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**Mestrado em Gestão de Informação**

Master Program in Information Management

## **THE IMPACT OF SOCIAL MEDIA INFLUENCERS ON CONSUMER PERCEPTION ABOUT THE PRODUCT AND PURCHASE INTENTION**

Rita Vicente Rodrigues

Dissertation report presented as partial requirement for  
obtaining the Master's degree in Information Management  
with a specialization in Marketing Intelligence

NOVA Information Management School  
Instituto Superior de Estatística e Gestão de Informação  
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**Advisor:** Professor Diana Orghian

August 2021

## ACKNOWLEDGEMENTS

The elaboration of this dissertation is the achievement of one more goal and ends another phase of learning and personal growth, which required a lot of dedication. This accomplishment would not have been possible without the continuous encouragement and support of several people, to whom I express my deepest thanks.

First, I would like to thank my advisor, Professor Diana Orghian, for all the support, knowledge and suggestions that were shared with me throughout this process. Thank you for your incentive and availability, which were very important for the realization of this dissertation.

To all the participants of this study for the time they made available and for their valuable contributions, because without their participation this investigation would not have been possible. My thanks also to the professors and colleagues of NOVA IMS who offered important feedback during classes to help improve my work.

To my friends for all the motivation and good times, which made this academic journey much easier and more enjoyable. A special thank you to Inês and Diana for all your help and friendship.

To my boyfriend for the constant love, support and encouragement. Thank you for always believing in me, for comforting me when things were a bit more difficult and for your understanding.

To my little sister, Joana, for distracting me from the more stressful moments of the dissertation, for being a loving sister and a little ray of sunshine, always bringing joy to my life.

To my father and grandparents, for being the pillars of my life and always being present in all the important moments and phases over the years. A special thank you for all your support, motivation and love, and for always showing pride in me.

Lastly and most importantly, I would like to thank my mother, who made me what I am today and who always encouraged me to be better and do better. The strongest thank you for all your time, dedication, patience, and unconditional love and support. Your help was fundamental to achieve my goals and to successfully complete another stage of my life. You will always be an example to me.

To all the other people who helped me reach my goals that I did not mention but did not forget, a big thank you.

## **ABSTRACT**

The growing popularity of social media networks has been enabling individuals to attract large audiences on these platforms. This new group of opinion leaders, the social media influencers (SMIs), have massive network potential and influential power over consumers, representing a new type of independent third-party endorsers who shape audience attitudes and beliefs through the use of social media. SMIs increasing popularity and persuasion power are leading companies to start recognizing their value as endorsers and include SMIs in brand communication strategies, with the goal of diffusing brand messages to target consumers. This study is designed to identify the factors associated with SMIs that increase their endorsement effectiveness and stimulate consumers' positive perceptions about the endorsed products and purchase intention, focusing on source credibility, source attractiveness, product match-up and communication. A quantitative method was used to operationalize this study and a sample of 306 participants, aged between 18 and 57 years old and who follow SMIs, was collected through an online questionnaire. The results showed that all the SMIs' effectiveness factors – source credibility, source attractiveness, product match-up and communication – have a significant positive influence on consumer perception about the product and on purchase intention, individually and together. The factors with most impact on purchase intention are source attractiveness and communication when studied individually, and source attractiveness and product match-up when studied together. Moreover, consumer perception about the product positively impacts purchase intention directly and mediates the relationship between the set of SMIs effectiveness factors and purchase intention.

## **KEYWORDS**

Social Media Influencers • Purchase Intention • Consumer Perception • Source Credibility • Source Attractiveness • Product Match-up • Communication

## RESUMO

A crescente popularidade das redes sociais tem permitido aos indivíduos atraírem grandes audiências nessas plataformas. Este novo grupo de líderes de opinião, os influenciadores das redes sociais (IRSs), têm uma grande rede de contactos e poder de influência sobre os consumidores, representando um novo tipo de *endorser* que molda as atitudes e opiniões do público através das redes sociais. A popularidade e o poder de persuasão crescentes dos IRSs estão a levar as empresas a reconhecer o seu valor como *endorsers* e a incluir os IRSs nas estratégias de comunicação da marca, com o objetivo de divulgar as mensagens da marca aos consumidores alvo. Este estudo foi desenvolvido para identificar os fatores associados aos IRSs que aumentam a eficácia dos seus *endorsements*, que despoletam perceções positivas dos consumidores sobre os produtos e estimulam a intenção de compra, com foco na credibilidade do *endorser*, atratividade do *endorser*, ligação entre o *endorser* e o produto, e comunicação. Este estudo foi operacionalizado através de uma metodologia quantitativa, cujos dados foram recolhidos através de um questionário online, e contou com a participação de 306 pessoas que seguem IRSs, com idades compreendidas entre 18 e 57 anos. Os resultados demonstraram que todos os fatores de eficácia dos IRSs - credibilidade do *endorser*, atratividade do *endorser*, ligação entre o *endorser* e o produto, e comunicação - têm uma influência significativamente positiva na perceção do consumidor sobre o produto e na intenção de compra, individualmente e em conjunto. Os fatores com maior impacto na intenção de compra são a atratividade do *endorser* e a comunicação, quando estudados individualmente, e a atratividade do *endorser* e ligação entre o *endorser* e o produto, quando estudados em conjunto. Além disso, a perceção do consumidor sobre o produto impacta positivamente a sua intenção de compra de forma direta e medeia a relação entre o conjunto de fatores de eficácia do IRS e a intenção de compra dos consumidores.

## PALAVRAS-CHAVE

Influenciadores das redes sociais • Intenção de compra • Perceção do consumidor • Credibilidade do *endorser* • Atratividade do *endorser* • Ligação entre o *endorser* e o produto • Comunicação

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## LIST OF ABBREVIATIONS AND ACRONYMS

<b>CFI</b>	Comparative Fit Index
<b>eWOM</b>	Electronic Word-of-Mouth
<b>GFI</b>	Goodness of Fit Index
<b>KMO</b>	Kaiser-Meyer-Olkin
<b>PCA</b>	Principal Component Analysis
<b>RMSEA</b>	Root Mean Square Error of Approximation
<b>SLT</b>	Social Learning Theory
<b>SMI</b>	Social Media Influencer
<b>SPSS</b>	Statistical Package for the Social Sciences
<b>UGC</b>	User Generated Content
<b>UTAUT2</b>	Unified Theory of Acceptance and Use of Technology
<b><math>\chi^2</math></b>	Chi-Square

## 1. INTRODUCTION

Over the last decades, social media platforms have been becoming increasingly valuable and the number of users still continues to grow (Kemp, 2021). Social media is considered as a mass phenomenon with an extensive demographic appeal and is regarded as a more reliable source of information among communication sources. Consequently, with the continuous rise of social media, marketers have been prompted to seek new ways to promote their products and brands on these platforms, in a practice called social media marketing (Evans et al., 2021).

At the same time, a new group of opinion leaders arose, the so-called social media influencers (SMIs). A SMI is defined as an opinion leader who has been empowered by their network, is very active on social media (Li, 2016), and who can use their online platforms to spread information and significantly impact the opinions and behaviors of their audiences, due to their notable skills, knowledge, and/or attractive characteristics (Moreno et al., 2015).

SMIs are likely to succeed in persuasion when people accept their social power (Briñol et al., 2017), which potentiates social influence. Social influence is usually defined as the potential to form and change the beliefs, opinions, attitudes, and behaviors of a person, resulting from the action of a reference person or group (Tyagi, 2018).

Due to the growing popularity of SMIs and the low financial investment when compared to traditional media (Conde, 2019), SMIs are being considered effective endorsers and many brands approach them to promote their products, as a way to enhance the brand's popularity and stimulate purchase intention (Maden, 2018). This concept is denominated influencer marketing and consists of engaging influential people online to share brand messages with their audiences (Sammis et al., 2015). It is essentially electronic word-of-mouth (eWOM), through which SMIs communicate with their followers and encourage them to purchase certain brands, by endorsing or reviewing its products in a way that connects on a more organic level with the consumers (Lou & Yuan, 2019).

Thus, influencer marketing is particularly effective because consumers are more likely to positively react to a message coming from a trusted source and SMIs are perceived as more reliable and sincere in demonstrating a product to their followers, which results in consumers' greater intent to purchase the recommended products (Ge & Gretzel, 2018).

The literature concerning influencer marketing is divided into three main research areas, namely maximizing influence and identifying SMIs, studying the management of online presence and influence, and exploring the impact of SMIs in consumer behavior (Conde, 2019). Regarding the

latter area, to understand SMIs impact in the consumer purchasing behavior, it is important to explore what are the factors associated with SMIs effectiveness as endorsers, and how those factors influence consumer perception about the product and consequent purchase intention (De Veirman et al., 2017).

In the context of Social Learning Theory (SLT), characteristics such as source credibility, source attractiveness, and product match-up have been widely studied for endorsements, effect on consumer perception and purchase intention (Lim et al., 2017). This theory can also be applied to SMIs and suggests that purchase intention is highly influenced by consumer perception about the products and by the effectiveness of endorsers in promoting such products (Bandura & Walters, 1963). Accordingly, these three factors will be used to possibly explain SMIs effectiveness as endorsers, and the consequent influence on consumer perception about the product and purchase intention.

Moreover, even though communication features have been often studied in the context of social media advertising (Alalwan, 2018), due to the novelty of the topic there is scarce literature studying the effect of SMIs communication style, alone and allied with the other three factors, in endorsement effectiveness. As such, little is known about the impact that communication aspects of SMIs in their endorsements have on consumer perception about the product and purchase intention.

Considering the limitations recognized in the literature and the growing interest and relevance of SMIs and influencer marketing, it is essential to better understand the role of SMIs as endorsers (Gräve, 2017). This project intends to fill this gap by studying the impact of SMIs effectiveness factors as endorsers, focusing on source credibility, source attractiveness, and product match-up, along with communication, as proposed by Lim et al. (2017), on consumer perception about the product and purchase intention. Accordingly, this study has the following research question:

- How do SMIs effectiveness factors impact consumer perception about the product and purchase intention?

This dissertation is organized in six main chapters, starting by the present introduction. The second chapter contemplates the theoretical framework with an extensive literature review on social media marketing, SMIs, influencer marketing and the main concepts adjacent to this study, namely (i) SMIs effectiveness factors, composed by source credibility, source attractiveness, product match-up, and communication, (ii) consumer perception about the

product, and (iii) purchase intention. This chapter aims to clarify the gap in the literature, and support the objectives of the study and the conceptual model developed.

In the third chapter, the research questions and hypothesis are presented along with the conceptual model. The model will be developed based on the literature and represents the relationship between the independent variables regarding SMIs effectiveness factors, the mediator variable referent to consumer perception about the product, and the dependent variable concerning purchase intention. An explanation of the methodology used to answer the research hypothesis will follow, including a description of the participants, procedures, measures, and data collection process. Considering that the present project intends to study the relationship between the constructs, a hypothetical-deductive, quantitative approach will be used to test the research hypothesis. The data will be collected using an online self-administered questionnaire, applied to people who follow SMIs.

The fourth and five chapters are dedicated to the research findings ensuing from the statistical analysis of the collected data, and to the discussion of the results obtained, respectively. The sixth and final chapter concludes this study, presenting a summary of the main findings and contributions of the research, as well as the theoretical and managerial implications. The dissertation ends with the limitations of the study and subsequent future recommendations.

## **2. LITERATURE REVIEW**

### **2.1. SOCIAL MEDIA MARKETING**

More and more, social media is becoming a part of all aspects of people's lives and affects the way individuals interact with each other and with organizations (Alalwan, 2018). In fact, social media is a virtual community that connects people across the world through various platforms, such as blogs and social networks like Instagram, Facebook, and YouTube (Bahtar & Muda, 2016). As a result, nowadays social media have far greater capacity to reach mass audiences and is replacing traditional media (Schivinski & Dabrowski, 2016). Also, the overall time spent on social media is increasing and the number of users continues to grow worldwide, with 58.11% of the world's population being active on social media, when considering eligible audiences aged 13+ years (Dean, 2021). In Portugal, 63.60% of the population uses social media (Grupo Marktest, 2019).

