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I’m my own mannequin- The impact of AR on self-concept

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BUSINESS
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Resumo

A realidade aumentada (AR) está a tornar-se uma ferramenta cada vez mais importante para os marketeers. As aplicações que permitem experimentar roupa através de AR têm ganho cada vez mais importância, apresentando várias vantagens em relação à experimentação em loja física. Ao usar estas aplicações existe um grande foco na pessoa e no seu autoconceito, como a aparência. Esta dissertação examina o impacto de aplicações que utilizam a realidade aumentada para experimentar produtos, neste caso óculos, no autoconceito, como a congruência com o "eu" ideal. Através de um questionário online, os participantes foram expostos a dois de quatro cenários: aplicação de AR ou experiência no *website*, e, apresentação de uma *review* positiva ou negativa. Os resultados demonstram que consumidores com baixa auto-estima apresentam maior congruência com o "eu" ideal ao usar AR (vs *website* normal) e consumidores de alta auto-estima revelam menor congruência com o "eu" ideal quando comparados a baixa auto-estima. Além disso, os resultados indicam que a congruência com o "eu" ideal afeta a intenção de compra e a confiança no produto, enquanto a confiança no produto modera a relação entre a congruência com o "eu" ideal e a intenção de compra. A diagnosticidade das *reviews* é importante para as respostas dos consumidores mediando a relação da congruência ideal e intenção de comprar, quanto maior a diagnosticidade das avaliações, maior a intenção de compra sendo ainda revelado que as *reviews* positivas impactam positivamente a atitude do produto. A presente dissertação contribui positivamente para a literatura relativa aos tópicos de realidade aumentada e autoconceito, bem como para *reviews* (positivas vs negativas).

Palavras-chave: Autoconceito, Auto-estima, Auto congruência, Aparência, Testemunhos, Reviews, Diagnosticidade de reviews, Intenção de compra

JEL Classification System: M30 (general) M31 (Marketing)

Abstract

Augmented reality (AR) is becoming an important technology for marketeers. Covid-19 pandemic triggered e-commerce and nowadays virtual try-on apps presents a lot of advantages in relation to physical try-on. These try on apps involve the attention on the 'self'. This research examines the impact of AR try on apps on consumers self-concept, such as the ideal self-congruence. Through an online survey, consumers are exposed to two of four scenarios: AR app or website experience, and positive review vs negative review. Furthermore, we uncover that low self-esteem consumers presence higher ideal self-congruence when using AR (vs normal website) while high self-esteem consumers experienced lower ideal self-congruence when comparing to low self-esteem. Also, results indicate that ideal self-congruence indeed impacts purchase intention and confidence in fit whereas confidence in fit moderates the relationship between ideal self-congruence and purchase intention. Testimonials diagnosticity are important to consumers responses, they moderate the relation between ideal self-congruence and purchase intention, the higher the diagnosticity of reviews the higher the purchase intention and positive one's impact positively product attitude. The present dissertation positively contributes to the literature on AR and the self-concept as well as reviews valence.

Keywords: Self-concept, Self-esteem, Self-congruence, Appearance, Testimonials, Reviews, Review diagnosticity, Purchase intention

JEL Classification System: M30 (general) M31 (Marketing)

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1. Introduction

Smartphones offer many interactive technologies capable of creating interesting and memorable experiences, the global number of mobile phone users are growing steadily, and the number of app downloads is also projected to increase (Statista, 2021). The mobility allows consumers to access e-commerce without time or space limitations, good virtual interactions can lead to positive psychological effects and responses (Kim & Forsythe, 2008).

With the technologic advances, AR apps have been increasing in number and quality (Poushneh &Vasquez-Parraga, 2017). Only recently retailers understood the power of AR on customer satisfaction and purchase intention and that together with AR developers they can define effective marketing strategies (Poushneh &Vasquez-Parraga, 2017). According to Rauschnabel et al. (2019), augmented reality (AR) will be similarly indispensable in marketing and the consumer has part of the consumption cycle. So, in order to strive, marketers need to use AR into their strategies and understand the needs and impacts on consumers.

1.1.Relevance of the topic

Covid-19 world pandemic triggered e-commerce growth leading brands and retailers to design a better digital channel, improve the online experience, and provide a real omnichannel experience to customers (Nielsen, 2021). With such situation convenience become even more important for customers who expect more from retailers. One of the big issues of online purchase is the deficient product information to properly evaluate the product thus increasing the risks of buying (Kim & Forsythe,2008). AR virtual try on can help reducing the risks allowing a more accurate evaluation and at the same time provide an entertain experience (Kim & Forsythe,2008). Looking for online opinions and reviews from other customers has become a bigger part of purchasing behavior to make a better decision (Li & Zhan, 2011). Online costumer reviews about the fit are fundamental to give other more information regarding product garment characteristics and reduce doubts (Shin et al., 2020).

1.2.Research Questions

Extant literature on AR concerning the marketing field, primarily focused on technological parts, and user acceptance models (Fan et al., 2020). In AR try on services technology is not the only factor that influences how consumers perceive high body-involving products, its mandatory to explore the psychological factors (Yim & Park, 2017). This study aims to explore the research made by Javornik et al. (2021) and expand to both genders by using a sunglass try on app, adding to the study the implications of ideal self-congruence on purchase intention, as well as testimonials and confidence in the fit. Therefore, with the growing importance of AR on online shopping and the under explored phycological factor of such technology, the following research questions were formulated:

RQ1: How does Self-esteem impact ideal self-congruence when seeing the oneself in an AR try on app?

RQ1 aim is to see if self-esteem moderates the relationship between the AR try on app and the level of ideal self-congruence. The goal is to see if AR modifies the levels of ideal self-congruence and how self-esteem influences that effect.

RQ2: How does ideal self-congruence augmentation impacts purchase intention?

When buying products people evaluate how congruent they are with their ideals (Javornik et al., 2021) and according to many authors contributing to the "ideal self" can produce better responses (Kaur & Anand, 2021; Suh et al., 2019).

RQ3: How does ideal self-congruence augmentation, confidence in fit and purchase intention relate to each other? Does confidence in fit mediate the relationship between ideal self-congruence and purchase intention?

According to Merle et al. (2012), virtual try on doesn't produce greater confidence in fit just alone, for such to happen the consumer needs to perceived the augmented image has self-congruent. Besides, many authors revealed that contributing to self-congruence produces positive responses (Wasseler et al., 2019; Bajac et al., 2018; Graeff, 1996; Kim, 2015; Javornik et al., 2021).

RQ4: How do testimonials influence consumer responses? Do testimonials impact purchase intention? Do negative testimonials have a greater impact on purchase intention than positive ones?

Due to the potential risks of online shopping many consumers try to reduce their doubts by seeing online reviews (Zhang et al., 2018), the point here is to try to understand if consumers would trust more the image, they see on the AR app by reading some reviews. Also, it is intended to explore if they value more positive or negative testimonials.

1.3. Objectives and Motivation

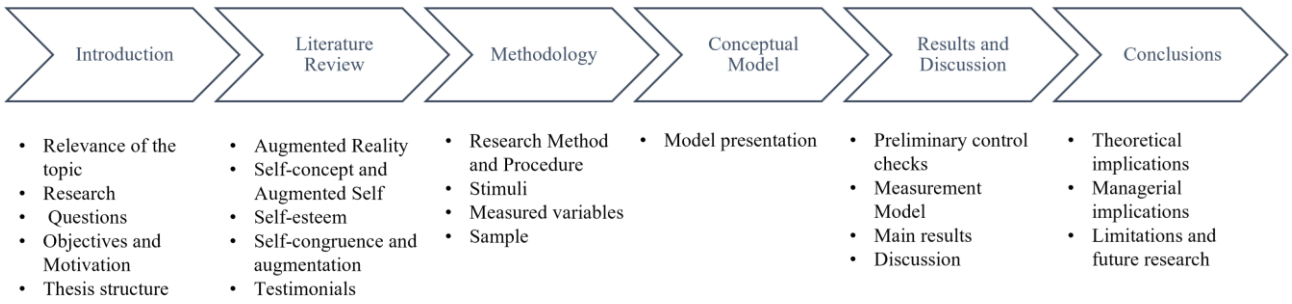
To e-commerce a going on challenge is the inability to imagine the experience of using a product or service, frequently result in product returns and dissatisfaction with the purchase experience (Heller et al.,2019). AR can help by providing a richer sensory experience. Virtual try on presents lots of advantages in relation to physical try on, it's a faster process that can be done at home, allows to see unavailable products in store and it's easier to verify the try on results from multiple viewpoints that may not be possible in real try on (Marelli et al., 2019). Reviews, testimonials, with internet growth are playing an increasingly important role of information sources. Many studies reveal that testimonials can shape and form customers' attitude toward products (Li & Zhan, 2011) thus the insecurity about the reality of products seen in AR can be overcome with such consumers opinions.

By using AR try on apps there are lots of factors involved, not just the technology, that is the most explored factor, but also the psychological side that affects how consumers interact and influence their responses (Yim & Park, 2017). In opposition to mannequins or models, in AR virtual try on consumers are seeing themselves with augmented objects. Thus, the objective is to understand how does that affect the self-concept? More specifically it's intended to analyze their self-congruence according to their self-esteem, what role confidence in the fit plays and how do testimonials impact purchase intention, do negative testimonials have greater impact? In sum, the goal is to understand how self-esteem moderates the AR impact on self-congruence, how ideal self-congruence and confidence in fit relate and how these factors affect purchase intention and how reviews can impact such intention to buy. With these knowledge marketers will know how to adapt the AR strategies to each consumer because they react differently, thus they can provide them a more personalized experience.

1.4.Thesis structure

This dissertation is structure in six chapters. The first chapter is the introduction where is addressed the relevance of the topic, the research problem and the main objectives and motivations. Chapter two provides a review of the previous literature on which this dissertation is based, exploring the concepts of Augmented Reality, Self-concept, Augmented Self, Self-esteem, Self-congruence, and Testimonials/reviews. During the exploration of these constructs research hypothesis are established and clarified in this chapter, as well as the presentation of the conceptual model. On the chapter three is presented the methodology used to conduct the study, as well as the collection of data, questionnaire structure, sample obtained and scales. The fifth chapter includes the measurement model and the presentation of the main results in order to obtain the validation of the hypothesis defined. Finally, the six chapter is where the main conclusions are made, as well as theoretical and practical implications, culminating with the research limitations and recommendations for future research.

Figure 1- Thesis structure



Source: authors' elaboration

2. Literature Review

2.1.Augmented Reality

According to Javornik (2016), AR has the capability to modify or augment the visual image of reality in real time, making this technology unique and not just another simple interactive technology. AR can be defined as a real-time direct or not direct representation of the physical world allowing users to see real environment around but augmented with virtual objects, creating a mixed reality in real time to improve user's experience (Mota el al., 2018). Azuma (1997) defines AR as *"a variation of Virtual Environments (VE), or Virtual Reality as it is more commonly called."* (p.355). In opposition to VR, virtual reality, AR is closer to physical reality because only a part of the environment gets changed with the virtual objects and it can also react to its changes (Javornik, 2016).

Rauschnabel et al. (2019) specified that AR is used as a strategic tool that integrates digital information into the user perception of the real world, can be combined with other media, such as interactive screens and smart devices (Javornik., 2016a), helping to raise awareness about the consumer benefits to achieve goals defined by the organization. Also, AR is more easily incorporated into consumer's quotidian, this technology is easily integrated into platforms like smartphones (Heller et al., 2019) and due to interactivity and immersive experiences can generate more interesting and superior shopping experiences (Javornik, 2016).

Mobile AR applications have the same interactive capabilities as the online websites but also offer services adapted to the user location, feedback, and the user can search anytime anywhere, having no time or space limitations (Do et al., 2020). If the virtual touch points with the consumer are well developed it can lead to positive psychological impacts and responses (e.g Rauschnabel et al., 2019). Rauschnabel et al. (2019), stated that AR will be part of the consumption cycle and the marketing ground in an essential way.

