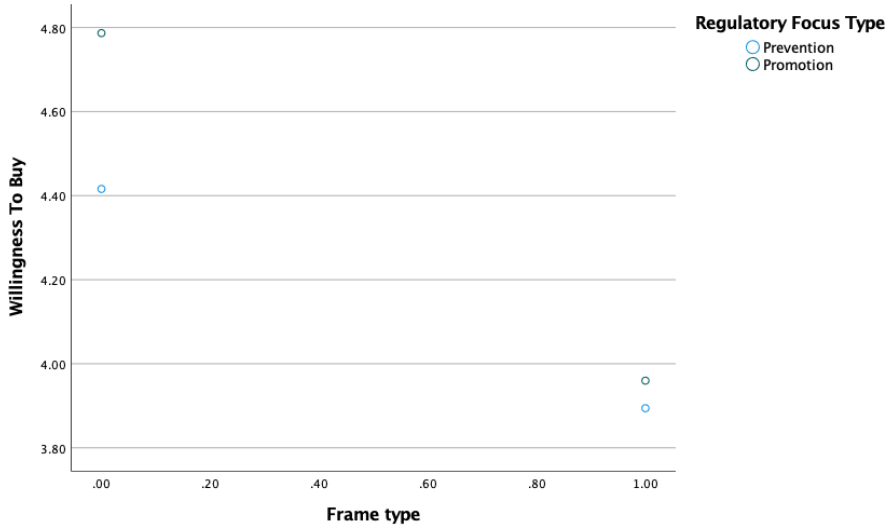


Fig. 6 – Graph indicating scores of willingness to buy for regulatory focus type for intrinsic (0) and extrinsic (1) goal framing

```
OUTCOME VARIABLE:
 WTB

Model Summary
          R       R-sq        MSE      F(HC4)        df1        df2          p
      .2635      .0694     1.8832    24.5528     3.0000   992.0000      .0000

Model
              coeff    se(HC4)          t          p       LLCI       ULCI
constant     2.8475      .4218     6.7507      .0000     2.1530     3.5419
Frame_Ty      .5117      .6365      .8040      .4216     -.5361     1.5596
RF_score      .3376      .0824     4.0993      .0000      .2020      .4732
Int_1        -.2274      .1248    -1.8230      .0686     -.4329     -.0220

Product terms key:
 Int_1    :        Frame_Ty x        RF_score

Test(s) of highest order unconditional interaction(s):
       R2-chng     F(HC4)        df1        df2          p
X*W      .0035     3.3232     1.0000   992.0000      .0686
----------
    Focal predict: Frame_Ty (X)
          Mod var: RF_score (W)

Conditional effects of the focal predictor at values of the moderator(s):

   RF_score     Effect    se(HC4)          t          p       LLCI       ULCI
     4.3638     -.4808      .1223    -3.9328      .0001     -.6821     -.2795
     5.1044     -.6493      .0871    -7.4561      .0000     -.7926     -.5059
     5.8451     -.8177      .1315    -6.2174      .0000    -1.0343     -.6012
```

Fig. 7– Hayes PROCESS output for Regulatory Focus Score on Frame Type (conditional effects at mean, -1 SD, 1SD)

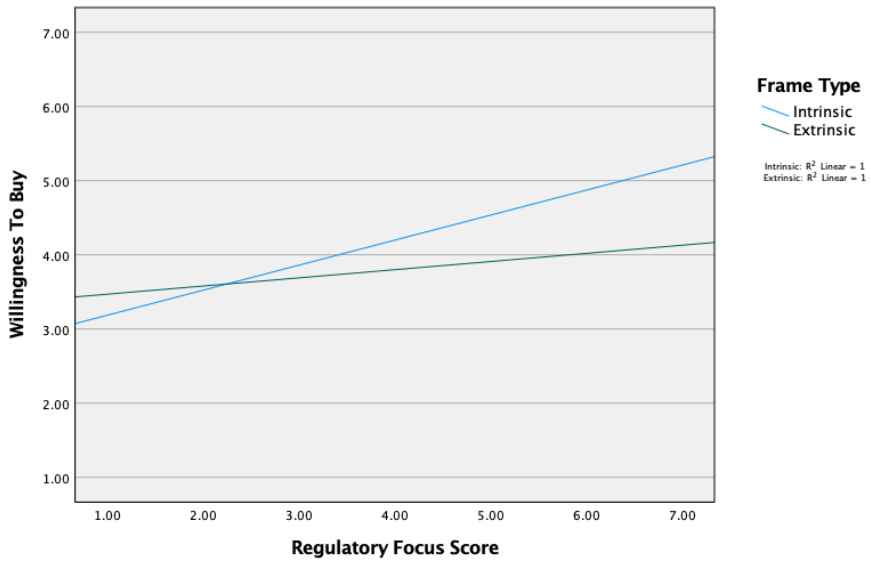


Fig. 8 – Graph indicating scores of willingness to buy for prevention/promotion focus for goal framing.

```
OUTCOME VARIABLE:
 WTB

Model Summary
          R       R-sq        MSE      F(HC4)        df1        df2          p
      .2083      .0434     1.9360     15.5254     3.0000   992.0000      .0000

Model
              coeff    se(HC4)          t          p       LLCI       ULCI
constant     4.4195      .0793    55.7088      .0000     4.2889     4.5502
Product_     -.5287      .1095    -4.8295      .0000     -.7090     -.3485
RF_Type       .2439      .1277     1.9096      .0565      .0336      .4542
Int_1        -.0514      .1824     -.2818      .7782     -.3517      .2489

Product terms key:
 Int_1    :        Product_ x        RF_Type

Test(s) of highest order unconditional interaction(s):
       R2-chng     F(HC4)        df1        df2          p
X*W      .0001      .0794     1.0000   992.0000      .7782
----------
    Focal predict: Product_ (X)
          Mod var: RF_Type  (W)

Conditional effects of the focal predictor at values of the moderator(s):

    RF_Type     Effect    se(HC4)          t          p       LLCI       ULCI
      .0000     -.5287      .1095    -4.8295      .0000     -.7436     -.3139
     1.0000     -.5801      .1459    -3.9767      .0001     -.8664     -.2939
```