This new wave of social media has prompted marketers to adapt their marketing strategies and seek customers where they spend a great part of their time (Evans et al., 2021). Brands started incorporating social media as a way to attract consumers, due to its efficacy and the great opportunities it presents (Alalwan et al., 2017). Social media allows easier reach and engagement with the brand's target audiences, and constitutes a more effective way to gather information, which allows companies to better understand consumers' behavior and needs. Besides, it is cost-efficient advertising because it entails fewer investment and effort compared to other marketing strategies (Appel et al., 2020).

This phenomenon, known as social media marketing, can be defined as the use of social media technologies, platforms, and channels to create, share, and communicate information and offerings with the goal of positively influencing consumers' purchasing behavior (Chen & Lin, 2019). In social media marketing, social media is used as a communication tool to promote and sell products and services, as well as disseminate information, and boost customer involvement with the brand and its products (Jacobson et al., 2020).

Social media marketing is commonly associated with relationship marketing, in the sense that, instead of only trying to sell their products, brands try to connect with consumers. This allows companies to foster brand loyalty through interactive two-way communication, networking, and community building (Nascimento, 2019).

Moreover, social media represents a space that enables online interactions between users or between consumers and brands, through the diffusion of any type of user-generated content

(UGC; Pachitanu, 2016), as well as the exchange of information and opinions about products and services, known as eWOM, between consumers (Rathore et al., 2016) – both of which constitute a considerable part of social media marketing. Therefore, a substantial amount of this UGC and eWOM is related to the promotion of brands and products, which results in advertising and promotional messages for brands, with significant effects on brand image, purchase intention, and sales (Liu et al., 2017).

More specifically, UGC refers to any material created and publicly shared online by all end users who are non-media professionals, for example through pictures, videos, reviews, or comments. UGC is usually perceived as trustworthy and described as an unbiased, useful, and objective source of information (Luca, 2015). On the other hand, eWOM refers to the informal communication online between potential, current or former consumers, and their peers, regarding the usage or characteristics of products and brands they have experienced, to endorse or discourage its consumption (Moran & Muzellec, 2017). Besides, eWOM is considered one of the most credible forms of advertising (Rosario et al., 2020).

Due to the growing habit of these practices, Internet users have been increasingly using social media to search and gather this type of information, with 72.10% using social media platforms to research brands (Kemp, 2021), resorting to the experiences of third party sources who they find more relatable and reliable than sources controlled by brands (Bahtar & Muda, 2016). Moreover, studies show that to help them make better purchasing decisions, consumers tend to trust more the opinions shared online by people they perceive as similar to them, believing more the authenticity of users who they believe to be willing to share the positive aspects of a product or brand as much as the negative, in contrast to corporative communication (De Veirman et al., 2017).

At the same time, potentiated by social media, influent users have been affirming themselves as new opinion leaders online, capable of reaching large audiences (Gräve, 2017). Opinion leaders refer to individuals who have the ability and motivation to share information, and the power to influence the actions, thoughts and decisions of a considerable number of people (Zhao et al., 2018).

In an online context, these individuals have a central position in their network and are characterized by the aptitude to express their opinions and purchasing experiences, as well as the great reach of their messages, and ability to generate a range of buzzwords (Tapinfluence, 2015). Moreover, opinion leaders are perceived as credible sources of information and are recognized as experts in particular fields (Rahmi et al., 2017).

Due to this recent shift, more than ever consumers are now looking to other consumers to get information about products and brands in order to enhance their purchasing process, taking into special consideration the opinion of these influential personalities, as is the case of SMIs (Talaverna, 2015).

SMIs play a crucial role in affecting the way users interact in social media and, due to their ability to capture the attention of other consumers and increase brand awareness and involvement (Moran & Muzellec, 2017), companies have learnt to leverage on these individuals and started to include SMIs in their social media marketing strategies (Ong & Ito, 2019), to boost the communication of promotional messages (Ge & Gretzel, 2018).

## **2.2. SOCIAL MEDIA INFLUENCERS**

A SMI is a regular Internet user with a sizable number of followers on social media (De Veirman et al., 2017), whose opinions, knowledge and reputation are respected by their audiences, and who has the ability, above the average individuals, to inform, entertain and, influence attitudes and behaviors (Maden, 2018).

These new opinion leaders have a huge network potential and influential power over consumers, and actively create and disseminate UGC and eWOM, that is consumed by unknown large audiences, in the form of textual and visual content depicting SMIs personal lives, lifestyles and purchasing choices (Gräve, 2017). SMIs are very well known to the audience and are recognized based on admiration, association, aspiration, and/or recognition (Djafarova & Rushworth, 2017).

### ***Characteristics of the SMI***

Due to their increasing relevance, SMIs are now being categorized and distinguished based on several attributes, with the most common being the number of followers. According to this criteria, SMIs can be divided into three categories: (i) micro-influencers, which are individuals with less than 100.000 followers, who are popular to a highly-engaged niche group, that perceives the SMI as very authentic and with whom they maintain a close relationship (Marwick, 2015); (ii) macro-influencers, referring to SMIs with 100.000 to one million followers, who have a substantial number of loyal followers and a more diverse audience than micro-influencers (Conde, 2019); and (iii) mega-influencers, who have a very diverse audience of more than one million followers, are widely known and highly popular, and have a status similar to celebrities or are actual celebrities, who nowadays also manifest their influence in social media (Alassani & Göretz, 2019).



In this line of thought, it is important to note that SMIs usually refer only to those individuals who achieve their status of micro-celebrities by creating and posting content on social media, thus acquiring their audience directly without any institutional mediation (Gräve, 2017). However, nowadays many traditional celebrities, who typically gained their popularity in an institutional setting and are well-known via traditional media, are also very present and active on social media. That being so, when they become regular content creators, traditional celebrities can also develop an influencer status and be considered as a type of SMI (Lou & Yuan, 2019).

SMIs create likeable online personalities and images, which they use to attract and engage with their considerable number of followers. They strive to keep an image of openness and intimacy, that gives their followers the perception of access to their personal lives, by sharing their everyday lives and authentic moments (Khamis et al., 2017).

This perception of closeness is also potentiated by social media features, which allow individual interactions between the SMI and their followers, with whom they can build and maintain relationships with (Dhanesh & Duthler, 2019). The affective relationships between SMIs and their audience are essential for SMIs persuasive power and depend on the SMIs ability to be authentic, honest, and genuine in their social media posts (Berryman & Kavka, 2017). Equally important is that the SMI continuously reflects the image of being reachable and maintains an open relationship with the audience, showing that they care for their followers (Glucksman, 2017).

Similarly, characteristics such as relatability, confidence, friendliness, credibility, and interactivity (Conde, 2019), as well as the ability to communicate skillfully and be well informed, are some of the most important aspects of a SMI's popularity (Forbes, 2016). Moreover, these influential individuals are overall described as verbal, smart, ambitious, productive, and self-assured (Freberg et al., 2011).

In this context, SMIs actively communicate their own identity to others through social media, while trying to manage their audience's perceptions of their image. As such, they carefully choose what to disclose about themselves in the content they share and opt to mainly highlight positive and relatable aspects of themselves and their lives in their online profiles, albeit without getting too far from the reality (Conde, 2019).

By doing this, SMIs maintain a consistent personal brand, which leads to the practice of self-branding, also known as personal branding. This concept refers to the development of a unique public image with the objective of commercial gain, and is based in the attention economy and

the narrative. A persuasive narrative can potentially attract followers for several motives, such as the message being inspirational, relatable, informative, and/or advisory (Khamis et al., 2017).

Therefore, SMIs are not limited only to creating relatable content but also inspire their audience, who perceive SMIs as aspirational due to their symbolic reference group associations (Djafarova & Rushworth, 2017). This leads consumers to guide their attitudes by the SMIs and replicate the SMIs actions as closely as they can, including their purchasing choices, which makes consumers feel attached to the promoted products as well, because those products relate to the consumer's desired image and strengthen their self-identity (Berryman & Kavka, 2017).

### ***Capitalization of SMIs influence***

Consumers create a perception of the SMI's lifestyle that is inseparable from their consumption decisions, which gives SMIs the opportunity to capitalize their great influence on consumers' opinions (Khamis et al., 2017). Therefore, SMIs started communicating brand messages not only for their audiences but also to capture brands' attention, thus showing their openness to partnerships, usually by creating aesthetically pleasing content, using specific hashtags, and mentioning the brands they want to collaborate with (Carter, 2016). In this context, SMIs assume a third-party nature that makes them neither a typical consumer nor a brand (Delbaere et al., 2021).

Moreover, by documenting their everyday lives and incorporating brands and products in real-life situations, SMIs connect more organically with their followers and are perceived as more credible, sincere, and reliable than other sources of information, when demonstrating the products to their audience (Nascimento, 2019). According to Talaverna (2015), messages conveyed by SMIs are frequently perceived as more compelling to consumers and 82.0% of followers' polls reported that consumers are more likely to follow their favorite SMI's recommendations.

As such, SMIs are seen as having strong and relatable opinions, and are frequently sought after by their peers, with whom they share interests and characteristics, for advice on purchasing decisions (Uzunoğlu & Kip, 2014). Besides, by being at the center of a large, engaged, and trusting community, SMIs have established themselves as potential endorsers and have been attracting the attention and interest of relevant brand marketers (Lou & Yuan, 2019).

In this context, SMIs have high marketing value for brands due to the great visibility they achieved among their audiences and by regularly generating valuable content on social media (Garcia et al., 2016). Therefore, due to their ability to influence the perceptions and behaviors of other consumers, and generate eWOM compared to other marketing strategies, such as

celebrity endorsements (Schouten et al., 2020), as well as their huge persuasion power and ability to promote a brand and its products, companies have been acknowledging these opinion leaders and frequently invite SMIs to be brand ambassadors (Ge & Gretzel, 2018).

SMIs are now becoming part of the companies' social media strategies and are approached by brands to promote their products on visually appealing social media platforms, to relay information about the products, and update their audiences about the newest promotions (Liu et al. 2015), as a way to attract people to be more motivated to try the brand's products (Osayemi, 2019).

Accordingly, when trying to define SMIs in the sense of establishing a relationship between their personal image and their role as endorsers, SMIs are considered a category of social media users who share curated content to their audience and get remuneration by collaborating with brands to promote their products and increase consumers' purchase intentions (Hund, 2017).

In conclusion, the way SMIs use social media and their ability to connect and establish close relationships with their followers (Glucksman, 2017), who trust their suggestions and opinions, and wish to have similar purchasing choices, results in commercial opportunities for SMIs (Audrezet et al., 2020).

In this context, the concept of influencer marketing emerges. Influencer marketing is not a new concept within the industry, but is now being incorporated in social media, which has opened up a new way for brands and people to work together on a more organic level, than that of brand-generated ads (Wardani et al., 2019).

In this type of marketing, the brand communicates with the SMI through activities like offering products, samples, and invitations to events, which SMIs recognize as the brand implying an obligation of promotion on the SMI's part (Archer & Harrigan, 2016). The SMI then shares the message with their audience who, in turn, will interact with the publication. Also, even though the SMI is the main responsible for conveying the message, their followers are also potential carriers of the message and represent important vehicles of information, by sharing it with friends, family, and other consumers (Uzunoğlu & Kip, 2014).

This way, rather than forcing a relationship that can be misinterpreted or result in a loss of connection between the brand and their consumers, brands can connect more directly and closely with consumers, on a daily lives basis, through SMIs' recommendations, opinions, and demonstrations of the brand's products on their online profiles (Osayemi, 2019).