Online shopping can have some disadvantages such as not being able to touch or properly visualize the product, thus being a special issue in fashion industry (Kim & Forsythe,2008). AR helps filling this gap by the augment image, lowering perceived psychological distance between consumers and virtual product (Poushneh, 2021). This technique, virtual try on, places lots of advantages in relation to physical try on, it's a faster, can be done at home, people can try on

products that don't exist in some stores, and allows users to see the fit in different angles that may not be so easy in real try on (Marelli et al., 2019).

Research on AR mainly focused on the technological aspects and user acceptance models of AR, instead of understanding the needs, experience, and moderating factors of consumer behavior (Fan et al., 2020). Augmented reality has been highly studied regarding the technology features capable of impacting consumer responses, since the interactivity attached to such technology allows consumers to have an experiential consumption (Poushneh & Vasquez-Parraga, 2017; Kumar, 2021). For instance, Wang et al. (2021) and Javornik (2016a) studied AR characteristics and its impact on consumer behavior. According to Wang et al. (2021) aesthetics features are especially important in fashion industry and- besides the better shopping experience- AR encourage consumer's exploratory behavior, increasing the purchase intention. Watson et al. (2018) suggested that augmentation creates a more positive emotional response by providing a rich sensory experience affecting consumer responses, such response to AR differs according to user's shopping motivations and level of individualism.

Consistent with the previous research, other big focus of AR scholars is towards customer experience. For instance, Poushneh and Vasquez-Parraga (2017) proved that AR provides the user with enriched product information, empowering the consumer with limitless interactions resulting in higher satisfaction and willingness to buy. Brannon et al. (2021) showed that AR has unique capabilities to contribute to the flow (high state of involvement; immersive), producing benefits such as enhanced cognitive processing, enjoyment, and satisfaction.

Privacy issues have also been core research recently (Kumar, 2021). Smink et al. (2019) concluded that online try on involving the self raises the intrusions level but that is accepted by consumers because it offers improved product visualizations. Feng and Xie (2019) settled that consumers who care highly about privacy perceived the virtual try on self-view as intrusive but by presenting them more controls over privacy settings can reduce such intrusiveness thus resulting in better attitudes toward the app and brand as well as intention to buy. According to Hilken et al. (2017), AR spatial presence provides greater decision comfort regarding the purchase, but this it is jeopardized by consumers privacy concerns. Smink et al. (2020) stated that AR intrusive experience may have negative consequences in self-viewing augmentation, producing negative behavioral intention regarding the app and contributed to a more negative brand attitude and purchase intention.

AR allows consumers to experience products and brands in a realistic environment but also in a more immersive way, thus marketers are adopting AR into their business models to integrate an omnichannel (Javornik, 2016). However, to a better integration of such technologies, marketers need to understand more about inherent aspects of such method and there has been limited research on potential moderation effects of psychological factors linked to body related variables on AR try on apps (Merle et al., 2012). Yet, scholars have brought new studies that join the AR and self-related concepts since online retailers of high body-involvement products need to devote more time to understand such factors (Merle et al., 2012).

Javornik et al. (2021) were the firsts to explicitly study the effect of AR on the self-concept, they defended that AR mirrors gives rise to an augmented self, "*A potential change of the self-concept (ideal, actual or gap between them) as a result of viewing a visually modified representation of oneself in an AR mirror*" (p. 173). This activation interrupts the knowing process of comparing the actual self to a desired ideal when viewing the self in a regular mirror, viewing a modified self can change the person's perception of how he really looks, or it can change their ideal self thus changing the ideal-actual gap and leading to compensatory behavior (Mandel et al, 2017). Lower self-esteem consumers are more open to different representations of the oneself, reducing the gap and engaging more in variety seeking (Yim & Park, 2019), for high self-esteem consumers they accept more who they really are, being less behavioral plasticity (Javornik et al., 2021), they rather be consistent with the existing self-concept that they accept and like, having a bigger gap. Javornik et al. (2021) underline the importance of self-congruence of augmented image with one's ideal appearance, when consumers feel that products are congruent with the ideal self, the ideal-actual attractiveness gap decreases, being more confident with their choices regarding the products.

Other research also linked AR and the self, for instance Yim and Park (2019) examined that unfavorable body image consumers engaged more in AR, having more favorable attitudes, and superior adoption intentions than participants using the traditional website, but for favorable body image consumers the variables didn't show such differences. AR- virtual try on allows to emerge in a fantasy creation where the users overcome physical shopping concerns as privacy problems, this way AR might be more interesting to individuals with an unfavorable body image (Yim & Park 2019). Thus, such consumers are less inclined to interactivity and irritation in forming their intention to adopt AR (Thompson & Chad, 2002). Favorable body image participants enjoy high interactivity AR because it allows them to express themselves more by customizing their appearance but irritation interrupts users' media experience which

can affect the process of enhancing their self-image, reducing the intention to adopt AR (Yim & Park, 2019).

Smink et al. (2020) study revealed that spatial presence and perceived personalization on AR positively affected attitude and behavioral intention. Personalization produces positive effects on brand responses for self-augmentation apps and spatial presence influences more such responses on apps that augments the surroundings (Smink et al., 2020). In contrast, on Rauschnabel et al. (2019) study wasn't shown any effects of AR on brand attitude because AR main goal is to help users to better visualize products, being less focused on the brand.

Baek et al. (2018) pointed that viewing the self on the AR virtual mirror improves self-brand connections and purchase intention: when seeing themselves virtually trying the products consumers felt more connected and therefore more likely to purchase when compared with seeing models wearing the product. It was also found that narcissism plays a moderating role on such relation (Baek et al., 2018).

Javornik and Pizzetti (2017) evoked that AR has a significant effect on how consumers perceived themselves, increasing self-esteem, and how they perceive the product, experiencing stronger ownership of the product. These results support the claim that AR allows the rise of the augmented self. Being able to personalize more the looks increased participants self-esteem, but the claimed augmented self emerges only when customers are already knowledgeable about the category (Javornik and Pizzetti., 2017). Consumers that are not experts do not experience the emergence of the augmented self and consequently personalized AR does not increase their intentions to purchase (Javornik and Pizzetti., 2017).

Rauschnabel et al. (2019) studied avoids the app-centric approach. In this study changes in brand attitude are driven by high levels of inspiration, consequence of the quality and integration of virtual content on the consumer's perception of the real-world. Inspiration was also object of study of Hinsch et al. (2020) that outlined how AR apps can inspire users, and how psychological and behavioral inspiration (inspired by and inspired to) can be driven by AR technology.

While most of the studies uses lab experiments or retail spaces to study how AR impacts the consumer, Scholz and Duffy (2018) examined how consumers incorporate a branded app into their private space and into their sense of self. Public spaces may form more utility-oriented relationship and by using a personal space AR can develop a close relationship between the consumer and brand (Scholz & Duffy, 2018). Scholz and Duffy (2018) also suggest that the

final purchase decision depends on the AR environment, when taking home, on a more private environment, the final purchase decision is less important with a branded app, whereas fun and play are valued aspects.

2.2.Self-concept and Augmented Self

Self-concept was defined by American Phycological Association (n.d) as "*one's description and evaluation of oneself, including psychological and physical characteristics (…).*" in other words, self-concept is how people see, perceived, and evaluate themselves. Graeff (1996) own definition of self-concept emphasizes a recognition of personal capabilities, limitations, physical appearance, and the person personality traits. Accordingly, people behave certain ways to try to maintain and enhance the self-concept, where products can help on such goal.

Sirgy et al (2000) detailed that the self-concept is composed by four dimensions: actual self (how consumers see themselves), ideal self (how consumers would like to see themselves), social self (how consumers think they are seen by others), and ideal social self-image (how consumers would like to be seen by others). According to Malär et al. (2011), the self-concept is composed by the actual self and the ideal self. Thus, such dimensions affect the self-concept and self-congruity: the actual self-congruity refers to match between brands/products and the individual, is about being consistent with the oneself to protect a personal identity. The motive here is the self-consistency, being primarily significant when consumers have strong beliefs about their own identity, are certain about who they are (Sirgy, 2018). The ideal self-congruity is moved by self-esteem motive, people try to enhance such concept and thus engage in some activities trying to reach the ideal state, boosting self-esteem (Sirgy, 2018).

Whereas ideal-actual gap compares two self-dimensions, self-congruence compares the self-concept and an object or brand (Malär et al., 2011). Sirgy (1982) pointed that, consumers who perceive the product image to be congruent with their self, are in agreement with the self-concept, are likely to be motivated to buy the product in order to maintain the consistency between behavior and self-image beliefs and to avoid the conflict generated from behavior/self-image belief discrepancies. So, many authors agree that the more congruent the product is with the self-concept, the greater is the likelihood that the product will satisfy a consumer and the consumer will positively evaluate it (Peng et al., 2012; Graeff, 1996; Kim, 2015). Incongruity

with self-concept may cause disagreement and psychological discomfort affecting the self (Sirgy, 2018).

Many beauty brands want to communicate how their products will enhance physical appearance, contributing to the "ideal self" believing that the ideal self-congruity can produce better responses (Kaur & Anand, 2021; Suh et al., 2019). However nowadays brands start to communicate the importance of accepting and contributing for the actual self, producing a strong emotional connection between the brand and the consumer (Malär et al., 2011; Sirgy 1982). Malär et al. (2011) and Japutra et al. (2019) agreed that contributing to the actual self-congruence generated higher levels of emotional brand attachment. Appealing to the ideal self can still be a good strategy to increase emotional brand attachment within the presence of low self-esteem (Malär et al., 2011). Javornik et al. (2021) stated that for AR try on shopping the ideal self-congruence has more impact since consumers will search for products that help them achieve the ideal.

Islam et al. (2018) stated that self-incongruity (ideal or actual) leads to brand hate. To Bajac et al. (2018) product-personality congruence and user-image are influential on consumer behavior such as product evaluation, the more congruence perceived more likely they are to evaluate positively and to buy. Wasseler et al. (2019) detailed that congruity with the destination brand powerfully influenced brand attitude and ambassadorial behavior.

According to Javornik and Pizzetti (2017) and Javornik et al. (2021), the virtual elements of virtual try on mirrors appear as a realistic part of the self, allowing the emerge of augmented self. Accordingly, when consumers see themselves in the AR mirror, they can increase self-esteem and product psychological ownership. Being so, the same can happen when using an AR app try on sunglass, a high body-involving product (Yim & Park, 2019).

2.3.Self-esteem

Self-esteem can be defined as the overall evaluation of a person's worthiness (Rosenberg 1979 as cited in Malär et all., 2011), high self-esteem people value and accept who they are and all the flaws, low self-esteem is an unfavorable definition of the self (Malär et al., 2011). Accordingly, high self-esteem consumers rely on self-verification, they are inclined to brands that are congruent with their actual self, helping them feel good about themselves and building

stronger brand connections. On other side low self-esteem want to seek a more attractive ideal self, so they rely on self-enhancement (Malär et al., 2011). Stuppy et al. (2019) suggested that consumers with low self-esteem prefer inferior products (lower quality) in opposition to high self-esteem consumers, because they pursue to verify their negative self-views. High-self-esteem consumers select products to enhance rather than verify themselves. It was also found that high actual-self congruence generated higher emotional brand attachment in the presence of high self-esteem (Malär et al., 2011).

Sirgy (1982, 2018) stated that self-esteem motive makes consumers purchase positively valued products and can arise for two reasons: to maintain a positive self-image, congruent with the self or to enhance themselves by approaching an ideal image, which drives the ideal self-congruity effects.

Appearance self-esteem can be defined has the person's worthiness related to own body weight and image; thus, low self-esteem consumers feel threaten when seeing an appearance related product on a mannequin, because mannequins show the standard of beauty, and these consumers feel like they can't achieve that (Argo & Dahl, 2017).

Bergagna and Tartaglia (2018) research showed that low self-esteem individuals make more social comparisons because they are uncertain about themselves, females with low self-esteem seem to spend more time on Facebook comparing them to others and to possibly increase their self-esteem (self-enhancement). Indeed, social comparison happens when individuals compare themselves with others on abilities or personal characteristics (Bergagna & Tartaglia, 2018).