Fig. 9 – Hayes PROCESS output for Regulatory Focus type on product type

```
OUTCOME VARIABLE:
 WTB

Model Summary
          R       R-sq        MSE     F(HC4)        df1        df2          p
      .2271      .0516     1.9194    18.3344     3.0000   992.0000      .0000

Model
             coeff    se(HC4)          t          p       LLCI       ULCI
constant    3.1872      .4449     7.1640      .0000     2.4548     3.9197
Product_    -.1678      .6373     -.2633      .7924    -1.2170      .8814
RF_score     .2614      .0866     3.0168      .0026      .1187      .4040
Int_1       -.0749      .1252     -.5984      .5497     -.2810      .1312

Product terms key:
 Int_1    :        Product_ x        RF_score

Test(s) of highest order unconditional interaction(s):
       R2-chng     F(HC4)        df1        df2          p
X*W      .0004      .3581     1.0000   992.0000      .5497
----------
    Focal predict: Product_ (X)
          Mod var: RF_score (W)

Conditional effects of the focal predictor at values of the moderator(s):

   RF_score     Effect    se(HC4)          t          p       LLCI       ULCI
     4.3333     -.4924      .1247    -3.9503      .0001     -.7371     -.2478
     5.1667     -.5549      .0889    -6.2389      .0000     -.7294     -.3803
     5.8333     -.6048      .1322    -4.5746      .0000     -.8643     -.3454
```

Fig. 10 – Hayes PROCESS output for Regulatory Focus score on product type

```
OUTCOME VARIABLE:
 WTB

Model Summary
          R       R-sq        MSE     F(HC4)        df1        df2          p
      .3321      .1103     1.8078    22.4199     7.0000   988.0000      .0000

Model
             coeff    se(HC4)          t          p       LLCI       ULCI
constant    4.2463      .0427    99.4186      .0000     4.1760     4.3166
Product_    -.5502      .0854    -6.4409      .0000     -.6908     -.4096
Frame_Ty    -.6493      .0854    -7.6006      .0000     -.7899     -.5086
Int_1        .2356      .1708     1.3791      .1682     -.0457      .5169
RF_score     .2239      .0612     3.6598      .0003      .1232      .3247
Int_2       -.0749      .1224     -.6122      .5405     -.2764      .1265
Int_3       -.2274      .1224    -1.8587      .0634     -.4289     -.0260
Int_4        .2674      .2447     1.0926      .2749     -.1355      .6703

Product terms key:
 Int_1    :        Product_ x        Frame_Ty
 Int_2    :        Product_ x        RF_score
 Int_3    :        Frame_Ty x        RF_score
 Int_4    :        Product_ x        Frame_Ty x        RF_score
```

Fig. 11 – Hayes PROCESS output for Regulatory Focus score on interplay product type and frame type

12.3. Control variables (demographics) on the relationship between product/frame and WTB

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	5.034	.183		27.558	<.001
	UT_HED	-.550	.084	-.194	-6.568	<.001
	INTR_EXTR	-.649	.084	-.229	-7.750	<.001
	Age=18-24	-.095	.117	-.033	-.814	.416
	Age=35-44	-.124	.214	-.022	-.580	.562
	Age=45-54	.162	.210	.032	.770	.442
	Age=55-64	-.312	.240	-.054	-1.299	.194
	Age=65 or older	2.018	.723	.127	2.791	.005
	Gender=Female	.175	.090	.060	1.947	.052
	Gender=Other	-1.154	.492	-.073	-2.347	.019
	Level_of_education=High school diploma	.116	.155	.028	.745	.456
	Level_of_education=Associates degree	-.463	.252	-.061	-1.839	.066
	Level_of_education=Bachelor's degree	-.206	.106	-.072	-1.939	.053
	Marital_status=Single	-.076	.098	-.026	-.771	.441
	Marital_status=Married	.170	.164	.046	1.039	.299
	Marital_status=Divorced	.454	.717	.020	.633	.527
	Marital_status=Other	2.109	.670	.094	3.149	.002
	Employment_Status=Employed	.103	.127	.036	.812	.417
	Employment_Status=Unemployed	-.338	.229	-.047	-1.478	.140
	Employment_Status=Retired	-1.457	.528	-.129	-2.762	.006
	Employment_Status=Other	-.101	.380	-.009	-.266	.790
	Annual_income=€20,000 -€39,999	-.050	.141	-.013	-.356	.722
	Annual_income=€40,000 - €59,999	-.335	.175	-.068	-1.912	.056
	Annual_income=€60,000 - €79,999	-.500	.168	-.119	-2.980	.003
	Annual_income=€80,000 and higher	-.343	.171	-.085	-2.008	.045
	Annual_income=Other	.521	.252	.068	2.064	.039

a. Dependent Variable: Willingness_to_buy

Fig. 11 – Linear regression including socio-demographic factors

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	4.846	.074		65.093	.000
	UT_HED	-.550	.086	-.194	-6.400	<.001
	INTR_EXTR	-.649	.086	-.229	-7.553	<.001

a. Dependent Variable: Willingness_to_buy

Fig. 12 – Linear regression with only independent variables