### **2.3. INFLUENCER MARKETING**

Influencer marketing refers to the set of practices that identify, encourage, and use selected SMIs to create and promote sponsored content to their followers and the brand's target consumers (Lou & Yuan, 2019). In this form of marketing, brands invest in strategies involving these key individuals and opinion leaders who have influence over their audiences to aid in their marketing activities by carrying and communicating the brand's message, with the goal of driving brand awareness and influence consumers' purchasing decisions (Sammis et al., 2015).

There are two types of influencer marketing: earned and paid. Earned influencer marketing refers to SMIs voluntary promotion of brands and to the free recommendations or mentions of products, resultant of a pre-existing relationship between the SMI and the brand, or with the objective of social ascension by gaining the appreciation of others (Sudha & Sheena, 2017). On the other hand, paid influencer marketing relates to sponsored content, meaning the promotion of the brand's products is directly or indirectly paid (Delbaere et al., 2021). Nonetheless, out of the two, the most common form of influencer marketing is the latter, entailing sponsored content (Boerman et al., 2017).

The practices of paid influencer marketing can be distinguished based on their degree of intrusion. A less intrusive approach consists of sending free products for the SMI to try, without any obligation on the part of the SMI to show or recommend the products to their followers. On the other hand, in a more intrusive approach, brands offer financial incentives to SMIs, directly paying them to positively discuss or promote a specific product, thus imposing stronger terms concerning the endorsement content (Audrezet et al., 2020).

#### ***Advantages and motivations of influencer marketing***

SMIs function as the fundamental connection between brands and consumers, by endorsing products through their personal lives, making them relatable and relevant to the regular consumer (Li et al., 2012). Thus, SMIs serve as brand ambassadors by creating and sharing sponsored content in the form of pictures and videos of the product alone or incorporated in their everyday moments, by mentioning the product in their posts' captions or tags, or sometimes by participating in major advertising events (Domingues Aguiar & Van Reijmersdal, 2018). Likewise, a previous study by Glucksman (2017) already showed that displaying products through photographs and videos, connecting brands and consumers, and exchanging opinions and feedbacks with their followers, is essential for the success of influencer marketing.

Moreover, influencer marketing is a type of native advertising, in the sense that it implicates incorporating commercial posts with sponsored products in a way that resembles, in format and

content, the daily narratives without promotional content that SMIs share with their followers (Boerman et al., 2017).

As such, it is also regarded as branded entertainment and highly credible eWOM, which makes influencer marketing a very attractive marketing tool for brands, because it can induce engagement, such as comments, likes, and shares, with a large audience, in a short time period and at lower costs than traditional advertising (Evans et al., 2017). Also, SMIs have the capacity to target niche groups that were usually unreachable by traditional advertising, which targeted mostly mass audiences (Glucksman, 2017).

Besides, when compared to traditional marketing, influencer marketing requires consumers to be more active and participative in creating and sharing marketing messages and content that influence other consumers (Gretzel & Yoo, 2014). Also, due to the opportunity for consumers to talk and interact with each other, influencer marketing is a powerful way to reach and engage with actual and potential consumers, and positively impact purchase intention (eMarketer, 2017).

Additionally, influencer marketing is considered the most effective means of producing brand recognition, obtaining new customers, building brand engagement, and encouraging brand loyalty (Delbaere et al., 2021).

In line with these benefits, previous studies have shown positive outcomes resultant of influencer marketing campaigns on sales, consumers' interest on the brand and its products, as well as on eWOM and in terms of leveraging the brand's online presence (Petrescu et al., 2018). Furthermore, a recent report on social media trends demonstrated that influencer marketing generated 11 times the return on investment of traditional marketing and that 94.0% of marketers found influencer marketing campaigns effective, after implementing them (Lou & Yuan, 2019). Moreover, when analyzing the most popular social media platform for influencer marketing, Instagram stands out as the most significant (Mediakix, 2019).

Lastly, because of consumers' general tendency to avoid or disregard advertisement, with the use of ad-blockers or overall evasion of marketing, induced by consumers being increasingly overly-stimulated and having very short attention spans, some of the social media marketing is rendered ineffective and its potential seems wasted (DeVeirman et al., 2017). Considering that influencer marketing incorporates the advertisements into the actual content of the media (branded entertainment) and adjusts the advertising content and design toward social media standards, in order for the advertising to blend in with non-commercial content (native advertising), it is a popular way to counter this situation (Evans et al., 2017).

### ***Challenges of influencer marketing for SMIs***

Despite all its advantages, influencer marketing also presents a few challenges for SMIs and brands alike. The issue of influencer marketing for SMIs is that most of their recommendations are directly or indirectly remunerated, but their commercial posts blend almost seamlessly with their non-commercial content, making it sometimes difficult to recognize it as endorsements (Boerman et al., 2017). For this reason, a growing number of countries has been imposing a legal obligation to identify in a clear way when the content is sponsored, through a practice denominated sponsorship disclosure (Hwang & Jeong, 2016).

Though consumers usually expect honest recommendations from SMIs, a sponsorship disclosure and the consequent recognition of a post as being an endorsement, makes it less appealing for the SMIs' followers to engage with the post (Boerman, 2020). Moreover, the acknowledgement that the message being communicated is sponsored affects consumers negatively, making them question the motivations that led the SMI to share the recommendation and making them more critical toward the endorsement, which in turn affects the endorsement's efficacy (Breves et al., 2019).

That being so, when consumers realize that a recommendation is being sponsored, they can perceive it only as a way for the SMI to be economically rewarded, which lowers the SMI's perceived credibility and authenticity (Audrezet et al., 2020), and negatively impacts the trust in the SMI (Moran & Muzellec, 2017). Also, consumers' perception that the message being conveyed in the endorsement is not genuine, but a commercially driven message instead, can create a sense of unfairness and deception, which might weaken the relationship between the followers and the SMI (Boerman et al., 2017).

Additionally, consumers are increasingly more aware of this form of marketing and even the way the information is presented to the consumer affects their attitude towards the SMIs endorsements and their effectiveness (Forbes, 2016), if the consumers perceive strong manipulative intent (Weismueller et al., 2020). Besides, previous studies by Djafarova and Trofimenko (2019) demonstrated that some people consider unfollowing the SMI if they post too much sponsored content, meaning that if the SMI becomes overly commercial it can sever the relationship with their followers.

In order to lessen these issues, SMIs often emphasize that they only promote products they would like to use themselves, and that the endorsements are a genuine expression of their identity (Carter, 2016), stressing that their opinions and recommendations are honest despite being sponsored (Hwang & Jeong, 2016). These actions are most likely because brands and SMIs

are aware that sponsorship disclosures have a negative effect in the SMIs' credibility and, consequently, on consumers purchase intentions, and wish to maintain the perceptions of authenticity and trust of their audience (Weismueller et al., 2020).

Contrarily, several studies show that for some followers this is not a significant issue, for they accept the SMIs' recommendations even when they recognize them as endorsements (Boerman et al., 2017). These consumers see the recommendations as a way for SMIs to inform consumers about new products or brands, so they do not mind the SMI being monetarily compensated for this (Djafarova & Trofimenko, 2019). Moreover, some consumers perceive sponsorship disclosures as transparency and honesty regarding the endorsement nature of the posts, which can increase source attractiveness (Evans et al., 2017).

### ***Challenges of influencer marketing for brands***

On the other hand, brands also face challenges arising from influencer marketing. Firstly, brands are reluctant to give up control of the brand's communication to the SMIs, who have creative liberty to create the content of the endorsement (Conde, 2019). Moreover, brands have to measure the effects generated by SMIs on consumer perception of the brand and its products as well as the change in consumer buying behavior (Uzunoğlu & Kip, 2014). Finally, and most importantly, the biggest challenge for brands is to identify, activate, and retain SMIs (Petrescu et al., 2018), and recognize which factors associated with SMIs most affect consumers' purchase intentions, consequently acting as key drivers in increasing sales (Gayathri & Anwar, 2019).

Therefore, the identification of the right SMI is fundamental for the endorsement's effectiveness and, as such, it is the most studied aspect in the literature (Carter, 2016). Usually, the selection of the most adequate SMI is done taking into account direct measures of influence, like number of followers and engagement rates (Hund, 2017). However, nowadays it is hugely recognized that the dimension of the audience and a high number of connections is not necessarily the same as influence, reason why the literature suggests that other factors subjacent to SMIs should be considered (De Veirman et al., 2017).

In conclusion, the identification and selection of SMIs who are simultaneously influent and suitable for the brand's goals remains one of the main challenges for brands (Roelens et al., 2016). Hence, it is of particular importance and interest to have a better understanding regarding the factors that most contribute for the SMIs' persuasion power and endorsement effectiveness, to be taken into consideration in this process.

## **2.4. SMIs EFFECTIVENESS FACTORS**

It is challenging but essential for brands to identify and select the SMIs who present a more significant impact on their target consumers and have higher influence in getting their followers to try and adopt the endorsed products, thus resulting in greater endorsement effectiveness and leading to higher purchase intentions (Pophal, 2019). In turn, this endorsement effectiveness is highly influenced by the consumers' perceptions of the SMI and their endorsements, which are dependent on a set of characteristics held by the SMI (Conde, 2019).

Based on the literature, to increase the impact of the message that SMIs share through their endorsements in social media, brands should look for the most credible, well-liked and well-known SMI, who is regarded as a respected opinion leader (De Veirman et al., 2017). Accordingly, it is argued that the success of SMIs is greatly dependent on their ability to provide authentic content to their followers, capable of convincing them that the SMI truly likes and uses the endorsed products (Gayathri & Anwar, 2019).

Moreover, it is essential to choose the most effective and adequate SMI, taking into account the type of product the brand wants to promote and how it fits with the SMI's image (Khan et al., 2019). Finally, it is important to consider the communication aspects featured in the SMI's endorsements in order to strengthen the effectiveness of the transmitted message and the SMI's influence over the target audience (Sarraf & Teshnizi, 2020).

According to the previously mentioned literature studying the characteristics that influence and predict the effectiveness of endorsers, in this case SMIs, regarding consumer perception about the product and purchase intention, four main factors from social psychology, communication and marketing will be studied and later used in the development of the conceptual model, namely source credibility, source attractiveness, product match-up, and communication.

### **2.4.1. Source Credibility**

Source credibility is widely used to evaluate endorsement effectiveness and plays an important role in explaining how a source of a message is persuasive (Seiler & Kucza, 2017). Based on social psychology, source credibility can be defined as the set of positive reliable qualities of a communicator that affects the audience's level of acceptance of a certain message (Hu et al., 2019).

Commonly, a credible source has the potential to change consumers' opinions and behaviors, and generally creates a positive influence on consumers' perceptions about a product or brand



(Wang et al., 2017), through the process of internalization. This process involves the receiver's acceptance of attitudes, values, and opinions of others into their own selves, when the source is considered credible and presents a behavior consistent with the receiver's value system (Sokolova & Kefi, 2020).

According to Hovland and Weiss (1951), the credibility of an endorser, and their consequent persuasion power, depends on two components: expertise and trustworthiness (Seiler & Kucza, 2017).

### ***Expertise***

Expertise has been defined as the degree to which an endorser is perceived to be able to make valid statements (Ismagilova et al., 2020). It refers to the knowledge, experience, and skills developed by a SMI to adequately promote a product (Ladhari et al., 2020).

Accordingly, the more a SMI uses a product, the more likely it is that they will exhibit significant knowledge about it and be considered an expert source. SMIs take advantage of this by frequently featuring and demonstrating direct experience with the products, showing on social media how they incorporate the products in their daily lives and in real-life settings, as well as sharing reviews and tutorials of the products they are endorsing (Rahmi et al., 2017).

In this matter, SMIs' ability to share fair and reliable information during their interactions with the audience improves the relationship between them and how much they are viewed as having expertise (Nejad et al., 2014). Besides, already back in 2011, Kumar advocated that it is not crucial for an endorser to be an actual expert, but to be perceived by the consumers as such.

SMIs who are perceived as experts are found to be more persuasive (Lim et al., 2017). Therefore, expertise has a positive significant influence on consumer perception about the product and is able to drive purchase intention, whether for personal use or gift giving (Nascimento, 2019).