According to Javornik et al. (2021) seeing the products on mannequins or comparing the self with others, social comparison, doesn't change the oneself appearance has in try on the products virtually or in physical shopping. AR mirrors do not reproduce an actual appearance because they virtually modified it (Javornik & Pizzetti, 2017). To connect such process with self-esteem the authors relied on the plasticity theory, individuals with low self-esteem are more likely to rely on external signs and to generalize negative feedback to their wider sense of self (Ferris et al., 2009), high self-esteem consumers have lower behavioral plasticity, accept more the external signs that are congruent with the oneself, since they embrace who they really are (Javornik et al., 2021). As suggested, AR mirror will change physical appearance in a realistic and slightly invasive way, since high self-esteem like who they are they will easier discard what they see, being less susceptible of self-enhancement activities, making the gap between the

ideal and actual self-grow (Javornik et al., 2021). For low self-esteem consumers, who aren't certain about the self and try to achieve an ideal, Javornik et al. (2021) concluded that the ideal-actual gap would reduce by seeing in the mirror what they could achieve.

2.4.Self-congruence and augmentation

According to Mandel et al. (2017), compensatory consumer behavior can reduce self-discrepancies, when a person perceives an inconsistency between the ideal and actual self, they can engage in compensatory consumer behavior to solve such discrepancies. To this discrepancy we call ideal-actual gap and can be related to the appearance, such discrepancy drives consumer behavior (Mandel et al., 2017). Higgins (1987), detailed on the self-discrepancy theory that consumers are motivated to line up their actual self with the ideal one. People consume product for its functionality, but also for it signaling value, helping to manage psychological shortages or threats (Zheng & Peng, 2014).

As mentioned, the ideal-actual gap compares the ideal self and the actual self and the self-congruence compares the self-concept with the product or brand (Malär et al., 2011). When searching for fashions products virtually, the ideal self-congruence is important has they search for product that contribute to the ideal self (Malär et al., 2011; Javornik et al., 2021). Low self-esteem consumers want to seek a more attractive ideal, so it's likely that they embrace more easily the image that the AR provides them reaching an image close to their ideal and giving them hope to achieve that (Javornik et al., 2021; Yim & Park, 2019). In opposition high self-esteem accept who they are so the augmented image is not so well accepted, so they experience an incongruence between their ideal and the AR image (Javornik et al., 2021). On AR try on ideal self-congruence is particularly important when browsing because they evaluate the virtual products by seeing the most congruent with the ideal appearance (Javornik et al., 2021). Also, according to the same authors, buying products on websites or by seeing mannequins doesn't change the oneself appearance has in trying on virtually or in physical shopping. Thus, the following hypothesis is formed:

H1: Self-esteem will moderate the effect of AR mirror on ideal self-congruence,

H1a: low appearance self-esteem consumers will experience significantly lower ideal self-congruence when using AR try on app vs buying on normal website

H1b: high appearance self-esteem consumers will experience significantly higher ideal self-congruence when using AR try on app vs buying on normal website

H1c: low appearance self-esteem consumers will experience significantly higher ideal self-congruence when comparing to high self-esteem consumers

Contributing to self-congruence can have benefits, as higher levels of emotional brand attachment (Malär et al., 2011), intention to buy (Sirgy, 1982) and produce higher satisfactions and positive evaluations (Wasseler et al., 2019; Bajac et al., 2018; Graeff, 1996; Kim, 2015). Javornik et al. (2021) confirmed that if consumers perceive the augmentation to be congruent with their ideal self it produces positive product responses, also, Sirgy (2018) revealed that the bigger the match between the brand/products image/personality and the consumer self-concept the greater the outcomes such has intention to buy, satisfaction, trust and willingness to advocate the brand. Therefore, we purpose that ideal self-congruence can increase purchase intention:

H2: Ideal self-congruence augmentation positively impacts purchase intention

Merle et al. (2012) found that if consumers find the image congruent with theirs self it becomes highly self-representing, they can have a better experience of the fit and easily form an impression. Thus, we suggest:

H3: Ideal self-congruence positively impacts confidence in fit

H4: Confidence in fit mediates the relationship between ideal self-congruence augmentation and purchase intention

2.5.Testimonials

With online shopping growing, consumers try to make their decisions easier based on online reviews. Due to the potential risks of online shopping (financial, performance, bad service) many consumers infer product quality and reduce uncertainty by referring to online reviews from other consumers (Zhang et al., 2018).

Online negative testimonials have been proved to have more impact than positive ones (Lee et al., 2008; Book et al., 2016; Shihab & Putri, 2018; Weisstein et al., 2017; Beneke et al., 2016; Le & Ha, 2021). Negative reviews can be more useful because allows the readers to understand potential risks about the product purchase and use (Yin et al., 2016).

Lee et al (2008) postulated that negative reviews have greater impact because such unfavorable information produces a perceived low-quality label, so such reviews are considered more useful to decide regarding a purchase. As the number of negative reviews increase, and the quality of such judgements, so does the negative attitude of consumers (Lee et al., 2008; Shihab & Putri, 2018).

Book et al. (2016) agreed that consumers give high importance to negative reviews since they are more salient and require more cognitive effort, but it need to be unanimous to affect the person's judgment.

Weisstein et al. (2017) concluded that negative reviews have a significant influence on product evaluation and purchase, an increased proportion of negative reviews lead to an increased perception of poor product performance and a decreased perception of product value. Also, high proportion of negative reviews have a significant negative impact on price perception and purchase decision when consumers have a purchase goal prior to browsing (Weisstein et al., 2017). In agreement with the author, Le and Ha (2021) revealed that negative reviews have bad results on attitudes towards products and sellers and negatively impacts the purchase behavior (Beneke et al., 2016; Le & Ha, 2021). So, negative reviews have been proved to be more influential than positive reviews, to this statement is called negativity bias or negativity effect (Shin et al., 2020; Kim et al., 2013).

However, there are some authors that revealed the power of positive online reviews. In opposition to negativity bias, some research exposed a positive confirmation bias, meaning that it confirms consumers prior expectations (Wickens & Hollands, 2000 as cited in Shin et al., 2020). In support of such theory, Zhang et al. (2010) study discovered that when individuals focus on their "ideal goals", as aspirations, consumers show a positivity bias, rating positive reviews as more persuasive than negative ones. In agreement, Shin et al. (2020), showed that positive reviews were more influent than negative reviews, when participants liked the product. Li and Zhang (2021) stated that consumers value positive reviews because the motive to read reviews is to seek for support in purchase decisions, the authors explained that when consumers are involved or with prior positive attitude towards the product, evaluated positive reviews more

favorably. In the tourism area, some authors revealed that positive reviews affected positively the attitude towards hotels and purchase intention (Ladhari & Michaud, 2015; Plotkina & Munzel, 2016).

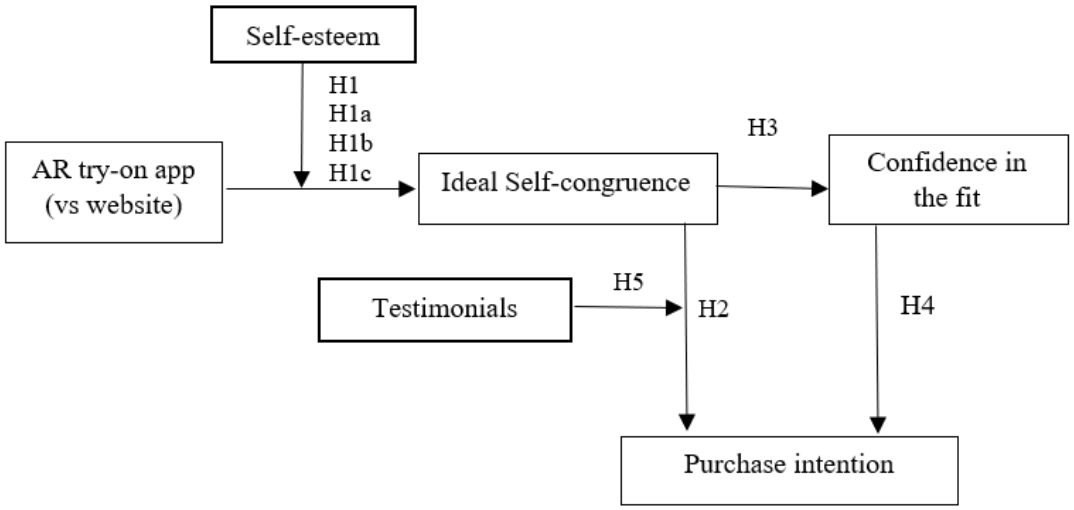
As showed, Testimonials have a strong impact on consumer behavior. With AR people might be suspicious regarding the products proximity to the reality of the product, the testimonials can be a way to overcome such inconvenient. Negative reviews have more empirical proves of being more powerful (Shin et al., 2020; Kim et al., 2013). Therefore:

H5: Testimonials moderate the relationship between ideal self-congruence and purchase intention such that negative testimonials have greater impact on purchase intention comparing to positive ones

3. Conceptual Model

In agreement with the literature review presented in the previous chapter and the defined hypotheses, the following research model was developed (Figure 2):

Figure 2- Conceptual Model



The aim is to understand the moderating role of self-esteem regarding the impact of AR virtual try on app on consumers ideal self-congruence, analyze the relationship between ideal self-congruence and confidence in the fit, as well as the relation of these two constructs with the purchase intention, and also see the impact of positive vs negative testimonials on buying intent.

Based on the previous argumentation, the following hypotheses are illustrated in the conceptual model:

H1: Self-esteem will moderate the effect of AR mirror on ideal self-congruence,

H1a: low appearance self-esteem consumers will experience significantly lower ideal self-congruence when using AR try on app vs buying on normal website

H1b: high appearance self-esteem consumers will experience significantly higher ideal self-congruence when using AR try on app vs buying on normal website

H1c: low appearance self-esteem consumers will experience significantly higher ideal self-congruence when comparing to high self-esteem consumers

H2: Ideal self-congruence augmentation positively impacts purchase intention

H3: Ideal self-congruence positively impacts confidence in fit

H4: Confidence in fit mediates the relationship between ideal self-congruence augmentation and purchase intention

H5: Testimonials moderate the relationship between ideal self-congruence and purchase intention such that negative testimonials have greater impact on purchase intention comparing to positive ones

4. Methodology

4.1.Research Method and Procedure

To test the previous hypothesis, the research procedure involves one survey divided into two different groups: one group of respondents will be exposed to the AR try on app, where they pretend to buy a pair of sunglasses, and another group will be shopping in a normal website.

The app of Augmented Reality in use is from Rayban glasses website (Rayban, 2022) and it can be accessed through the browser on computer or smartphones, to reduce the probability of respondents can't install the application for multiple reasons. Participants will try on the sunglasses with AR and will have the normal online purchase experience of seeing them on the website, to compare both methods of buying. Due to potential privacy issues and to have trustworthy results, the experimentation will all happen when consumers find themselves in the comfort of their homes, a private space.

The questionnaire is divided into 3 parts, the first one is about understanding consumers self-concept as their self-esteem and ideal self. Next, respondents are attributed to one of two scenarios (with or without AR), where is also measured some constructs about their self-concept. On the third part, the respondents are exposed to positive or negative reviews (different scenarios) regarding the glasses and have to classify their attitude toward them having such reviews in account. Such testimonials are text based, to reduce potential distractions from image-based reviews. Lastly, they are inquired about their intention to buy the glasses. Overall, the survey includes four scenarios, 2 with AR and 2 without AR, then each scenario will have a positive and a negative review to analyze better which one has more impact on the consumer.

After using the app and the website, the participants will be asked to respond to a survey, through Qualtrics (see Appendix A- Survey).

4.2.Stimuli

Sunglasses have been witnessing a growth, driven by the increased consumer awareness and demand for protection against UV radiation and the growing popularity of sunglasses as a fashion accessory (Mordor Intelligence, nd). Besides that, sunglasses are representative of high

body-involving products, which, according to Rosa et al. (2006) high body-involving products are products that demand high connection with body-related information, such as feel, fit and, also, safety. Fashion industry thus is a good example of such involvement.

Consumer's personal space, as their home, provides them to with more meaningful interactions, express and experiment better the oneself in a more personal and supportive way (Scholz & Duffy, 2018), thus it makes more sense to explore AR impacts on the self at consumer's comfort zone, their intimate space. A pre-test was conducted with 5 individuals to analyze the content validity of the questionnaire. Only a very few adjustments were made.

4.3.Measured variables

Before taking the survey, respondents were inquired about AR familiarity in order to understand potential deviations in answers according to their prior knowledge on such technology.

In the first instant is important to understand how participants see themselves, in regards of appearance self-esteem. Thus, based on the scale of Heatherton and Polivy, (1991) and Javornik et al. (2021), on a 7-Point Scale, the participants were asked "I feel satisfied with the way my face looks right now", "I feel that others respect and admire me ", "I am dissatisfied with my looks ", "I feel good about myself.", "I am pleased with my appearance right now" and "I feel unattractive" to determine the level of self-esteem. Ideal attractiveness was analyzed by asking "I would ideally like to be extremely attractive", "I would ideally like to be extremely good looking", "I would ideally like to be extremely beautiful" and "I would ideally like to be extremely pretty" (Javornik et al., 2021, Heine & Lehman, 1999).

Then, participants were randomly assigned to the use of the website, or the AR try on app and answered the same questions about the chosen/ favorite glasses.

To analyze the self-concept, the scale of Heine and Lehman (1999) was adopted, enquiring consumers "I am extremely attractive", "I am extremely good looking", "I am extremely beautiful" and "I am extremely pretty" to assess actual attractiveness to assess actual attractiveness. The Ideal self-congruence with the augment self was measured on a scale from 1 (Strongly Disagree) to 7 (Strongly Agree) using the questions "When I see my face in the app is consistent with how I would ideally like to see myself ", "The image of my face in the app reflects who I would ideally like to be", and "My reflection in the app is the image of how I

would ideally like to look" adapted from Merle et al. (2012) and Javornik et al. (2021). In the website case. The same questions were asked but asking consumers to imagine how they would look with the glasses on.

Regarding the Confidence in apparel fit/glasses, from "I am 100% sure (100% chance)" to "I am 0% sure (no chance)" the consumers answered the following questions about the degree of confidence if they had bought the glasses "The glasses will fit right", "The glasses will look good on me", "The glasses will match my style" and "These glasses will make the right impression", adapted from Merle et al. (2012).

In order to understand testimonials/reviews impact, after being exposed to a negative or a positive review, consumers had to respond to "The negative/positive review presented improved my ability to make a decision as to whether or not to buy the glasses.", "The negative/positive review presented provide me with insights into whether or not I would like this product", "The negative/positive reviews contain useful information about the glasses", adapted from (Li et al., 2013; Jiang & Benbasat et al., 2004; Le & Ha, 2021). These questions evaluate perceived diagnosticity, based on the category diagnosticity theory, in other words they evaluate the informational cues that have an effect on impression formation and further on the behavior (Le & Ha, 2021). One of the suppositions of such theory is that different people consider different weights to evaluate the helpfulness of informational signs (Le & Ha, 2021).

Participants also answered questions regarding Product Attitude. This construct was measured by a seven-point semantic differential scale anchored by *favorable/unfavorable*, *good/bad*, *effective/ineffective*, *reliable/unreliable,* and likelihood to have a side-effect (Chae & Hoegg, 2013) and was specially asked when reading the reviews positive vs negative.

To assess consumers' purchase intention, was used a seven-point semantic differential scale from Spears and Singh (2004), anchored by *Never/definitely*, *Definitely do not intend to buy/definitely intend*, *Very low/high purchase interest*, *Definitely not buy It/ definitely buy it* and *Probably not/probably buy it.*

Table 1 summarizes all the scales authors and items in the model.

Table 1- Scales authors and number of items

Variable	Scale's Author	Nª of items
Appearance Self-esteem	Heatherton and Polivy, (1991), Javornik et al. (2021)	6
Ideal attractiveness	Javornik et al. (2021), Heine & Lehman (1999)	4
Actual attractiveness	Heine and Lehman (1999	4
Confidence in fit	Merle et al. (2012).	4
Ideal self-congruence	Merle et al. (2012) and Javornik et al. (2021)	3
Purchase intention	Spears and Singh (2004)	5
Perceived diagnosticity of reviews	Li et al. (2013); Jiang and Benbasat et al. (2004); Le and Ha (2021)	3
Product Attitude	Chae and Hoegg, 2013).	3

Source: authors' elaboration

4.4.Sample

To conduct the proposed research, a survey was released on Social Media Platforms as Linkedin, Instagram, Facebook, Email and Amazon Mechanical Turk. It was registered a total of 222 valid responses. 102 of the responses are attributed to the AR scenario, so there are 120 responses regarding the website experience.

The sample was composed by 53.6% females, 38.7% of the respondents age ranges between 18 and 24 years old, following by 27.9% ages between 25 and 34. More than a half has a Batchelor degree (52.7%), 29.3% has a master's degree and 14.9% has completed the high school. The demographic information regarding the responds can be analyzed in Table 2. Regarding their familiarity with AR apps, 59.9% of the participants were familiar with such technology.

On the website scenario, 56.7% are women's, 55.8% have a bachelor's degree, 40% ages between 18 and 24 years and 27.5% between 25 and 34. Regarding the employment status, most of the respondents are employed (76.7%). On the AR scenario, 50% are men, bachelor's degree continues to be the predominant level of education (49%), as well as the ages range, 37.3% have between 18 and 24 years old and 77.5% are currently employed.

Table 2- Demographics

N = 222	*Demographic*	*Percentage*
Age	<18	0.9
	18-24	38.7
	25-34	27.9
	35-44	20.7
	45-54	9.9
	55-64	1.4
	>=65	0.5
Gender	Male	46.4
	Female	53.6
Education level	Less than high school degree	2.7
	High school degree	14.9
	Bachelor's degree	52.7
	Master's degree	29.3
	Ph.D or higher	0.5
Annual Household Income	<12000	17.6
	12000-18000	29.3
	18000-24000	14.4
	24000-30000	15.8
	>30000	23.0
Employment status	Student	18.9
	Employed	77.0
	Unemployed	3.2
	Retired	0.9
Country	Albania	0.9
	Argentina	0.9
	Armenia	0.9
	Australia	1.4
	Austria	0.5
	Belgium	0.5
	Benin	0.5
	Democratic Republic of the Congo	0.5
	France	0.9
	Germany	0.9
	Honduras	0.5
	India	1.4
	Italy	0.9
	Netherlands	0.5
	Poland	0.5
	Portugal	57.7
	Qatar	0.5
	Switzerland	1.8
	United Kingdom of Great Britain and Northern Ireland	1.4
	United States of America	27.5

Source: author's elaboration

5. Results and discussion

5.1.Preliminary control checks

An independent t-test was conducted and concluded that there were no significant differences on the two groups AR vs Website for the variables–Confidence in fit (M=5.09, SD=1.26 vs M=5.26, SD=1.14; t(220)=1.009, p=0.314), purchase intention (M=4.62, SD=1.65 vs M=4.52, SD=1.34; t(194)=-0.50, p=0.618) and ideal actual attractiveness gap (M=0.49, SD=1.72 vs M=0.69, SD=1.58; t(220)= 0.880, p= 0.380). The only variable that showed differences between the two scenarios was ideal self-congruence (M=4.86, SD=1.53 vs M=3.73, SD=1.70; t(220)=-5.11, p=0).

Therefore, furthermore the Website group will be ignored for those variables since people didn't report much difference between buying online or with AR regarding the mentioned variables, except for ideal self-congruence. Additionally, since there is no difference between the groups for most of the variables, it was only tested demographic changes regarding the ideal self-congruence. In this matter, it wasn't found significant changes in the two groups regarding gender, male vs female (M=4.29, SD=1.69 vs M=4.21, SD=1.74; t(220)=0.37, p=0.72) or education levels (F(4)=0.93, p=0.44).

5.2.Measurement Model

To understand the reliability among the items that measure a construct, was conducted a reliability test. The Cronbach's alpha and composite reliability of the constructs were above the recommended levels of .70 (Hair, et al., 2010) for all the constructs. In the case of appearance self-esteem item 5 was removed resulting in Cronbach's alpha equals 0.736. For ideal self-congruence the results showed that if item 1 was removed the reliability would increase. The results are specified in Table 3.

Table 3- Reliability test

Construct	Items	Cronbach's alpha
Appearance Self-esteem	ASE1 ASE2 ASE3 ASE4 ASE6	0.736
Ideal attractiveness	IdalSelf1 IdealSelf2 IdealSelf3 IdealSelf4	0.954
Actual attractiveness	ActualSelf1 ActualSelf2 ActualSelf3 ActualSelf4	0.966
Confidence in fit in fit	Confidence1 Confidence2 Confidence3 Confidence4	0.900
Ideal self-congruence	ISC2 ISC3	0.918
Purchase intention	Buy1 Buy2 Buy3 Buy4 Buy5	0.919
Product attitude Negative	Attitude1_NEG Attitude2_NEG Attitude3_NEG Attitude4_NEG Attitude5_NEG	.935
Product attitude Positive	Attitude1_POSI Attitude2_POSI Attitude3_POSI Attitude4_POSI Attitude5_POSI	.908
Perceived diagnosticity of reviews (Positive)	ReviewPositive1 ReviewPositive2 ReviewPositive3	0.859
Perceived diagnosticity of reviews (Negative)	ReviewNeg1 ReviewNeg1 ReviewNeg1	0.840
Actual attractiveness AR	ActualSelf1_AR ActualSelf2_AR ActualSelf3_AR ActualSelf4_AR	0.963
Confidence in fit AR	Confidence1_AR Confidence2_AR Confidence3_AR Confidence4_AR	0.922
Ideal self-congruence AR	ISC1_AR ISC2_AR ISC3_AR	0.931
Purchase intention AR	Buy1_AR Buy2_AR Buy3_AR Buy4_AR Buy5_AR	0.952

Source: author's elaboration

5.3.Main Results

In order to test the hypothesis H1 and H5 we used PROCESS (version 4.1), model 1 set to 5,000 bootstraps (95% CI), and to test H4 it was used PROCESS model 4 set to 5,000 bootstraps (95% CI). H2 and H3 were tested trough linear regression.

5.3.1.

H1: Self-esteem will moderate the effect of AR mirror on ideal self-congruence,

H1a: low appearance self-esteem consumers will experience significantly higher ideal self-congruence when using AR try on app vs buying on normal website

H1b: high appearance self-esteem consumers will experience significantly lower ideal self-congruence when using AR try on app vs buying on normal website

H1c: low appearance self-esteem consumers will experience significantly higher ideal self-congruence when comparing to high self-esteem consumers

To test the moderation, we runed PROCESS model 1 set to 5,000 bootstraps (95%CI). If the regression coefficient for the interaction is different from zero between lower and upper level confidence intervals then the moderation is significant (Hayes, 2013). It was found that ASE (appearance self-esteem) does moderate the effect of the AR app on the ideal self-congruence (b=0.34, se=0.12, t=2.8, p=0.0056, 95% CI [0.1, 0.6]. Next, to test H1a and H1b, by using conditional values mean centered, slope analysis (see Figure 3), we can see that in the AR scenario low self-esteem consumers do experience greater ideal self-congruence when comparing to the website scenario, so H1a is checked. H1b reveals the same behavior has H1a so, it H1b isn't supported, when using AR high self-esteem revealed greater ideal self-congruence. Still, we can see by the conditional values represented at Figure 3 and Table 4, that low self-esteem consumers, when using AR, experience higher ideal self-congruence when compared to high self-esteem respondents as predicted by Jarvornik et al. (2021). To reinforce such conclusion, an independent t-test was made, revealing that indeed low self-esteem (M=5.99, SD=0.96) recorded higher ideal self-congruence than high self-esteem participants (M=4.21, SD=1.42; t(97)=7.5, p=0) therefore H1c is supported (see Table 5). In sum, H1 is only partially supported.