Additionally, when consumers perceive that SMIs lack expertise and knowledge about the endorsed products and are unaffiliated with the information they share, SMIs indirectly cause negative attitude towards themselves and consequently lead to consumers' negative perception about the products and little intention to purchase (Lim et al., 2017).

### ***Trustworthiness***

On the other hand, trustworthiness refers to the endorser's perceived honesty, integrity, and believability, and the extent to which the consumer can trust the intentions of the endorser when communicating the most valid arguments. The ability of the SMI to provide honest and

precise information results in a higher degree of confidence in, and acceptance of, the message (Zhang et al., 2020).

In general, consumers perceive digital celebrities, like SMIs, as more trustworthy than traditional celebrities (Djafarova & Rusworth, 2017). This can be explained by the fact that consumers believe SMIs deliver information in a more transparent and sincere way (Ge & Gretzel, 2018), and see SMIs as people more similar to ordinary consumers and, therefore, more alike themselves, when compared to other celebrities (Schouten et al., 2020). However, as mentioned before, when consumers acknowledge SMIs are being paid to endorse a product, they sometimes tend to perceive them as less trustworthy, assuming they are only endorsing the product to get benefits from sharing the information with the audience and not because they genuinely believe what they are saying (Bergkvist et al., 2016).

Taking this into account, the trustworthiness of an endorser is considered one of the most fundamental factors influencing endorsement success (Seiler & Kuzca, 2017) and the main characteristic of source credibility for digital influencers (Chapple & Cownie, 2017). As such, when SMIs are perceived as trustworthy, they are more likely to be effective in changing consumers' perceptions and stimulating intention to purchase (Ismagilova et al., 2020).

In conclusion, SMIs who are perceived as more expert and trustworthy have more influence on their followers' behaviors, which results in higher acceptance of the delivered message (Sokolova & Kefi, 2020). Several studies (e.g., Ananda & Wandebori, 2016; Kumar, 2011; Weismueller et al., 2020) show that source credibility positively affects consumer perception about the product and purchase intention.

#### **2.4.2. Source Attractiveness**

Source attractiveness is considered to directly influence the effectiveness of an endorsement and refers to both physical attractiveness and social attractiveness (Delbaere et al., 2021). This way, attractiveness entails not only an endorser's physical attributes, but also other characteristics that the audience may perceive as virtuous, such as creativity, personal traits, and lifestyle (Conde, 2019).

SMIs with attractive features are viewed as having desirable qualities and personalities, and tend to be more persuasive and effective in changing beliefs, resulting in a positive attitude on consumer perception about the product and, consequently, on purchase intention (Chekima et al., 2020).

Source attractiveness is based on social psychology (McGuire, 1985) and suggests that the effectiveness and persuasiveness of the source depends on three elements: similarity, familiarity, and likeability (Chun et al., 2018; De Veirman et al., 2017; Gräve, 2017).

### ***Similarity***

Similarity is defined as the perceived resemblance between the source and the audience (Li & Yin, 2018), and it can depend on demographic attributes, such as age, gender, education, and social status, or perceptual characteristics, like interests, values, lifestyle, and experiences (Fanoberova & Kuczkowska, 2016).

When endorsers are perceived as demographically similar, they become preferred sources of information. Moreover, SMIs who are perceived as less expert are more influential than expert endorsers with whom the audience shares no similarities (Conde, 2019).

By creating their own customized content, SMIs can be more imaginative, and show their personal lives and everyday lifestyle more closely and believably, which allows the audience to better understand their personality and the similarities between them and the SMI (Forbes, 2016). This personalized information consequently acts as a persuader for the consumers who trust the content shared by the SMI with whom they share opinions, interests, and attitudes (Kapitan & Silvera, 2016). Allied with the possibility of interacting with the SMI (e.g., commenting on their posts), this enhances the consumers feeling that the SMI is similar to them and allows the followers to better connect with the SMI and relate to their content (Schouten et al., 2020).

Accordingly, when SMIs are perceived as similar in values, attitudes, and/or appearance, their followers are more likely to be attached to them, which results in higher levels of trust and, consequently, more positive perceptions about the endorsed products and purchase intention (Ladhari et al., 2020).

### ***Familiarity***

Familiarity corresponds to the audience's degree of knowledge of the source gained through exposure (Li & Yin, 2018).

When consumers follow or interact more regularly with the SMI, they usually perceive the SMI as more relatable and approachable, and develop a certain closeness with them, feeling like they are a long-distance friend (Gannon & Prothero, 2018). As such, SMIs are likely to be more effective when the audience is very familiar with them, because their followers intentionally choose to follow their activities and consider the SMI as part of their community (Gräve, 2017).

According to Fanoberova and Kuczkowska (2016), closer contact with the SMI also makes followers note the principle “like me” and more easily consider themselves like the SMI, which strengthens the similarity factor. Furthermore, people are expected to trust and rely on a communicator with whom they are familiar and have a bond with. By knowing the SMI better, consumers tend to follow their suggestions and believe there is less risk in making the same decisions as the SMI, which leads to positive perceptions and intention to purchase the endorsed products (Chun et al., 2018).

### ***Likeability***

Likability is considered as the level of affection, fondness, and care for the source due to physical attributes, personality, and behavior (Abdullah et al., 2020). As such, the likeability of an endorser does not solely depend on their appearance, but it is also affected by several other characteristics, such as intellectual skill, lifestyle, and beliefs (Seiler & Kucza, 2017).

People are more inclined to follow an endorser when they feel fond of them. As such, the more the audience thinks the SMI is likeable, the more expected it is that the message is effective and translates into greater attention and easier recall for consumers (Fanoberova & Kuczkowska, 2016).

Besides, the persuasiveness of a source can be determined through the process of identification, which happens when the audience accepts the message of an endorsement being communicated by a likeable source, because they wish to identify themselves with the SMI they care for or simply because they like them (Briñol et al., 2017). Hence, well-liked endorsers are considered to have a persuasive role as a brand spokesperson (Lim et al., 2017) and are able to stimulate higher interest, being more liable to capture the followers’ attention (Fanoberova & Kuczkowska, 2016).

Many past researchers have found that attractive endorsers are more effective than less attractive sources at persuasiveness, influencing positive attitudes and stimulating purchase intentions (Li & Yin, 2018). Moreover, it was shown that products associated with physically attractive endorsers were more well liked than those presented by those less attractive (Peng et al., 2020). However, according to Chapple and Cownie (2017), source attractiveness is mainly related with emotional and affective aspects instead of physical appearance, in the specific case of SMIs.

In summary, an attractive SMI regarded as similar, familiar, and likeable is more inclined to affect consumers with positive outcomes (Lim et al., 2017), because when the endorser has attractive

attributes, it reflects in a positive effect on the nature of the endorsed product as well (Nascimento, 2019). Several studies (e.g., Kumar, 2011; Wang et al., 2017) show that source attractiveness positively influences consumer perception about the product which leads to purchase intention.

### **2.4.3. Product Match-up**

Product match-up refers to the perceived fit between the SMI and the product they endorse, and depends on the shared attributes between the product features and the SMIs image (Breves et al., 2019).

The Match-up Hypothesis (Kamins, 1990) suggests that the effectiveness of an endorsement is impacted by the relationship between the endorser and the endorsed product's characteristics. Customers create an image about the product by comparing its qualities to the SMI's, expecting them to be compatible (Khan et al., 2019). As such, when the SMI's traits and the product features complement each other, there is a strong association between the SMI and the product, and the significant match-up strengthens the endorsement effectiveness (Gong & Li, 2017).

When there is a congruence between the SMI and the product, not only does the endorsement prove to be an effective marketing strategy (Seiler & Kuzca, 2017), but it also increases the credibility and attractiveness of the SMI among the target audience (Osei-Frimpong et al., 2019). Likewise, Lim et al. (2017) corroborate that it is vital to employ spokespersons that directly resemble the product and have knowledge about it.

On the other hand, if there is no consistency between the SMI and the endorsed product, the consumers may assume the SMI is not being genuine and is only endorsing the product because they are paid to do it (Kumar, 2011). Accordingly, SMIs are perceived as less credible if they endorse products that do not fit with them (Lee & Koo, 2015). Furthermore, if the SMI lacks a distinct and harmonious relationship with the product they endorse, and share no common attributes, consumers tend to recall the SMI but not the product being endorsed. This is called the vampire effect, when the endorser overshadows the endorsed product, rendering the endorsement ineffective and harming the brand (Erfgen et al., 2015).

Another study revealed that product match-up can play a dual role in the endorsement effectiveness. While a bad product-endorser fit can lead to increased skepticism, a good fit between the product and the endorser can result in more positive perceptions of source credibility and stimulate internalization (Kapitan & Silvera, 2016).

In sum, SMIs as endorsers of a brand must present a suitable match with the product features and it is of great importance that the SMI's content aligns with the brand's overall image, in order to attract the audience and ensure the message is more effective (Schouten et al., 2020).

Taking these findings into consideration, product match-up is found to substantially improve the effectiveness of an endorsement and results in a positive effect on consumer perception about the product and the endorsement itself (Pradhan et al., 2016). Consequently, a good match-up between the SMI and the product is one of the most essential factors driving consumer purchase intention (Lim et al., 2017).

#### **2.4.4. Communication**

Communication is the first interaction between brands and consumers in the value creation process (Lim et al., 2017). As such, comprehending how communication occurs and how the communication aspects of an endorsement affect persuasion, is essential to understand how the characteristics of the message transmitted by SMIs influences the effectiveness of their endorsements on consumer perception and purchase intentions (Lou & Yuan, 2019).

The communication aspects of social media advertising have been widely studied by several authors (e.g., Lutfie & Marcelino, 2020; Shah et al., 2019), urged by the interactive and two-way communication nature of social media, that allows companies to communicate more informatively and attractively with their consumers (Lee & Hong, 2016; Swani et al., 2017). Indeed, communication on social media can generate different perceptions and experiences for consumers, because it boosts engagement between the consumers and the advertisement, such as likes and comments (Khan et al., 2019).

Accordingly, social media communication is extremely important in shaping the consumers decision-making process, resulting in positive perceptions and consequently higher purchase intentions (Shareef et al., 2019).

However, these communication aspects have been scarcely studied regarding SMIs endorsements, and the role they play in the effectiveness and persuasiveness of such endorsements. As such, Lim et al. (2017) proposed that communication should be studied in this context to explore the effect of SMIs communication on consumer perception about the product and on purchase intention. That being so, among the key communication features recognized by Alalwan (2018) and Sarraf and Teshnizi (2020), that may also be applied to SMIs and influence endorsement effectiveness, three factors will be studied to explain the impact on consumer

perception about the product and purchase intention, namely hedonic motivation, interactivity, and informativeness, adapted to the context of SMIs.

### ***Hedonic Motivation***

Hedonic motivation is one of the main contributions included in the Unified Theory of Acceptance and Use of Technology (UTAUT2) by Venkatesh et al. (2012), based on the consumers' approach, to study the role of intrinsic motivations in influencing consumers' purchase intentions. Hedonic motivation refers to the pursuit of pleasure and the value achieved from mental experiences like fun and entertainment, which can be obtained through the use of social media (Lutfie & Marcelino, 2020).

Social media networks are largely recognized as new entertainment platforms characterized by a higher level of innovation, where people can satisfy hedonic needs, because it allows the audience to find enjoyment and different, exciting experiences (Alalwan et al., 2017; Shareef et al., 2019). As such, consumers are more attracted to social media endorsements due to their level of originality, creativity, appeal (Jung et al., 2016), and interactivity (Shah et al., 2019), and perceive hedonic benefits from the message being transmitted, which results in substantial positive outcomes in the purchasing process (Chen et al., 2017a).