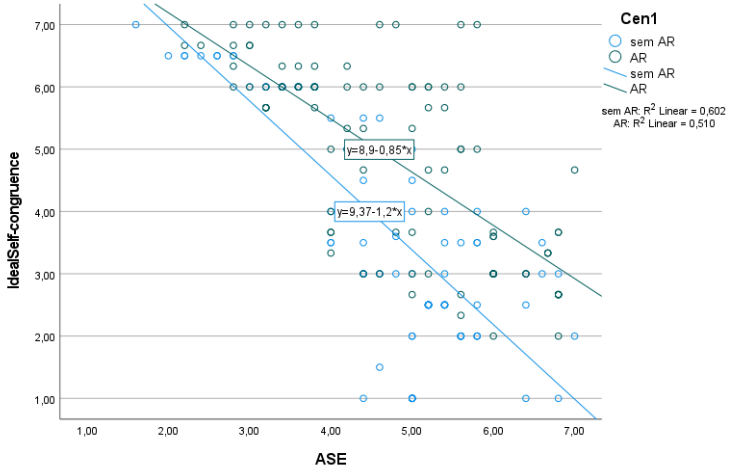
Table 4- Appearance self-esteem as a moderator on the effect of AR (vs no AR) on ideal self-congruence

	Coefficient	SE	Lower CI	Upper CI
Outcome ASE*AR vs no AR	0.34**	0.12	0.10	0.58
Conditional values				
Low ASE (-1SD)	3.4***	0.21	0.27	1.13
Medium ASE	4.8***	0.14	0.89	1.47
High ASE (+1SD)	6***	0.21	1.17	2.01

**p <0.05; **p < 0.01; ***p < 0.001 SE: Standard Error; CI: Confidence Interval*

Source: author's elaboration

Figure 3- Graph conditional effects moderation ASE on the relationship between AR (vs no AR) and ideal self-congruence



Source: author's elaboration

Table 5- Results for independent t-test for ideal self-congruence on apperence self-esteem

	Mean	SD	t-test
Low appearance self-esteem	5.99	0.96	7.5***
High appearance self-esteem	4.21	1.42	

**p <0.05; **p < 0.01; ***p < 0.001*

Source: author's elaboration

5.3.2.

H2: Ideal self-congruence augmentation positively impacts purchase intention

To test if ideal self-congruence (in the case of AR scenario) has a positive impact on purchase intention, a linear regression was conducted. The results show that 47.4% of the variation of purchase intention is explained by the ideal self-congruence, in the case of AR scenario. The overall regression was statistically significant ($R^2 = 0.474$, F(1,100)=90.2 ,p=0) so we can conclude that ideal self-congruence is an important predictor of buying intention, and this is effect is positive (ß =0.772, p=0). If we analyze the correlation Table 6 we can observe there is a high positive linear association between the two variables. H2 is confirmed.

Table 6- Correlation matrix

		Ideal self-congruence	**Confidence in fit**	**Purchase intention**
Ideal self-congruence	Pearson Correlation	1	,633**	**,689****
	Sig. (2-tailed)		,000	,000
	N	102	102	102
Confidence in fit	Pearson Correlation	,633**	1	,634**
	Sig. (2-tailed)	,000		,000
	N	102	102	102
Purchase intention	Pearson Correlation	,689**	,634**	1
	Sig. (2-tailed)	,000	,000	
	N	102	102	102

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

Source: author's elaboration

5.3.3.

H3: Ideal self-congruence positively impacts confidence in fit

As in H2 test, we used linear regression to confirm H3. 40.01% of the model is explained by the variable ideal self-congruence. The overall regression was statistically significant ($R^2 = 0.401$, F(1, 100) = 66.94 p=0). Looking at coefficient results (ß=0.543, p=0) its confirmed that

positive ideal self-congruence produces positive confidence in fit having a moderated effect according to Table 6.

5.3.4.

H4: Confidence in fit mediates the relationship between ideal self-congruence augmentation and purchase intention

To conduct this mediation analysis, we used PROCESS model 4 (Hayes, 2013), set to 5,000 bootstraps (95% CI) and by the results we can concluded that the relationship between ideal self-congruence and purchase intention is indeed mediated by confidence in the fit. According to the author (Hayes, 2013) if confidence intervals don't include zero, there is there is 95% confidence that there is a mediating effect.

Both the impact of ideal self-congruence on confidence in fit (b=0.54, SE=0.066, p=0, 95% CI = [0.41, 0.67]) and the impact of confidence in fit on purchase intention (b=0.43, SE=0.11, p=0, 95% CI = [0.2, 0.66]) are significant. The conditional indirect effects it also shows that confidence in fit mediates the effect of ideal self-congruence on purchase intention (indirect effect=0.24, SE=0.1, 95% CI = [0.08, 0.47]). For the conditional direct effect it shows that confidence in fit mediates the impact of ideal self-congruence on purchase intention (direct effect=0.54, SE=0.1, p=0, CI=[0.34, 0.73]). Has both direct and indirect effects are significant, we are in presence of partial mediation (see results in Table 7).

If consumers find the look to be congruent with their ideals, they will have greater confidence in the fit and therefore a positive purchase intention.

Table 7- Confidence in fit as mediator on the effect of ideal self-congruence on purchase intention

Indirect effect paths	**Indirect effect**	**Lower CI**	**Upper CI**
Ideal self-congruence → Confidence in fit	0.54***	0.41	0.67
Confidence in fit →Purchase intention	0.43	0.2	0.66
Ideal self-congruence → Confidence in fit→Purchase intention	0.24	0.08	0.47
Direct effect paths	**Direct effect**	**Lower CI**	**Upper CI**
Ideal self-congruence → Purchase intention	0.54***	0.34	0.73

**p <0.05; **p < 0.01; ***p < 0.001 SE: Standard Error; CI: Confidence Interval*

Source: authors elaboration

5.3.5.

H5: Testimonials moderate the relationship between ideal self-congruence and purchase intention such that negative testimonials have greater impact on purchase intention comparing to positive ones

To test the moderation the authors, rely on estimating a linear regression model (Hayes, 2013). The regression coefficient for the interaction (reviews x ideal self-congruence) shows a marginal effect on purchase intent (b =0.12, SE = 0.03, t (218) = 3.34, p = 0.001, 95% CI = [0.05, 0.18]), concluding that exist a moderation.

The interaction analysis suggests that higher levels of perceived diagnosticity of reviews produce higher levels of purchase intention, meaning that, reviews that consumers perceived has more diagnostic produce greater responses, such as positive purchase intentions. This reveals the importance of reviews on online shopping (Table 8). As the diagnosticity of reviews increases, so does the effect of the moderation.

To analyze the impact of perceived diagnosticity of positive vs negative reviews on purchase intention, it was conducted an independent sample t-test to check if there were differences between the two groups (scenario with positive reviews vs negative reviews). The results indicate that there is no significant difference between the two groups (positive reviews, M=4.67, SD= 1.66; negative reviews, M=4.59, SD=1.65; t(100)=-0.249, p=0.804). This implies that respondents purchase intention is equally impacted by negative or positive reviews, so H5 is only partially supported.

Table 8-Perceived diagnosticity of reviews as moderator between ideal self-congruence and purchase intention

	Coefficient	**SE**	**Lower CI**	**Upper CI**
Outcome Perceived diagnosticity of reviews x ideal self-congruence	0.12**	0.03	0.05	0.18
Conditional values				
Low Perceived diagnosticity of reviews (-1SD)	0.39***	0.07	0.25	0.52
Medium Perceived diagnosticity of reviews	0.53***	0.05	0.43	0.63
High Perceived diagnosticity of reviews (+1SD)	0.68***	0.07	0.55	0.81

**p <0.05; **p < 0.01; ***p < 0.001 SE: Standard Error; CI: Confidence Interval*

Source: author's elaboration

5.3.6. Further Analysis

5.3.6.1.Reviews/ Testimonials and product attitude

After the moderation analysis between ideal self-congruence and purchase intention and after analyzing that that wasn't differences between positive and negative reviews when impacting the purchase behavior, a further analysis was conducted to better understand the impact of positive vs negative reviews on consumer responses. An independent sample t-test was performed to see the differences between the two groups. The results demonstrated that that was a significant difference between the diagnosticity of negative reviews (M=3.4, SD=0.33) and positive reviews (M=5.13, SD=1.45); t(121)=-12.1, p=0) (see Table 9). So, participants reported different levels of product attitude according to being exposed to positive vs negative reviews, whereas negative reviews produced lower levels of product attitude and positive testimonials produce good behavior responses regarding the attitude towards products. These results are not in agreement with most literature that relates higher importance to negative reviews regarding consumer responses, but some authors already revealed the importance of positive reviews in confirmation bias, when consumers like the product a priori they rather reed positive reviews to seek for support of such expectations (Shin et al., 2020; Li & Zhang, 2021).

Table 9- Results for independent t-test for Perceived diagnosticity of reviews on product attitude

	Mean	**SD**	**t-test**
Perceived diagnosticity of negative reviews	3.4	0.33	-12.1***
Perceived diagnosticity of positive reviews	5.13	1.45	

**p <0.05; **p < 0.01; ***p < 0.001*

Source: author's elaboration

5.3.6.2.Purchase intention and AR familiarity

Being the purchase intention one of the main characters of the present dissertation, and being an important behavioral construct, further analysis was mad to if the familiarity with AR influences the buying behavior. To do so, an independent sample t-test was made. It reported a significant difference between people already familiar with AR technology (M=5.1, SD=1.4)

and people not familiar (M=3.8, SD=1.8); t(53)=3.6, p=0.001) showing that people that already know such technology had greater buying intentions (see Table 10).

Table 10-Results for independent t-test for AR familiarity on purchase intention

	Mean	SD	t-test
Familiar with AR try on apps	5.1	1.4	3.6**
Non familiar with AR try on apps	3.8	1.8	

**p <0.05; **p < 0.01; ***p < 0.001*

Source: author's elaboration

5.3.6.3. Ideal actual attractiveness gap and appearance self-esteem

To understand more how AR influences the self-concept, a further analysis was made to see the impact of ASE on consumers ideal actual attractiveness gap. The independent sample t-test revealed that high self-esteem consumer experienced a higher gap (M=1.97, SD=1.00) when comparing to low self-esteem (M=-0.69, SD=1.08); t(100)=-12.50, p=0.00. This is in agreement with Javornik et al. (2021) that suggested that AR mirror, since it changes physical appearance in a realistic manner, makes high self-esteem consumers discard those changes because they like their actual self, making the gap between the ideal and actual self grow. In other side, low self-esteem see that is possible to achieve the ideal and the gap reduces.

Table 11- Results for independent t-test for ASE on ideal actual attractiveness gap

	Mean	SD	t-test
High self-esteem	1.97	1.00	-12.5***
Low self-esteem	-0.69	1.08	

**p <0.05; **p < 0.01; ***p < 0.001*

Source: author's elaboration

5.4.Discussion

The goal of the present thesis was to understand how AR try on apps impact the self-concept (self-esteem and ideal self-congruence) and how this impacts consumers responses such has the confidence in the chosen look and purchase intention (RQ1, RQ2, RQ3, RQ4). Also, the authors tested the impact of reviews on such consumer responses (RQ5), specifically purchase intention.

Concerning RQ1, it was found a moderation impact of self-esteem on the relationship between AR (vs no AR) and ideal self-congruence (H1 was partially supported). H1a was supported, has the literature informed, indeed low self-esteem consumers experienced bigger ideal self-congruence when using AR try on app vs the normal website, as stated by Javornik et al (2021) and Yim and Park (2019), those consumers seek for ideals, so it's more likely that they accept the AR image easily. H1b tested if the oppositive happened for high self-esteem consumers, supposedly those consumers accept who they are so don't engage so much with their augmentation (Javornik et al., 2021). H1b was not supported when comparing those consumers ideal self-congruence on the two scenarios (AR vs normal website). This circumstance may be explained by the fact that the study wasn't supervised so people used the app, or not, without proper instructions. Other reason is the fact that the survey explored psychological factors and the complexity of the concept of augmented self, this construct is harder to measure because consumers might not be fully understood what was being inquired because are not familiar with the terms or didn't understand the differences of some questions. However, it was found that high self-esteem consumers demonstrated lower ideal self-congruence when in comparison with low self-esteem individuals as predicted by Javornik et al (2021) and Yim and Park (2019), having H1c in agreement with the authors, again because low self-esteem consumers embrace their augmented image as a possible ideal and high self-esteem discard the AR image more easily because already accept their actual self.

RQ2 confirmed that ideal self-congruence positively impacts purchase intention, and the findings are in line with previous literature (Wasseler et al., 2019; Bajac et al., 2018; Graeff, 1996; Kim, 2015). So, it is important in apparel businesses, such as sunglasses, that pretend to use AR as try on tool, to appeal to the ideal self of consumers, as this improves the likability of having them purchase the product.

Next, RQ3 proved that ideal self-congruence also impacts positively the confidence in the fit, many authors showed that contributing to the ideal self can have lots of benefits, for example, Javornik et al. (2021) stated that if consumers perceive the augmentation to be congruent with their ideal self it produces positive product responses. The more congruent the AR image in the app with consumer ideals, the greater the outcomes (Sirgy, 2018) such has being more confident with the chosen glasses.

The mediation analysis showed a partial mediation of confidence in fit in the relationship between ideal self-congruence and purchase intention. This means that ideal self-congruence impacts purchase intention trough confidence in fit, so building confidence in the fit by appealing to consumers ideal self is an important strategy that leads to positive e behavior responses, such has buying intent.

Finally regarding RQ4, it was partially supported. There exists a moderation between ideal self-congruence and purchase intention and, indeed, when consumers find review as more diagnostic, it produced higher intention to buy the glasses, showing the importance of online reviews and also more diagnostic reviews lead to higher impression formation (Le & Ha, 2021). In other words, as reviews diagnosticity increase so does the moderation. It wasn't supported the hypothesis of negative reviews being more diagnostic having greater impact on purchase intention, has proved by many authors (e.g Le & Ha, 2021). This might happen because some respondents may attribute different weights to negative vs positive reviews, having a big divergency in answers.

Regarding further analysis, it was explored the importance given by participants to positive vs negative reviews in respect of product attitude. It showed that consumers reported greater attitude towards products when exposed to positive reviews, most of the studies do infer that negative have significant higher impact than positive testimonials (Lee et al., 2008; Book et al., 2016; Shihab & Putri, 2018; Weisstein et al., 2017; Beneke et al., 2016; Le & Ha, 2021). However, even being in a small number, some research proves that positive reviews have good impacts on responses (Ladhari & Michaud, 2015; Plotkina & Munzel, 2016) and some also reported positive testimonials has more impactful because of the confirmation of prior expectations (Shin et al., 2020; Li & Zhang, 2021). The fact that participants liked their augmented image with the sunglasses may explained the greater attitude when confronted with positive testimonials regarding the product, because such reviews provide them support on their prior expectations (Li & Zhang, 2021). Next, concerning purchase intention, being an important

consumer response, it was concluded that people with prior knowledge about AR try on apps indeed had greater intention to buy the chosen glasses, the familiarity with the technology gave participants more comfort in decisions, such as buy. Lastly, it was studied the impact of ASE on the gap between the ideal and the actual attractiveness. In concordance with Javornik et al. (2021), low self-esteem consumers, by assessing their augmented image, found a possible way to change and achieve the ideal self, thus reducing the gap between ideal and actual attractiveness, in opposition high self-esteem increases the gap since they like and accept who they actually look like.

6. Conclusions

AR is a growing technology that has clear effects on consumers responses regarding brands and products (Javornik et al., 2021; Heller et al., 2019; Rauschnabel et al., 2019).

The self-concept has a big importance in our decisions, such as purchases. The main purpose of this dissertation was to understand how AR try on apps influence the two types of self-esteem consumers, how does self-esteem moderate the AR effect on ideal self-congruence (RQ1) as Javornik et al. (2021) studied. Answering to RQ1, the study indeed suggest that self-esteem moderate the AR effect on ideal self-congruence, low self-esteem consumer showed higher ideal self-congruence on the AR experience vs website, and higher ideal self-congruence when comparing to high self-esteem. These conclusions are in agreement with Javornik et al. (2021) and Yim and Park (2019), accordingly AR try on allows to emerge in a fantasy conception, that is embraced by the low self-esteem consumers, who achieve an ideal and don't accept the oneself. In consequence, the ideal self-congruence impacts, in a positive way, purchase intention (RQ2) and confidence in fit (RQ3), because being congruent with the self-concept produces positive responses (Sirgy, 2018). It was also concluded that confidence in fit mediates the effect of ideal self-congruence on purchase intention (RQ3). Nowadays, internet is full of reviews/ testimonials, in such recent technology to try on products, opinions may be the decisive factor, so is important to understand how reviews impact consumers on their buying intent (Lee et al., 2008; Shihab & Putri, 2018), it was shown that they have an important role on forming an impression (RQ4), and that positive reviews produced greater product attitude.

6.1.Theoretical implications

Under the conceptualization that AR try on apps give rise to a new reference point, the "augmented self" (Javorik et al., 2021), our study revealed that self-esteem is an important construct for AR try on apps, it impacts the way consumers accept the AR. For instance, low self-esteem consumers accept more their augmented self, so they see an opportunity to change and achieve such aspiration. When browsing for the sunglasses, individuals search for the ones that satisfy their ideal, as low self-esteem consumers strive more for the ideals and are more open to new representations, they experienced higher ideal self-congruence when comparing to the website experience (Javornik et al., 2021; Yim & Park, 2019). High self-esteem consumers registered lower ideal self-congruence when comparing to low self-esteem, because they are

more certain about their image, so they rather take the external signs that are congruent with them (Javornik et al., 2021). AR is connected with positive effects for those low in self-esteem. As many authors stated, being congruent with the ideal self can have some benefits (Malär et al., 20211; Javornik et al., 2021), in line with this it was found that the more congruent with the consumers ideal, better the confidence in fit and purchase intention. So, consumers integrate the self-congruent stimuli as part of their self which is an important insight to scholars (Javornik et al., 2021), helping them understand how AR and self-congruency influences own identity. It was also reported that confidence in fit mediates the effect of ideal self-congruence on purchase intent.

Another interesting finding from the current study is the impact of testimonials on buying intentions, reviews that are perceived has more diagnostic produced good purchase intention, as expected, so it's proven the importance of such online feedback (Shin et al., 2020; Ladhari & Michaud, 2015). Indeed, testimonials moderate the relationship between ideal self-congruence and purchase intention, a superior diagnosticity of reviews produces a stronger moderation, so the greater the buy intent. Further it was concluded that positive reviews have greater impact on product attitude, even being an unpopular opinion, some authors explained this through the confirmation bias theory, where consumers confirm prior expectations, usually happening when they like the product (Shin et al., 2020; Li & Zhang 2021).

The major conclusion is that self-esteem and reviews indeed impact how consumers use the AR try on app. Thus, is important that brands/ companies that use such technology understand the importance of this psychological perspective and the presence of testimonials to reinforce consumers' confidence and comfort with the decision (Zhang et al., 2018).

6.2.Managerial implications

AR applications have been growing his importance and quality, being an important access to marketers to pay attention (Poushneh &Vasquez-Parraga, 2017).

At a phycological level, marketers can take from this study the need to understand that the same marketing tool, as AR, can have different impacts on different consumers according to their appearance self-esteem. It is secure to say that many companies that use AR try on apps, do not recognize the importance of such perspective.

So, in an era with such personalization, they can adapt the use of AR try on apps to different levels of self-esteem by, for example, allowing the low self-esteem individuals to have a more immersive experience with the augmented self (with more personalization, embracing variety seeking) and the looks and giving high self-esteem consumers, a more real vision of them, giving them looks that enhance the actual self. In other side, being a try on app and not being able to fully try the look and touch, testimonials can be a way to overcome such insecurity with such technology. Before all that, is important get to know their costumers, the target, and they self-esteem levels.

6.3.Limitations and future research

The present research contributes to the extant literature by exploring how the self-concept impacts the use of try on apps using AR in both men and women and at their private spaces. However, there are some limitations that are worthy to be taken into consideration.

The fact that participants experience the app at home provokes a loss of control, since is not a controlled environment we can't be sure that people used the app correctly, that they explored the existing glasses and fully understood what was requested.

In addition, most of the respondents are from Portugal, but the survey was in English so it's possible to exist some language barrier that affected some responses.

Regarding the survey introduced, there was no questions to check the full attention of the respondents. The fact that we are testing phycological factors and the difficulty in the idea of the augmented self, makes it harder for the consumers to fully understand, a lot of questions appeared to be similar, and the respondents might answer in a more unconscious way.

Other possible limitation is the chosen website to try on glasses, by choosing a known brand we may be seeing results influenced by the brand and 40% of the respondents weren't familiar with AR try on apps, which makes this the first contact that can produce different responses.

Testimonials were only presented in solo, meaning that, each costumer only saw one review being positive or negative, and the quantity of reviews it's an influencer on this matter (Le & Ha, 2021).

More testes could be made in order to find more relations between the constructs and to have more reliable results adding to the fact that the survey only had 222 valid responses.

In the future, is interesting to analyze the relationship between AR, self-esteem and privacy issues and understand the differences between men and women that some studies reveal different self-esteem perspectives (Yim & Park, 2019). On other hand, people have different technology preponderance and acceptance, it would be a good insight to try to introduce this aspect into the model. Also, regarding the reviews subject there are important aspect to consider as the reviews quality, quantity, credibility, and personal involvement. It would be also interesting to analyze self-esteem as a moderator between the testimonials and the product attitude.

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Appendix

Appendix A- Survey

Figure 4- Survey

Thank you very much for participating in this survey.

This questionnaire aims to understand the impact of AR (Augmented Reality) try-on app on self-concept and is part of my master thesis carried out at ISCTE Business School.

The survey will take about 7 minutes and all responses are kept anonymous and confidential. Thank you very much for taking your time and helping me finish my master's!

Jéssica Martinho

Are you familiar with AR try-on apps?

- ○ Yes
- ○ No

On a scale from 1 – Strongly Disagree to 7– Strongly agree, please indicate your agreement with the following sentences

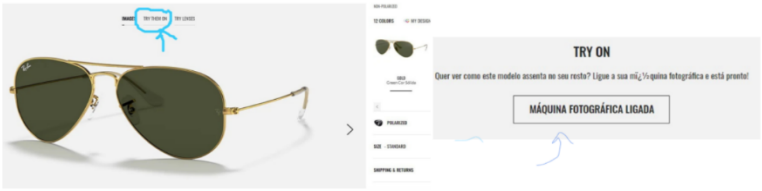
	1- Strongly Disagree	2	3	4- Neither agree or disagree	5	6	7- Strongly Agree
I feel satisfied with the way my face looks right now	○	○	○	○	○	○	○
I feel that others respect and admire me	○	○	○	○	○	○	○
I am dissatisfied with my looks	○	○	○	○	○	○	○
I feel good about myself	○	○	○	○	○	○	○
I feel unattractive	○	○	○	○	○	○	○
I am pleased with my appearance right now	○	○	○	○	○	○	○

On a scale from 1 – Strongly Disagree to 7– Strongly agree, please indicate your agreement with the following sentences

	1- Strongly Disagree	2	3	4- Neither agree or disagree	5	6	7- Strongly Agree
I would ideally like to be extremely attractive	○	○	○	○	○	○	○
I would ideally like to be extremely good looking	○	○	○	○	○	○	○
I would ideally like to be extremely beatiful	○	○	○	○	○	○	○
I would ideally like to be extremely pretty	○	○	○	○	○	○	○

On this group you will see sunglasses on a website and choose your favorite pair. Then, follow the steps:

1- See the offer and choose a pair of glasses that you like
2- Select them
3- Click on "Try them On" to use the virtual fitting room, then on "Máquina fotográfica ligada"



4- accept the Biometric data conset and allow the site to use your camera

5-Then, align your face until the lines around your face turn green:

6- Pay attention to how you look with the glasses on the AR (augmented reality) try on app

Access the site here: https://www.ray-ban.com/portugal/sunglasses/view-all
(after clicking on the link another tab will open)

Please indicate your agreement with the following setences on a scale from 1 to 7, having in attention your image in the app with the glasses on