Additionally, hedonic motivation includes the emotional aspects, like happiness and fun, found throughout the consumers' shopping experience on social media (Sarraf & Teshnizi, 2020). Therefore, entertaining and emotional content has more probability of encouraging dialogue and information spreading, because consumers seek to enjoy the buying process as much as the product they intend to purchase. Accordingly, hedonic endorsements can influence these exploration-oriented consumers, who are liable to make purchases if adequately motivated by the message (Shah et al., 2019).

Taking this into account, SMIs have a vital role in stimulating hedonic motivation in their followers by sharing entertaining content regularly and incorporating hedonic aspects in their endorsements (Schouten et al., 2020). This way, SMIs reflect in their posts personal aesthetic and appealing traits that typically create an enjoyable experience and result in entertainment value for their followers (Lou & Yuan, 2019). Besides, SMIs associate their social status and personality with the product they are endorsing which, allied with the consumers' connection with the SMIs and the SMIs' connection with the product, allows SMIs to raise their audience's attachment to the endorsed product (Lin et al., 2018).

Hence, hedonic motivation positively influences consumer perception of the endorsement and the product (Shareef et al., 2019) and is a key predictor of purchase intention (Alalwan, 2018; Shah et al., 2019).

### ***Interactivity***

Interactivity is one of the most essential aspects in social media and refers to the two-way communication and interaction between SMIs and consumers, like asking followers' opinions and feedbacks on their posts and endorsed products (Osayemi, 2019).

Social media expands consumers' perception and awareness of the transmitted information and enhances their ability to consciously process it, which results in additional knowledge (Alalwan, 2018). Indeed, interactivity is the extent to which someone is able to control the context and make their own contribution to the information being exchanged, so it significantly changes how the communication process occurs and the way information is shared between users online (Sundar et al., 2014).

Considering that consumers cannot physically contact with the product being endorsed by SMIs to assess its characteristics and qualities, interactivity plays a strong role in shaping the users' perceived benefits associated with those products (Barreda et al., 2016). Additionally, when endorsements are interactive, it is more likely to enhance consumers' trust than less interactive ones. It also increases the level of intrinsic satisfaction like hedonic motivation, which encourages consumers' will to follow and pay attention to these endorsements, due to their usefulness and entertainment (Chen et al., 2017a).

For its ability to provide timely, quick responses and real-time feedback in two directions, consumers currently give more preference to this two-way communication over simply being receivers of the message being transmitted (Alalwan, 2018). Moreover, interactivity further values consumers' opinions by allowing them to share their experience and perception about the endorsement and the product (Jiang et al., 2010).

Accordingly, SMIs who often ask for their followers' feedbacks, boost the communication between them and their audience, and incorporate high levels of interactivity in their endorsements, have a substantial indirect impact on the audience's engagement and a very important role in positively influencing consumer perception and purchase intention (Alalwan, 2018).



### ***Informativeness***

Informativeness is defined as the extent to which an SMI has the ability to relay adequate information regarding the endorsed product, and stimulate the rational assessment and acceptance of that information, based on which consumers can make better purchasing decisions (Alalwan, 2018).

The substantial increase in the range of products available, allied with the consumers' familiarity with social media and the perceived easiness of searching and understanding information accessible online, has increased product information demand (Shah et al., 2019). Indeed, more and more consumers are looking for information online to evaluate and compare products during the consumption process (Dwidienawati et al., 2020).

This, in turn, makes highly informative social media endorsements more efficient and helpful from the consumers' perspective (Jung et al., 2016). In fact, it allows consumers to save time and effort in the information search process, by providing more updated, timely, and complete information in a more convenient way (Noguti & Waller, 2020). Moreover, the considerable interactivity level of social media makes SMIs' endorsements a worthier source of information compared to other traditional media (Rathore et al., 2016). Likewise, social media offers more tools that enable the customization of the endorsements and the information shared, which allows SMIs to deliver appropriate and helpful information that responds to consumers' needs (Lee & Hong, 2016).

In this regard, informativeness is one of the main characteristics influencing endorsement effectiveness and proves a significant positive connection between the information content and consumer action, by substantially changing consumers' perceptions (Lou & Yuan, 2019). Furthermore, Lee and Hong (2016) also proved that consumers are more likely to buy a product if they perceive the endorsement as a rich source of information, revealing a positive impact of informativeness on consumers' purchase intentions.

In conclusion, and taking into account the three factors above, consumers are more likely to positively perceive and purchase a product if the communication style used in the SMIs' endorsements is deemed as enjoyable, a worthy source of information, and highly interactive (Sarraf & Teshnizi, 2020).

## **2.5. CONSUMER PERCEPTION ABOUT THE PRODUCT**

Perception is a main factor in marketing and describes how consumers become aware of, select, and interpret information in a way to produce meaningful representations of their environment (Tyagi, 2018). It represents a subjective reality, influenced by a person's needs, values, and expectations, and shapes learning and behavior (Agyekum et al., 2015).

Perception is subject to three perceptual processes: (i) selective attention, which allows people to focus only on the information that most matters and tune out unimportant details; (ii) selective distortion, which relates to people's tendency to interpret information in a way that goes accordingly with what they already believe; and (iii) selective retention, which refers to the situation where people more accurately retain messages that are closer to their interests and values, remembering only selected information and ignoring the rest (Akhtar, 2019).

SLT by Bandura and Walters (1963) advocates that an individual is motivated and consequently displays positive perceptions from socialization agents via direct and indirect social interaction. This theory is widely used in advertising and communication as a way to understand consumer's buying behavior and perceptions, and predict how it is influenced by socialization agents like friends, family, and celebrities (Nascimento, 2019). As such, it is proposed that SLT can also be used as a foundation for studying the impact that SMIs have on consumer behavior and perception, considering that SMIs are a new type of reference group and opinion leaders (Li, 2016).

SLT states essentially that people can learn new information and behaviors by observing the actions of others. Therefore, observational learning allows individuals to learn which behaviors are acceptable and desirable or not, and reproduce the behaviors observed (O'Fallon & Butterfield, 2012). All learning includes two distinct processes: an external interaction process between the learner and their environment, and an internal psychological process of getting and interpreting information (Chen et al., 2017b). In this study, the external process refers to the consumers' interaction with the SMIs on social media, and the internal process to the perception consumers have after their socialization experience with the SMI.

Social media offers an ideal environment to observe the behavior of others by allowing people to share opinions and interact with each other, which provides them with extensive social knowledge. Likewise, in social consumption, people get information about the products they want through content generated by other users online – UGC. This social learning process is fundamental during consumption, because consumers learn important information from the knowledge and experience of others they know and trust, for instance, if the products are

reliable, if they satisfy their needs, and if the purchasing process is enjoyable, thus supporting consumers' buying decisions (Chen et al., 2017b).

SIMs' strong social media presence and role as trustworthy digital opinion leaders, allows them to influence the attitudes, decisions, and behaviors of their followers. Accordingly, it is very relevant to study how SIMs impact consumer perception about the product, through their endorsements (Lim et al., 2017). Besides, there is evidence that a positive perception about the endorser results in a positive perception about the product as well (De Veirman et al., 2017).

Therefore, SIMs qualities can improve consumers' perceptions about the products they endorse and consequently increase intention to purchase (Kumar, 2011). As mentioned before, several studies show that when SIMs are credible (Weismueller et al., 2020), attractive (Wang et al., 2017), fit well with the product they endorse (Pradhan et al., 2016), and have good communication skills (Lou & Yuan, 2019), they generate more positive perceptions towards the endorsed products among their followers.

Moreover, exploring how consumers perceive information from SIMs about products is key to understanding the effectiveness of the transmitted message in making consumers believe that a product is better and delivers higher value comparing to others (Babin et al., 2017). Hence, consumers' favorable perceptions towards products endorsed by SIMs can lead to increased probability of consumer purchase intention, as shown in several previous researches (e.g., Schivinski, & Dabrowski, 2016; Seiler & Kuzca, 2017).

In conclusion, consumer perception about the product is positively influenced by the favorable SIMs effectiveness factors, such as source credibility, source attractiveness, product match-up, and communication. In turn, a positive perception towards the product endorsed by a SIM will result in higher purchase intention (Ting & de Run, 2015). As such, consumer perception about the product is an essential knowledge for the success of a marketing strategy and a dominant predictor of purchase intention (Seiler & Kuzca, 2017).

It is important to mention that consumer perception about the product is the equivalent of the term attitude, most commonly used by those who have a background in psychology.

The relationship between the constructs of the SIMs effectiveness models and consumer perception about the product is summarized in Table 1.

**Table 1***Relationship between SMIs effectiveness factors and consumer perception about the product*

<b>SMIs effectiveness models</b>	<b>Basic principles</b>	<b>Consumer perception about the product</b>
Source credibility (Hovland & Weiss, 1951)	Trustworthiness and expertise of SMI	Positive perception about the product when the SMI is expert and trustworthy
Source attractiveness (McGuire, 1985)	Similarity, familiarity, and likeability of SMI	Positive perception about the product when the SMI is similar, familiar, and likeable
Product match-up (Kamins, 1990)	Match-up between SMI and product	Positive perception about the product when the SMI's qualities match the product features
Communication (Alalwan, 2018)	Hedonic motivation, interactivity, and informativeness	Positive perception about the product when the message conveyed by the SMI is entertaining, informative, and interactive

## **2.6. PURCHASE INTENTION**

Purchase intention refers to the possibility that a consumer is interested in, has the intention to buy, or will plan to purchase a particular product (Martins et al., 2019), after the consumer socialization process. It corresponds to the consumer's desire to fulfill certain needs and wants by purchasing a particular product or service after evaluation (Younus et al., 2015).

As such, taking into account that purchase intention is related to an individual's cognitive behavior and explores the reason of a consumer to buy a product of a certain brand, it is commonly used as a marketing tool to estimate the effectiveness of a marketing strategy, and to predict sales and market share (Wardani et al., 2019). Moreover, previous studies have shown that an increase on purchase intention leads to a higher likelihood of consumers buying the products and precedes actual purchasing behavior (Lou & Yuan, 2019).

Consumers' intention to purchase a specific product may be driven by utilitarian and hedonic motivations (Arum & Sung, 2018). Utilitarian motivation is rational and goal-oriented, with the objective of satisfying needs and complete a task (Zheng et al., 2019). It is associated with the effectiveness of the buying experience and is influenced by aspects like convenience, cost and time saving, product selection, and information availability (Nascimento, 2019).

On the other hand, hedonic motivation is experiential and emotional, and is related with the search for enjoyment and happiness during the purchasing process (Yeo et al., 2017). These consumers expect sensory stimulation when buying a product and are motivated by the

adventurous and fun aspects of consumption, as well as aesthetics, their own satisfaction, and socialization (Gan & Wang, 2017).

Moreover, purchase intention depends on factors like perception of the product, regarding its value, price, and/or quality, as well as attitude and preference toward a brand or product (Nascimento, 2019).

Therefore, it is argued that perception about the product significantly influences purchase intention and both are highly impacted by eWOM on social media (Seiler & Kuzca, 2017). Accordingly, brands have been increasingly trying to capitalize on opportunities to influence consumers' purchase intention through social media by communicating interesting content about their products, in order to capture their customers' attention and increase brand awareness, with the goal of stimulating consumers' interest on the promoted products and consequent purchase intention (Lou & Yuan, 2019).

In view of that, brands have been electing marketing through SMIs as an effective way to encourage consumers' purchase intentions due to the SMIs ability to create eWOM (Gräve, 2017), as well as the entertaining, interactive, and informative aspects of their endorsements (Lutfie & Marcelino, 2020). Besides, the main reason influencing consumers to purchase a specific product depends on their beliefs and preferences, which SMIs can change because of their aspirational roles, by shaping consumers' opinions through their recommendations and endorsements, thus creating a sense of willingness-to-purchase (Djafarova & Rushworth, 2017).

Hence, as explained by SLT and as described above, consumer perception about the product and the SMIs effectiveness factors when endorsing a product, namely source credibility (Weismueller et al., 2020), source attractiveness (Chekima et al., 2020), product match-up (Lim et al., 2017), and communication (Sarraf & Teshnizi, 2020), are highly influential on consumers' purchase intention.