	1- Strongly Disagree	2	3	4-Neither agree or disagree	5	6	7- Strongly Agree
I am extremely attractive	○	○	○	○	○	○	○
I am extremely good looking	○	○	○	○	○	○	○
I am extremely beautiful	○	○	○	○	○	○	○
I am extremely pretty	○	○	○	○	○	○	○

Please indicate your agreement with the following sentences, on a scale from 1 to 7:

	1- Strongly Disagree	2	3	4-Neither agree or disagree	5	6	7- Strongly Agree
The app is showing an accurate reflection of me.	○	○	○	○	○	○	○
The app is representing my appearance truthfully.	○	○	○	○	○	○	○
The image in the app reflects who I really am.	○	○	○	○	○	○	○
The app reflection represents my appearance in a correct manner.	○	○	○	○	○	○	○

If you bought your favorite glasses, what degree of confidence would you have for the apparel you chose on the following points?Please indicate your agreement with the following sentences on a sclae from 1 to 7

	1- Strongly Disagree	2	3	4-Neither agree or disagree	5	6	7- Strongly Agree
The glasses will fit right	○	○	○	○	○	○	○
The glasses will look good on me	○	○	○	○	○	○	○
The glasses will match my style	○	○	○	○	○	○	○
These glasses will make the right impression	○	○	○	○	○	○	○

On a scale from 1 – Strongly Disagree to 7 – Strongly agree, please indicate your agreement with the following sentences

	1- Strongly Disagree	2	3	4-Neither agree or disagree	5	6	7- Strongly Agree
My face in the try-on app I used to try on glasses is consistent with how I would ideally like to see myself	○	○	○	○	○	○	○
The image of my face in the try-on app reflects who I would ideally like to be	○	○	○	○	○	○	○
My face in the AR try-on app is a mirror image of how I would ideally like to look	○	○	○	○	○	○	○

Now, in this group, imagine that your are buying sun glasses online.

Please take a look at the offers and choose your favorite pair. For the following questions, please imagine how you would look like with the chosen glasses on.

Please access the website: https://www.ray-ban.com/portugal/sunglasses/view-all
(after clicking on the link another tab will open)

Imagine your face with the glasses on and indicate your agreement with the following sentences:

	1- Strongly Disagree	2	3	4-Neither agree or disagree	5	6	7- Strongly Agree
I am extremely attractive	○	○	○	○	○	○	○
I am extremely good looking	○	○	○	○	○	○	○
I am extremely beautiful	○	○	○	○	○	○	○
I am extremely pretty	○	○	○	○	○	○	○

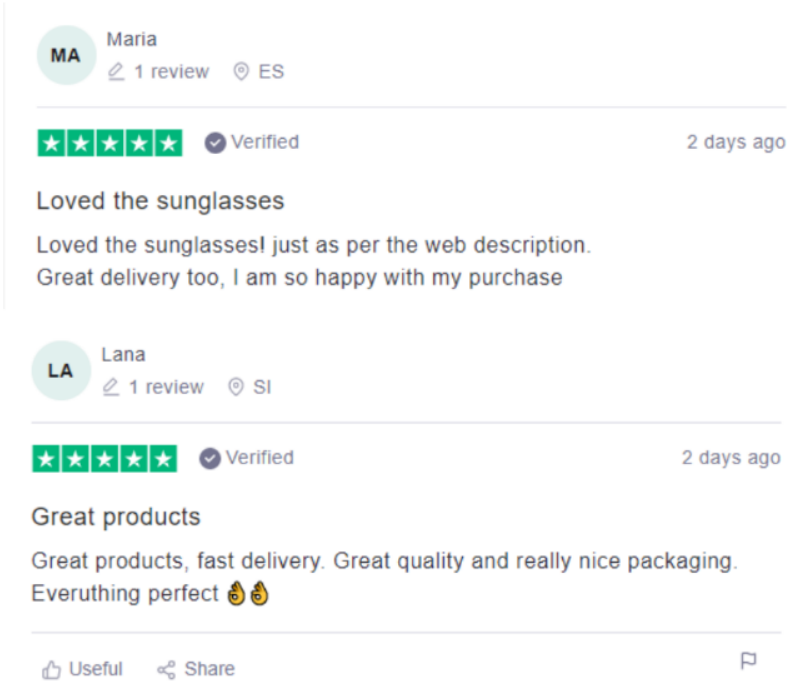
If you bought your favorite glasses, what degree of confidence would you have for the apparel you chose on the following points? On a scale from 1 – Strongly Disagree to 7– Strongly agree, please indicate your agreement with the following sentences:

	1- Strongly Disagree	2	3	4-Neither agree or disagree	5	6	7- Strongly Agree
The glasses will fit right	○	○	○	○	○	○	○
The glasses will look good on me	○	○	○	○	○	○	○
The glasses will match my style	○	○	○	○	○	○	○
These glasses will make the right impression	○	○	○	○	○	○	○

When I imagine the glasses chosen on my face…

	1- Strongly Disagree	2	3	4-Neither agree or disagree	5	6	7- Strongly Agree
My face with the glasses is consistent with how I would ideally like to see myself	○	○	○	○	○	○	○
My face with the glasses reflects who I would ideally like to be	○	○	○	○	○	○	○
My face with the glasses is the image of how I would ideally like to look	○	○	○	○	○	○	○

Please read the following reviews/ testimonials:



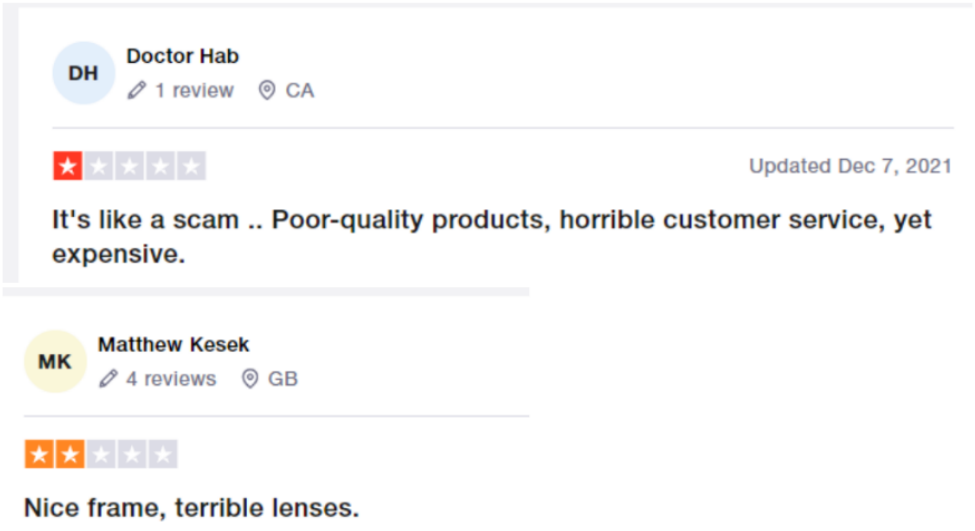
Having the reviews in mind, indicate your agreement with the following sentences:

	1- Strongly Disagree	2	3	4-Neither agree or disagree	5	6	7- Strongly Agree
The positive review presented improved my ability to make a decision as to whether or not to buy the glasses.	○	○	○	○	○	○	○
The positive review presented provide me with insights into whether or not I would like the product	○	○	○	○	○	○	○
These positive reviews contain useful information about the glasses	○	○	○	○	○	○	○

Regarding the Testimonial/ Review previously showed, please ansawer on a scale from 1 to 7: Your attitude towards the product is...

Unfavorable	○	○	○	○	○	○	○	Favorable
Bad	○	○	○	○	○	○	○	Good
Not effective	○	○	○	○	○	○	○	Effective
Unreliable	○	○	○	○	○	○	○	Reliable
Likelihood to have a side-effect	○	○	○	○	○	○	○	Unlikelihood to have a side-effect

Please, see the following reviews and answer:



Having such reviews in mind, please indicate your agreement with the following sentences:

	1- Strongly Disagree	2	3	4-Neither agree or disagree	5	6	7- Strongly Agree
The negative review presented improved my ability to make a decision as to whether or not to buy the glasses.	○	○	○	○	○	○	○
The negative review presented provide me with insights into whether or not I would like the product	○	○	○	○	○	○	○
These negative reviews contain useful information about the glasses	○	○	○	○	○	○	○

Regarding the Testimonial/ Review previously showed, please answer on a scale from 1 to 7: Your attitude towards the product is...

Unfavorable	○ ○ ○ ○ ○ ○ ○	Favorable
Bad	○ ○ ○ ○ ○ ○ ○	Good
Not effective	○ ○ ○ ○ ○ ○ ○	Effective
Unreliable	○ ○ ○ ○ ○ ○ ○	Reliable
Likelihood to have a side-effect	○ ○ ○ ○ ○ ○ ○	Unlikelihood to have a side-effect

Regarding your intention to buy the glasses pelase rate the following sentences on a scale from 1 to 7:

Never	○ ○ ○ ○ ○ ○ ○	Definitely
Definitely do not intend to buy	○ ○ ○ ○ ○ ○ ○	Definitely intend to buy
Very low purchase interest	○ ○ ○ ○ ○ ○ ○	Very high purchase interest
Definitely not buy It	○ ○ ○ ○ ○ ○ ○	Definitely buy It
Probably not	○ ○ ○ ○ ○ ○ ○	probably buy it

What is your gender?

- ◯ Male
- ◯ Female

What is the highest level of school you have completed or the highest degree you have received?

- ◯ Less than high school degree
- ◯ High school degree
- ◯ Bachelor's degree
- ◯ Master's degree
- ◯ Ph.D. or higher

How old are you?

- ◯ Under 18
- ◯ 18-24 years old
- ◯ 25-34 years old
- ◯ 35-44 years old
- ◯ 45-54 years old
- ◯ 55-64 years old
- ◯ 65+ years old

What is your current employment status?

- ◯ Student
- ◯ Employed
- ◯ Unemployed
- ◯ Retired

Annually, what is your household income level?

- ◯ < 12000
- ◯ 12000-18000
- ◯ 18000-24000
- ◯ 24000-30000
- ◯ >30000

In which country do you currently reside?

Appendix B- Demographics

Table 12- Gender demographics

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Male	103	46,4	46,4	46,4
	2 Female	119	53,6	53,6	100,0
	Total	222	100,0	100,0	

Table 13-Education level

Education- highest level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Less than high school degree	6	2,7	2,7	2,7
	2 High school degree	33	14,9	14,9	17,6
	3 Bachelor's degree	117	52,7	52,7	70,3
	4 Master's degree	65	29,3	29,3	99,5
	5 Ph.D. or higher	1	,5	,5	100,0
	Total	222	100,0	100,0	

Table 14- Age

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Under 18	2	,9	,9	,9
	2 18-24 years old	86	38,7	38,7	39,6
	3 25-34 years old	62	27,9	27,9	67,6
	4 35-44 years old	46	20,7	20,7	88,3
	5 45-54 years old	22	9,9	9,9	98,2
	6 55-64 years old	3	1,4	1,4	99,5
	7 65+ years old	1	,5	,5	100,0
	Total	222	100,0	100,0	

Table 15- Employment status

Employment status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Student	42	18,9	18,9	18,9
	3 Employed	171	77,0	77,0	95,9
	6 Unemployed	7	3,2	3,2	99,1
	7 Retired	2	,9	,9	100,0
	Total	222	100,0	100,0	

Table 16- Annual Income

Annual Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3 < 12000	39	17,6	17,6	17,6
	8 12000-18000	65	29,3	29,3	46,8
	9 18000-24000	32	14,4	14,4	61,3
	10 24000-30000	35	15,8	15,8	77,0
	11 >30000	51	23,0	23,0	100,0
	Total	222	100,0	100,0	