### **3. METHODOLOGY**

This research is hypothetical-deductive because it aims to search and explain causal relationships between variables. An exploratory research will be followed to study in-depth the impact of SMIs effectiveness factors as endorsers on consumer perception about the product and purchase intention. Hence, a quantitative approach will be used, which requires collecting numerical data and analyzing it through the application of statistical tests.

#### **3.1. RESEARCH OBJECTIVES**

##### **3.1.1. Main objective**

There are several characteristics of SMIs as endorsers that can potentially influence consumer perception about the product and purchase intention. The main objective of this study is to understand if and how each of these factors influences consumer purchase intention, focusing on source credibility, source attractiveness, product match-up, and communication. To achieve this purpose, a main **research question** was generated: How do SMIs effectiveness factors impact consumer perception about the product and purchase intention?

##### **3.1.2. Specific objectives**

To support the main objective and explore in more detail the research topic, the following four specific objectives will be studied:

1. Identify which characteristics of SMIs as endorsers influence purchase intention, focusing on source credibility, source attractiveness, product match-up, and communication.
2. Find which characteristics of SMIs as endorsers, namely source credibility, source attractiveness, product match-up, and communication, influence consumer perception about the endorsed products.
3. Explore if consumer perception about the product influences consumer purchase intention.
4. Assess the mediation effect of consumer perception about the product in the relationship between SMIs effectiveness factors (source credibility, source attractiveness, product match-up, and communication) and purchase intention.

### 3.2. RESEARCH HYPOTHESES

To study the proposed general and specific objectives, four main research hypotheses were developed, according to the literature review, relating SMIs effectiveness factors, consumer perception about the product and purchase intention, namely:

**H1:** SMIs effectiveness factors positively influence purchase intention.

**H1a:** Source credibility positively influences purchase intention.

**H1b:** Source attractiveness positively influences purchase intention.

**H1c:** Product match-up positively influences purchase intention.

**H1d:** Communication positively influences purchase intention.

**H2:** SMIs effectiveness factors positively influence consumer perception about the product.

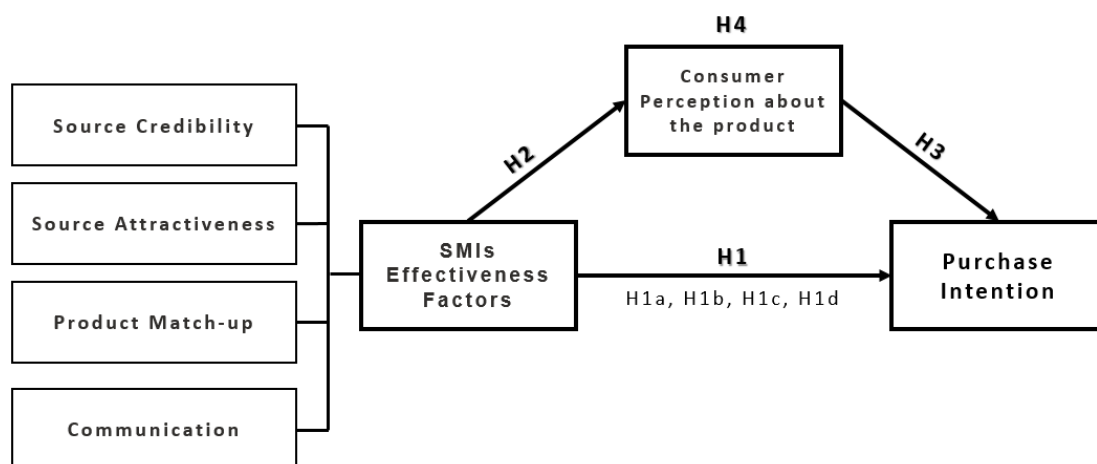
**H3:** Consumer perception about the product positively influences purchase intention.

**H4:** There is a mediation effect of consumer perception about the product in the relationship between SMIs effectiveness factors and purchase intention.

### 3.3. CONCEPTUAL FRAMEWORK

To test the formulated hypotheses and respond to the main and specific objectives of this study, the following conceptual model was outlined (Figure 1).

**Figure 1**  
*Conceptual model*



### 3.4. PARTICIPANTS

For this study, it was collected a sample constituted by 306 participants, aged between 18 and 57 years old ( $M = 24.08$ ;  $SD = 5.86$ ), who use social media and follow SMIs.

Respondents in this study consist of 74.2% females and 25.8% males, predominantly aged between 21 and 24 years old (61.8%). It is important to remark that the age categories were grouped in order to obtain the most homogeneous distribution of participants while trying to ensure reasonable age classes.

In terms of education level, almost half of the respondents have a Bachelor's Degree (44.8%), 23.2% completed secondary school, 14.1% obtained a professional course and 13.1% possess a Master's Degree or PhD. A small number of respondents preferred not to disclose their education level (4.9%). The education levels chosen were grouped according to the levels stipulated by the Portuguese Ministry of Education (Law No. 46/86, of October 14).

The respondents demographic profile is shown in Table 2.

**Table 2**  
*Respondents demographic profiles*

<b>Demographic</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Gender</b>		
Female	227	74.2%
Male	79	25.8%
<b>Age</b>		
20 years old and below	52	17.0%
21 - 24 years old	189	61.8%
25 years old and over	65	21.2%
<b>Education Level</b>		
Secondary School	71	23.2%
Professional Course	43	14.1%
Bachelor's Degree	137	44.8%
Master's Degree/PhD	40	13.1%
Prefer not to say	15	4.9%

### **3.5. PROCEDURE**

The data collection was conducted through an online self-administered questionnaire, because it allows to collect standardized and easily comparable data from a sizeable population, quickly, and in a very economical way (Ponchio et al., 2021). Moreover, considering that participants need to be familiarized with the Internet and social media, online questionnaires are suitable to reach this audience.

Before the main research survey was implemented, a pretest was applied to evaluate the viability and duration of the questionnaire, and to collect feedback from 15 relevant participants of the population under study, in order to adjust and improve the questionnaire design prior to



the general data collection. The feedback of this preliminary study allowed to better explain what was intended with a few questions, to add new ones, and to clarify vocabulary, in order to increase the likelihood of a better outcome. It is important to note that these respondents were not included in the main survey.

The questionnaire was developed on Qualtrics, an online platform designed for web-based surveys, and distributed through a link shared on several social media networks, namely Facebook, Instagram, and LinkedIn, and sent individually through message platforms, such as Messenger and WhatsApp. The confidentiality of the results was ensured, and it was guaranteed that the data collected was intended for purely academic purposes and analyzed respecting the indications of the GDPR. To assure the proper conduct of the research, the questionnaire was submitted, reviewed, and approved by the Nova IMS's Research Ethics Committee prior to its distribution.

## **3.6. MEASURES**

### **3.6.1. Questionnaire Design**

This study utilized a questionnaire composed by five main groups: (i) qualification questions, (ii) social media, (iii) SMIs, (iv) SMIs' endorsements, and (v) sociodemographic questions.

The first group was composed by two qualification questions used to filter the participants and exclude the ones who either do not use social media or do not follow any SMIs. In this section, a definition of what is a SMI was provided to guarantee that the respondents could answer knowledgeably. Simultaneously, the two initial questions in this group were about social media use and SMIs, thus leading to the following groups.

Included in the second group were general questions about social media, namely the respondent's frequency of use, their preferred social media networks, and number of followers.

In the third group, composed by questions about SMIs, the respondent was asked to choose a SMI of their preference, whom they follow frequently. Subsequently, a set of questions about the SMI was presented, such as the identification of the SMI (optionally), as well as their number of followers and area of influence. Thereafter, the items referring to source credibility, source attractiveness, and two dimensions of communication (hedonic motivation and interactivity) were measured according to the chosen SMI. The respondents were asked to choose the SMI, rather than having a particular SMI being specified by the researcher, in order to reduce the bias of participants poorly evaluating the effectiveness factors under study if they did not particularly

like the selected SMI. As such, this was believed to be the best option, taking into account that, for the purpose of this study, the impact of the effectiveness factors on purchase intention should not be affected by that bias, but only by the perceived characteristics associated with SMIs who participants already knew, followed, and were subject to be influenced by.

The fourth group corresponded to questions about the SMI's endorsements, and the respondents started by evaluating the hedonic motivation of these endorsements in general. Then, the participants were asked to find the most recent endorsement and assess product match-up between the SMI and the endorsed product, as well as the informativeness of the endorsement. Some information about the endorsed product and how well it represents the overall endorsements of the SMI was also asked. The purpose for asking the respondents to search for the most recent endorsement was to better represent the natural environment, while assuring that the evaluation of the endorsement was carried out more accurately and having in mind the most up to date information. Nevertheless, if the respondent could not find the most recent endorsement, the items presented measured the endorsements of the SMI in general. Lastly, the consumer's perception about the product endorsed by the SMI and their purchase intention was evaluated.

The fifth and final group was dedicated to the respondent's sociodemographic questions, namely gender, age, and education level.

### **3.6.2. Measurement Scales**

Considering that this study was conducted in Portugal, all the questionnaire items were translated to Portuguese, maintaining their original meaning to the best extent possible (Appendix 1). The adequacy of the translation was confirmed in the pretest applied prior to the main questionnaire, through which it was possible to verify that the respondents considered the language to be clear and appropriate.

For the purposes of this study and to standardize the measurement scales, a seven-point Likert scale ranging from strongly disagree (1) to strongly agree (7) was used to evaluate all the main questionnaire items, according to the participants' level of agreement with each statement. Seven-point Likert scales are found to more precisely measure the participants' responses while being sufficiently compact to be efficient and, as such, are the most suitable for online questionnaires (Finstad, 2010).

Throughout the questionnaire, six measurement scales were used corresponding to the main constructs, as described below.

### ***Source Credibility Questionnaire***

The source credibility questionnaire was adapted from the seven-point semantic differential scale developed by Ohanian (1990). Source credibility was measured using ten items that evaluate two dimensions: expertise and trustworthiness (five items each).

### ***Source Attractiveness Questionnaire***

To evaluate the source attractiveness questionnaire, 16 items were adapted from the existing literature, entailing three dimensions.

The first two dimensions corresponded to similarity, consisting of five items applied by Whittler and Dimeo (1991), and familiarity, composed by five items used by Kent and Allen (1994). Both of these scales were adapted from the five-point Likert scale questionnaire compiled by Chun et al. (2018).

Lastly, likeability was overall constituted by six items corresponding to the sub-dimensions: physical attractiveness and personality. Physical attractiveness was measured using three items adapted from Lee and Watkins (2016), who selected the items from the five-item questionnaire, measured on a seven-point Likert scale, by McCroskey and McCain (1974). Personality also included three items, adapted from the seven-point semantic differential scale applied by Dimofte et al. (2003).

### ***Product Match-up Questionnaire***

The unidimensional product match-up questionnaire was measured by four items adapted from the nine-point semantic differential scale used by Till and Busler (2000).

### ***Communication Questionnaire***

To measure the communication questionnaire, 13 items were adapted from the existing literature to evaluate three dimensions: hedonic motivation, interactivity, and informativeness.

Hedonic motivation was composed by three items adapted from the seven-point Likert scale utilized by Venkatesh et al. (2012). Interactivity included five items adapted from the seven-point Likert scale used by Alalwan (2018), based on the questionnaire of Jiang et al. (2010).

Lastly, informativeness was adapted from the seven-point Likert scale applied by Logan et al. (2012).

### ***Consumer perception about the product Questionnaire***

To evaluate the questionnaire of consumer perception about the product, four items were adapted from the six-item questionnaire, measured on a seven-point Likert scale, used by Qureshi et al. (2012), according to the objectives of the study.

### ***Purchase Intention Questionnaire***

Lastly, purchase intention was evaluated by four items adapted from Alalwan (2018), which were based on the nine-item scale compiled by Duffet (2015), measured on a seven-point Likert scale.