Table 17- Participant's countries

List of Countries

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2 Albania	2	,9	,9	,9
	7 Argentina	2	,9	,9	1,8
	8 Armenia	2	,9	,9	2,7
	9 Australia	3	1,4	1,4	4,1
	10 Austria	1	,5	,5	4,5
	17 Belgium	1	,5	,5	5,0
	19 Benin	1	,5	,5	5,4
	47 Democratic Republic of the Congo	1	,5	,5	5,9
	61 France	2	,9	,9	6,8
	65 Germany	2	,9	,9	7,7
	74 Honduras	1	,5	,5	8,1
	78 India	3	1,4	1,4	9,5
	84 Italy	2	,9	,9	10,4
	122 Netherlands	1	,5	,5	10,8
	137 Poland	1	,5	,5	11,3
	138 Portugal	128	57,7	57,7	68,9
	139 Qatar	1	,5	,5	69,4
	169 Switzerland	4	1,8	1,8	71,2
	185 United Kingdom of Great Britain and Northern Ireland	3	1,4	1,4	72,5
	187 United States of America	61	27,5	27,5	100,0
	Total	222	100,0	100,0	

Table 18- Familiarity with AR try on apps

AR familiarity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	133	59,9	59,9	59,9
	2 No	89	40,1	40,1	100,0
	Total	222	100,0	100,0	

Table 19- Gender of website respondents

Gender What is your gender?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Male	52	43,3	43,3	43,3
	2 Female	68	56,7	56,7	100,0
	Total	120	100,0	100,0	

Table 20- Education level website respondents

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Less than high school degree	4	3,3	3,3	3,3
	2 High school degree	13	10,8	10,8	14,2
	3 Bachelor's degree	67	55,8	55,8	70,0
	4 Master's degree	35	29,2	29,2	99,2
	5 Ph.D. or higher	1	,8	,8	100,0
	Total	120	100,0	100,0	

Table 21- Age groups website respondents

Age How old are you?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Under 18	2	1,7	1,7	1,7
	2 18-24 years old	48	40,0	40,0	41,7
	3 25-34 years old	33	27,5	27,5	69,2
	4 35-44 years old	24	20,0	20,0	89,2
	5 45-54 years old	9	7,5	7,5	96,7
	6 55-64 years old	3	2,5	2,5	99,2
	7 65+ years old	1	,8	,8	100,0
	Total	120	100,0	100,0	

Table 22- Employment status website group

Employment status?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Student	21	17,5	17,5	17,5
	3 Employed	92	76,7	76,7	94,2
	6 Unemployed	5	4,2	4,2	98,3
	7 Retired	2	1,7	1,7	100,0
	Total	120	100,0	100,0	

Table 23- Gender AR group respondents

Gender What is your gender?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Male	51	50,0	50,0	50,0
	2 Female	51	50,0	50,0	100,0
	Total	102	100,0	100,0	

Table 24- Education level AR group respondents

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Less than high school degree	2	2,0	2,0	2,0
	2 High school degree	20	19,6	19,6	21,6
	3 Bachelor's degree	50	49,0	49,0	70,6
	4 Master's degree	30	29,4	29,4	100,0
	Total	102	100,0	100,0	

Table 25- Age AR group respondents

Age How old are you?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2 18-24 years old	38	37,3	37,3	37,3
	3 25-34 years old	29	28,4	28,4	65,7
	4 35-44 years old	22	21,6	21,6	87,3
	5 45-54 years old	13	12,7	12,7	100,0
	Total	102	100,0	100,0	

Table 26- Employment status AR group respondents

Employment status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Student	21	20,6	20,6	20,6
	3 Employed	79	77,5	77,5	98,0
	6 Unemployed	2	2,0	2,0	100,0
	Total	102	100,0	100,0	

Table 27- Income level AR group respondents

Income level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3 < 12000	19	18,6	18,6	18,6
	8 12000-18000	25	24,5	24,5	43,1
	9 18000-24000	19	18,6	18,6	61,8
	10 24000-30000	15	14,7	14,7	76,5
	11 >30000	24	23,5	23,5	100,0
	Total	102	100,0	100,0	

Appendix C- Results

Table 28- Independent t-test AR vs No AR

Group Statistics

	Cen1	N	Mean	Std. Deviation	Std. Error Mean
ISCJ	0 sem AR	120	3,7383	1,70132	,15531
	1 AR	102	4,8582	1,53285	,15177
GapJunto	0 sem AR	120	,6854	1,57731	,14399
	1 AR	102	,4902	1,72414	,17072
ConfidenceJunto	0 sem AR	120	5,2604	1,13916	,10399
	1 AR	102	5,0980	1,25773	,12453
BuyJunto	0 sem AR	120	4,52	1,344	,123
	1 AR	102	4,62	1,645	,163

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
ISCJ	Equal variances assumed	,472	,493	-5,113	220	,000	-1,11984	,21900	-1,55144	-,68823
	Equal variances not assumed			-5,157	219,237	,000	-1,11984	,21716	-1,54781	-,69186
BuyJunto	Equal variances assumed	4,505	,035	-,508	220	,612	-,102	,201	-,497	,294
	Equal variances not assumed			-,500	194,927	,618	-,102	,204	-,504	,300
ConfidenceJunto	Equal variances assumed	2,089	,150	1,009	220	,314	,16238	,16094	-,15481	,47957
	Equal variances not assumed			1,001	205,965	,318	,16238	,16224	-,15749	,48225
ActualSelfJunto	Equal variances assumed	,030	,863	-,354	220	,724	-,07120	,20120	-,46773	,32532
	Equal variances not assumed			-,354	213,694	,724	-,07120	,20134	-,46806	,32566

Table 29- t-test for ideal self-congruence and gender

Group Statistics

	Gender What is your gender?	N	Mean	Std. Deviation	Std. Error Mean
ISCJ	1 Male	103	4,2981	1,68657	,16618
	2 Female	119	4,2137	1,74755	,16020

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
ISCJ	Equal variances assumed	,800	,372	,364	220	,716	,08433	,23142	-,37175	,54041
	Equal variances not assumed			,365	217,385	,715	,08433	,23082	-,37061	,53927

Table 30- ANOVA test for ideal self-congruence on education levels

Descriptives

ISCJ

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1 Less than high school degree	6	4,3333	2,35938	,96321	1,8573	6,8093	1,00	7,00
2 High school degree	33	4,7556	1,65872	,28875	4,1674	5,3437	2,00	7,00
3 Bachelor's degree	117	4,1225	1,82972	,16916	3,7875	4,4575	1,00	7,00
4 Master's degree	65	4,2364	1,45621	,18062	3,8756	4,5972	2,00	7,00
5 Ph.D. or higher	1	3,5000	.	.	.	.	3,50	3,50
Total	222	4,2529	1,71617	,11518	4,0259	4,4798	1,00	7,00

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
ISCJ	Based on Mean	3,358	3	217	,020
	Based on Median	2,695	3	217	,047
	Based on Median and with adjusted df	2,695	3	204,299	,047
	Based on trimmed mean	3,419	3	217	,018

ANOVA

ISCJ

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10,951	4	2,738	,928	,448
Within Groups	639,947	217	2,949		
Total	650,898	221			

Table 31- Linear regression impact of ideal self-congruence on confidence in fit

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,633[a]	,401	,395	,97830

a. Predictors: (Constant), Cong_AR

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	64,062	1	64,062	66,935	,000[b]
	Residual	95,708	100	,957		
	Total	159,770	101			

a. Dependent Variable: Confidence_AR

b. Predictors: (Constant), Cong_AR

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2,666	,313		8,529	,000
	Cong_AR	,543	,066	,633	8,181	,000

a. Dependent Variable: Confidence_AR

Table 32- Linear regression impact of ideal self-congruence on purchase intention

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,689[a]	,474	,469	1,19863

a. Predictors: (Constant), Cong_AR

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	129,553	1	129,553	90,173	,000[b]
	Residual	143,671	100	1,437		
	Total	273,224	101			

a. Dependent Variable: Buy_AR

b. Predictors: (Constant), Cong_AR

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1,165	,383		3,042	,003
	Cong_AR	,772	,081	,689	9,496	,000

a. Dependent Variable: Buy_AR

Table 33- Independent t-test for Purchase intention and perceived diagnosticity of reviews

Group Statistics

	Cenário2	N	Mean	Std. Deviation	Std. Error Mean
Buy_AR	1,00 Neg review	54	4,5852	1,64734	,22417
	2,00 Positive Review	48	4,6667	1,65816	,23934

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Buy_AR	Equal variances assumed	,125	,724	-,249	100	,804	-,08148	,32780	-,73183	,56886
	Equal variances not assumed			-,248	98,448	,804	-,08148	,32793	-,73220	,56924

Independent Samples Effect Sizes

			95% Confidence Interval	
		Standardizer[a]	Point Estimate	Lower	Upper
Buy_AR	Cohen's d	1,65244	-,049	-,438	,340
	Hedges' correction	1,66496	-,049	-,435	,337
	Glass's delta	1,65816	-,049	-,438	,340

a. The denominator used in estimating the effect sizes.

Cohen's d uses the pooled standard deviation.

Hedges' correction uses the pooled standard deviation, plus a correction factor.

Glass's delta uses the sample standard deviation of the control group.

Table 34- Independent t-test for Product attitude and perceived diagnosticty of reviews

Group Statistics

	Cen2	N	Mean	Std. Deviation	Std. Error Mean
Attitude	1,00 Neg review	111	3,4165	,32641	,03098
	2,00 Positive Review	111	5,1284	1,45026	,13765

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Attitude	Equal variances assumed	114,044	,000	-12,133	220	,000	-1,71189	,14110	-1,98996	-1,43382
	Equal variances not assumed			-12,133	121,116	,000	-1,71189	,14110	-1,99123	-1,43256

Independent Samples Effect Sizes

				95% Confidence Interval	
		Standardizer[a]	Point Estimate	Lower	Upper
Attitud1	Cohen's d	1,05114	-1,629	-1,931	-1,323
	Hedges' correction	1,05474	-1,623	-1,924	-1,319
	Glass's delta	1,45026	-1,180	-1,484	-,873

a. The denominator used in estimating the effect sizes.

Cohen's d uses the pooled standard deviation.

Hedges' correction uses the pooled standard deviation, plus a correction factor.

Glass's delta uses the sample standard deviation of the control group.

Table 35- Results for independent t-test for Purchase intention and AR familiarity

Group Statistics

	ARfam Are you familiar with AR try-on apps?	N	Mean	Std. Deviation	Std. Error Mean
Buy_AR	1 Yes	68	5,0500	1,38149	,16753
	2 No	34	3,7706	1,81117	,31061

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Buy_AR	Equal variances assumed	5,026	,027	3,964	100	,000	1,27941	,32276	,63907	1,91975
	Equal variances not assumed			3,625	52,792	,001	1,27941	,35291	,57150	1,98733

Independent Samples Effect Sizes

			95% Confidence Interval	
		Standardizer[a]	Point Estimate	Lower	Upper
Buy_AR	Cohen's d	1,53662	,833	,403	1,258
	Hedges' correction	1,54827	,826	,400	1,249
	Glass's delta	1,81117	,706	,257	1,147

a. The denominator used in estimating the effect sizes.

Cohen's d uses the pooled standard deviation.

Hedges' correction uses the pooled standard deviation, plus a correction factor.

Glass's delta uses the sample standard deviation of the control group.

Table 36- Results for independent t-test for ideal actual attractiveness gap AR and appearance self-esteem

Group Statistics

	ASECAT	N	Mean	Std. Deviation	Std. Error Mean
GAP_AR	1,00 LOW	37	-,6959	1,08034	,17761
	2,00 HIGH	65	1,9692	1,00245	,12434

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
GAP_AR	Equal variances assumed	,346	,558	-12,550	100	,000	-2,66518	,21236	-3,08649	-2,24386
	Equal variances not assumed			-12,293	70,420	,000	-2,66518	,21680	-3,09753	-2,23282

Independent Samples Effect Sizes

				95% Confidence Interval	
		Standardizer[a]	Point Estimate	Lower	Upper
GAP_AR	Cohen's d	1,03117	-2,585	-3,120	-2,042
	Hedges' correction	1,03898	-2,565	-3,097	-2,026
	Glass's delta	1,00245	-2,659	-3,266	-2,042

a. The denominator used in estimating the effect sizes.

Cohen's d uses the pooled standard deviation.

Hedges' correction uses the pooled standard deviation, plus a correction factor.

Glass's delta uses the sample standard deviation of the control group.