A summary of the scales chosen to evaluate the constructs under study is presented in Table 3.

**Table 3**  
*Measures*

<b>Constructs</b>		<b>Number of items</b>	<b>Sources</b>
Source credibility	Expertise	5 items	Ohanian (1990)
	Trustworthiness	5 items	Ohanian (1990)
Source attractiveness	Similarity	5 items	Whittler and Dimeo (1991)
	Familiarity	5 items	Kent and Allen (1994)
	Likeability (Physical appearance & Personality)	3 + 3 items	Lee and Watkins (2016); Dimofte et al. (2003)
Product match-up		4 items	Till and Busler (2000)
Communication	Hedonic Motivation	3 items	Venkatesh et al. (2012)
	Interactivity	5 items	Alalwan (2018)
	Informativeness	5 items	Logan et al. (2012)
Consumer perception about the product		4 items	Qureshi et al. (2012)
Purchase intention		4 items	Alalwan (2018)

### **3.7. DATA COLLECTION**

This study used a non-probabilistic convenience sampling, which is based on the relative ease of availability of the participants and is commonly used when the population under study is too large to consider its entirety. Moreover, it is the most cost-efficient and least time consuming technique (Mweshi & Sakyi, 2020).

A power analysis was performed beforehand using G-Power 3.1.9.4 software to determine the sample size required for this study. The results indicated a minimum sample size of 274 participants to achieve 99% statistical power for a medium effect size of 0.08 at a significance level of 1% (0.01) for the proposed model (Verma & Verma, 2020), but a bigger sample was used

to further minimize the error. Furthermore, Kyriazos (2018) recommends a ratio of 5 to 10 participants per item for a minimum sample of 100 respondents, which suggests a sample ranging from 270 to 540 participants for this study.

Before proceeding to the analysis of the results, the data collected was submitted to the process of data cleaning to identify and delete incomplete, irrelevant, and/or incorrect responses.

In total, 452 participants initiated the questionnaire. However, when cleaning the data, 17.5% of the responses were found to be incomplete and therefore were eliminated from the dataset, resulting in a total of 373 complete answers. Further analysis showed that, of the complete answers, 67 participants were not qualified for this study for not following any SMI, and were instantly excluded in one of the initial filter questions. Hence, the final sample size was of 306 participants.

## **4. RESULTS**

For data analysis, several statistical tests were performed using IBM SPSS - Statistical Package for the Social Sciences (version 27) and AMOS (version 22).

First, the analysis of the psychometric properties of the instruments will be approached to ensure the validity and reliability of the constructs under study. Secondly, the descriptive and differential statistics will be presented, in order to analyze the means and standard deviations of the constructs, and perform a comparative analysis of those constructs according to respondents' sociodemographic characteristics (e.g. gender, age, education level) and use of social media, and SMIs' characteristics.

Subsequently, we will proceed to a correlation analysis to determine the association between the constructs and identify its intensity and direction. Lastly, linear multiple regressions will be performed to assess the impact of the independent variables and the mediator variable on the dependent variable, followed by the analysis of the mediator effect of consumer perception about the product in the relationship between SMIs effectiveness factors and purchase intention.

### **4.1. PSYCHOMETRIC ANALYSIS**

Considering that the accuracy of the results is very dependent on the measures used in the questionnaire, the psychometric analysis is of extreme importance to assure the validity and reliability of the items measuring the constructs under study (Souza et al., 2017).

Validity is the extent to which the instruments measure what they intend to measure. There are several types of validity, but for the purpose of this analysis, only validity of the construct will be used. Construct validity refers to the adequacy between the items and the constructs they were developed for and the degree of confidence in the inferences made, using that instrument. That being the case, it is essential that they correspond appropriately to ensure that the items correctly measure the construct (Almanasreh et al., 2019).

On the other hand, reliability assesses the internal consistency of the instruments to guarantee that the respective set of items evaluates a common construct, and will be measured using the Cronbach's alpha coefficient, which is considered good for values of 0.70 and above (Hair et al., 2018).

#### **4.1.1. Validity**

The validity of the constructs was studied using a Principal Component Analysis (PCA) with *varimax* rotation, which is easier to interpret and minimizes the number of variables by grouping them into main factors, in order to assess if the items used were adequate to measure the constructs under study and to identify the dimensions associated with them (Allen, 2017).

To perform a PCA, a large number of recommendations for sample size is presented by many authors, according to whom the sample size of 306 participants collected for this study is considered good for a factor analysis (Kyriazos, 2018).

For this purpose, the Kaiser-Meyer-Olkin (KMO) indicator and Bartlett's Test of Sphericity were used to assess if the correlation between the items was adequate and acceptable which, according to Hair et al. (2018), occurs for KMO values higher than .70 and when the Bartlett's Test of Sphericity is statistically significant ( $p < .05$ ).

Moreover, the component extraction was based on the Kaiser-Guttman criteria (eigenvalues greater than one), Scree plot analysis, and percentage of explained variance, which is considered good for values higher than 60.0% (Hair et al., 2018). In this analysis, only the items with factor-item correlation higher than .40 and difference between correlations higher than .20 were selected (Rust & Golombok, 2014).

#### ***Source Credibility Questionnaire***

To assess the validity of the source credibility questionnaire, a PCA was performed and through the KMO indicator (.92) and Bartlett's Test of Sphericity [ $\chi^2_{(45)} = 2762.18, p < .001$ ] it was possible to determine that the ten items adequately measure the construct.

Additionally, the component matrix revealed the existence of two components that, combined, explain 78.60% of the total variance. The first component extracted includes the items related to trustworthiness and explains 42.44% of the variance, and the second component refers to expertise, presenting an explained variance of 36.15% (Table 4).

**Table 4**  
*Component matrix of the source credibility questionnaire*

Items	Factor 1	Factor 2
1. The SMI is honest.	.905	
2. The SMI is reliable.	.890	
3. The SMI is sincere.	.885	
4. The SMI is dependable.	.811	
5. The SMI is trustworthy.	.773	
6. The SMI is an expert.		.835
7. The SMI is experienced.		.826
8. The SMI is qualified.		.807
9. The SMI is knowledgeable.		.754
10. The SMI is skilled.		.696
Eigenvalue	6.54	1.31
% of Explained Variance	42.44	36.15

**Note:** Factor 1 = Trustworthiness; Factor 2 = Expertise

**Source Attractiveness Questionnaire**

Observing the values of the KMO indicator (.86) and Bartlett's Test of Sphericity [ $\chi^2_{(120)} = 2864.34$ ,  $p < .001$ ] obtained through the PCA, we can ascertain that the 16 items are adequate to measure the source attractiveness questionnaire.

The factorial structure denotes the existence of four components that in total explain 70.42% of the variance. The first component extracted explains 21.84% of the variance and is constituted by the items associated with familiarity; the second component refers to likeability in terms of physical appearance and presents an explained variance of 16.95%; the third component, related with similarity, explains 16.76% of the variance; and lastly, the fourth component corresponds to likeability in terms of personality and displays a smaller explained variance of 14.86% (Table 5).

Even though PCA indicates four components for this construct, which is due to the fact that physical appearance and personality are two distinct sub-dimensions, they are both included in the dimension likeability, according to the literature review (Kumar, 2011).



**Table 5**  
*Component matrix of the source attractiveness questionnaire*

Items	Factor 1	Factor 2	Factor 3	Factor 4
1. I have knowledge about the SMI.	.813			
2. I know the SMI well.	.771			
3. I am familiar with the SMI.	.746			
4. I always follow the SMI.	.695			
5. I easily recognize the SMI.	.677			
6. The SMI is very sexy looking.		.926		
7. I find the SMI very attractive physically.		.912		
8. I think the SMI is quite pretty.		.904		
9. I am similar to the SMI on cultural background.			.820	
10. I am similar to the SMI on appearance.			.754	
11. I am similar to the SMI on overall lifestyle.			.748	
12. I am similar to the SMI on interest.			.576	
13. I am similar to the SMI on basic values.			.567	
14. The SMI is friendly.				.861
15. The SMI is likeable.				.837
16. The SMI is warm.				.732
Eigenvalue	6.14	2.31	1.68	1.12
% of Explained Variance	21.84	16.95	16.76	14.86

**Note:** Factor 1 = Familiarity; Factor 2 = Likeability (Physical appearance); Factor 3 = Similarity; Factor 4 = Likeability (Personality)

#### ***Product Match-up Questionnaire***

Through the KMO indicator (.86) and Bartlett's Test of Sphericity [ $\chi^2_{(6)} = 1373.77, p < .001$ ], we assessed that there is an adequate correlation between the four items and that there are no identity problems in the data belonging to the product match-up questionnaire.

Furthermore, the PCA showed the existence of only one component that explains 88.81% of the total variance and whose eigenvalue is 3.55.

#### ***Communication Questionnaire***

After submitting the 16 items of the communication questionnaire to a PCA, it was possible to assess that both the KMO indicator (.88) and Bartlett's Test of Sphericity [ $\chi^2_{(120)} = 3951.39, p < .001$ ] present adequate values.

Moreover, we verified the existence of three components, that altogether explain 73.86% of the total variance. The first component extracted is composed by the items correspondent to informativeness and explains 25.93% of the total variance; the second component presents an

explained variance of 24.99% and refers to hedonic motivation; and the third and last component is related to interactivity, explaining 22.94% of the variance (Table 6).

**Table 6**  
*Component matrix of the communication questionnaire*

Items	Factor 1	Factor 2	Factor 3
1. The SMI is a good source of product information.	.903		
2. The SMI provides timely information.	.884		
3. The SMI is a good source of up-to-date product information.	.873		
4. The SMI is a convenient source of product information.	.870		
5. The SMI supplies complete product information.	.851		
6. SMIs posts are entertaining.		.793	
7. SMIs endorsements are fun.		.789	
8. SMIs endorsements are entertaining.		.782	
9. SMIs endorsements are enjoyable.		.742	
10. SMIs posts are fun.		.733	
11. SMIs posts are enjoyable.		.710	
12. The SMI encourages followers to offer feedback.			.834
13. The SMI makes me feel like they want to listen to their followers.			.825
14. The SMI facilitates the two-way communication between them and their followers.			.818
15. The SMI gives followers the opportunity to talk back.			.810
16. The SMI is effective in gathering customers' feedback.			.666
Eigenvalue	7.41	2.82	1.57
% of Explained Variance	25.93	24.99	22.94

**Note:** Factor 1 = Informativeness; Factor 2 = Hedonic motivation; Factor 3 = Interactivity

***Consumer perception about the product Questionnaire***

To determine the validity of the consumer perception about the product questionnaire, we obtained the KMO indicator (.82) and Bartlett's Test of Sphericity [ $\chi^2_{(6)} = 677.28, p < .001$ ], and verified that the four items adequately evaluate the construct for which they were developed.

The component matrix indicated that this construct entails only one component which explains 74.54% of the total variance and presents an eigenvalue of 2.98.

### ***Purchase Intention Questionnaire***

When analyzing the four items of the purchase intention questionnaire using PCA, the KMO indicator (.84) and Bartlett's Test of Sphericity [ $\chi^2_{(6)} = 1077.54, p < .001$ ] revealed that the items are adequate to measure this construct.

The analysis showed the existence of a single component with an eigenvalue of 3.35, that explains 83.98% of the total variance.

#### **4.1.2. Reliability**

For the constructs source credibility, source attractiveness, and communication, it was suitable to create composite variables (global scale), consisting of the combination of all the items correspondent to the dimensions measured for each of those constructs. Additionally, a construct named SMIs effectiveness factors (global scale) was created by combining all the items regarding source credibility, source attractiveness, product match-up, and communication.

Reliability was assessed using the Cronbach's alpha coefficient, which revealed that all the constructs and their dimensions have adequate and very satisfactory internal consistency, with values ranging between 0.80 and 0.95, as shown in Table 7.

**Table 7**  
*Cronbach's alpha coefficients*

<b>Constructs and dimensions</b>	<b>Cronbach's alpha coefficients</b>
Source credibility (global scale)	.93
Expertise	.90
Trustworthiness	.95
Source attractiveness (global scale)	.88
Similarity	.80
Familiarity	.86
Likeability	.84
Product match-up	.95
Communication (global scale)	.92
Hedonic motivation	.89
Interactivity	.90
Informativeness	.94
SMIs effectiveness factors (global scale)	.95
Consumer perception about the product	.88
Purchase intention	.93

## 4.2. CONFIRMATORY FACTOR ANALYSIS

To confirm the results obtained in the exploratory research, several Confirmatory Factor Analysis (AFC) were performed. Through these analyses it is possible to test whether the constructs under study adequately represent the number of underlying dimensions and if the latent factors are responsible for the behavior of the variables (Marôco, 2014).

The validation of a conceptual model consists of determining the level of fit between the model and the sample data. As such, the goodness-of-fit measures are very important to understand to which degree the correlation matrix or the variance-covariance matrix obtained by the model under study can be generalized to the population. Thus, to analyze the factorial structure of the conceptual models of the main constructs, several model fit measures detailed in Table 14 and respective cut-offs suggested by the literature were considered to test the fit of all six models.

**Table 8**  
*Reference values for model fit indexes*

<b>Statistics</b>	<b>Reference values</b>
Chi-squared test ( $\chi^2$ )	The lower, the better
Comparative Fit Index (CFI)	< .90 – Bad fit
Goodness of Fit Index (GFI)	[.90; .95] - Good fit > .95 – Very good fit
Root Mean Square Error of Approximation (RMSEA)	> .10 – Bad fit ].05; .08] – Reasonable fit ≤ .05 - Very good fit

(Adapted from Marôco, 2014, p. 55; Xia & Yang, 2018)

The results, considering the error covariations suggested by AMOS's modification indices, show that all the models present adequate values of model fit, as follows: source credibility, with the two dimensions considered [ $\chi^2_{(31)} = 2.69$ ,  $p < .01$ , GFI = .94, CFI = .98, RMSEA = .07]; source attractiveness, tested with three dimensions according to the literature review [ $\chi^2_{(90)} = 2.95$ ,  $p < .01$ , GFI = .90, CFI = .93, RMSEA = .08]; product match-up, with a single dimension [ $\chi^2_{(2)} = 7.77$ ,  $p < .01$ , GFI = .97, CFI = .99, RMSEA = .14]; communication, composed by three dimensions [ $\chi^2_{(95)} = 2.69$ ,  $p < .01$ , GFI = .90, CFI = .95, RMSEA = .07]; and lastly, consumer perception about the product [ $\chi^2_{(2)} = 1.97$ ,  $p < .01$ , GFI = .99, CFI = .99, RMSEA = .05], and purchase intention [ $\chi^2_{(2)} = 5.09$ ,  $p < .01$ , GFI = .98, CFI = .99, RMSEA = .11], both with a single dimension (Appendix 2).

### 4.3. DESCRIPTIVE AND DIFFERENTIAL STATISTICS

After the assessment of the psychometric properties of the measurement instruments, the analysis of the descriptive and differential statistics of the variables was performed, as follows.

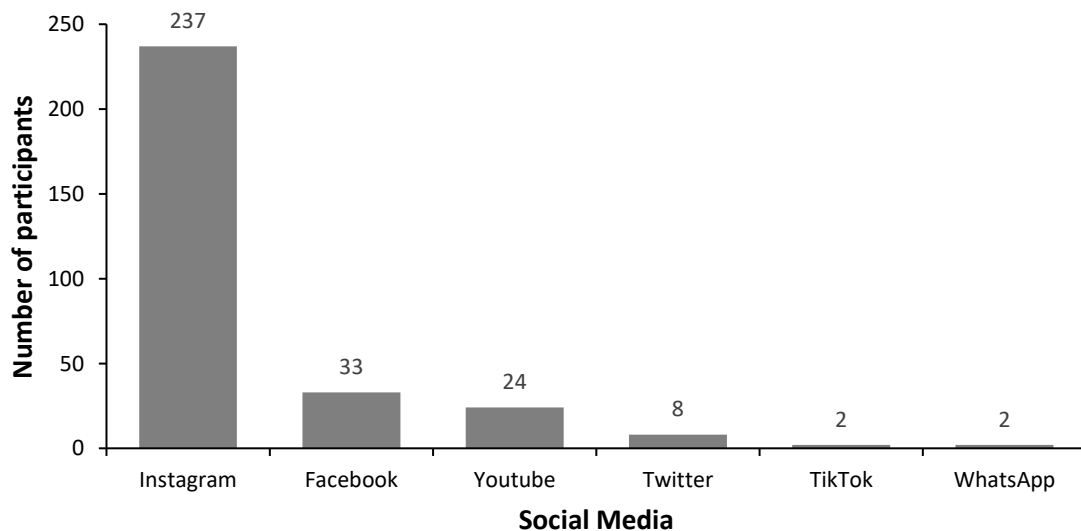
#### *Descriptive Analysis*

To better understand the characterization of the sample in relation to the topic under study, such as the participants' use of social media and their relationship with SMIs, as well as the chosen SMIs characteristics and the products endorsed, several descriptive analyses were conducted.

First, regarding the participants' frequency of use of social media, we verified that almost all the participants access their social media channels every day (99.0%), with only 1.0% of the participants referring their frequency of use to be 2 or 3 times a week, and no one stating to use social media less often. Moreover, we denoted that Instagram is considered to be the most used social media network for the majority of the participants (77.5%), followed by Facebook (10.8%) and YouTube (7.8%). Only 3.9% of the participants referred other social media channels as their most used, namely Twitter, TikTok, and WhatsApp (Figure 2).

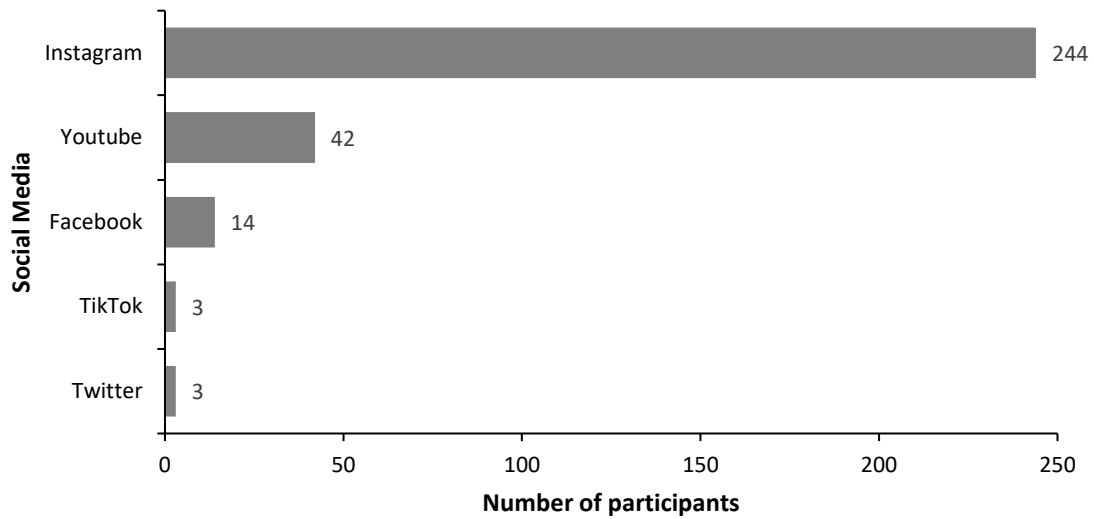
**Figure 2**

*Participants most used social media channel*



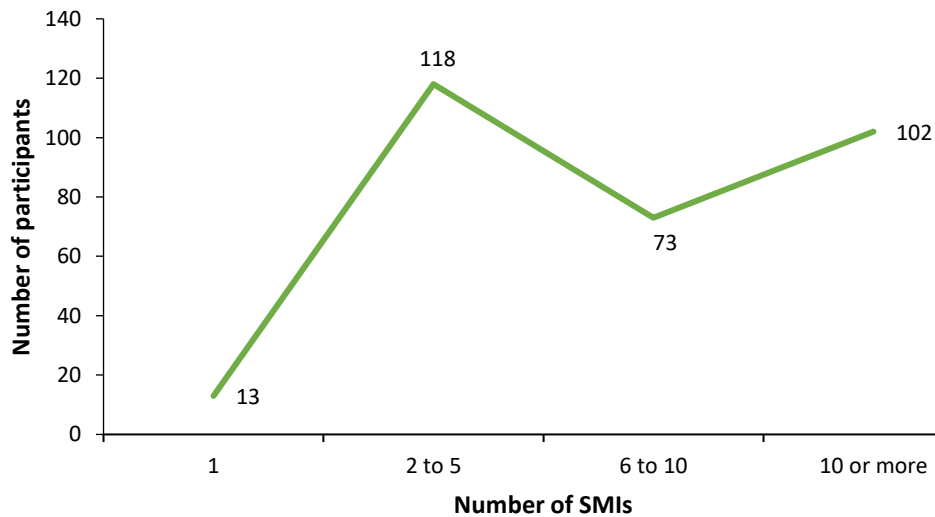
Similarly, the analysis showed that the preferred social media to follow SMIs is Instagram (79.7%), followed by YouTube (13.7%), and Facebook (4.6%), in contrast with TikTok and Twitter (1.0% each), which are the least used social media platforms for following SMIs (Figure 3).

**Figure 3**  
*Participants preferred social media channel to follow SMIs*



Concerning the number of SMIs the participants follow, we determined that most of the respondents follow several SMIs, with simply 4.2% following only one. Accordingly, 38.6% of the participants follow 2 to 5 SMIs, 33.3% follow 10 or more, and 23.9% follow 6 to 9 (Figure 4).

**Figure 4**  
*Number of SMIs followed by the participants*

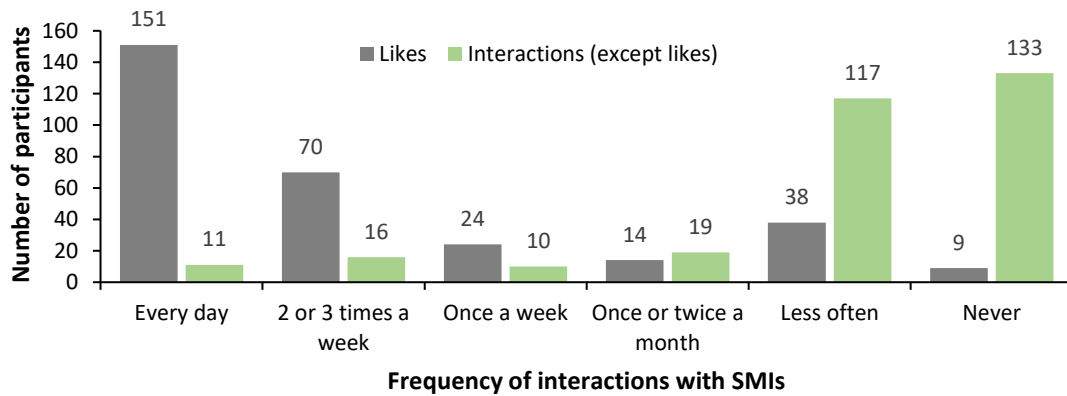


Furthermore, it was possible to observe that most of the participants leave likes on SMIs' contents every day (49.3%) or 2 or 3 times a week (22.9%). These results go in opposite direction with the frequency of more active interactions with the SMIs (e.g., leaving comments, sharing), as 43.5% of the participants never actively interact with SMIs or do it less often (38.2%). Only

3.6% of the respondents refer interacting daily with the SMIs in a more active way and 5.2% do it 2 or 3 times a week (Figure 5).

**Figure 5**

*Participants frequency of interactions with SMIs: likes versus other interactions*



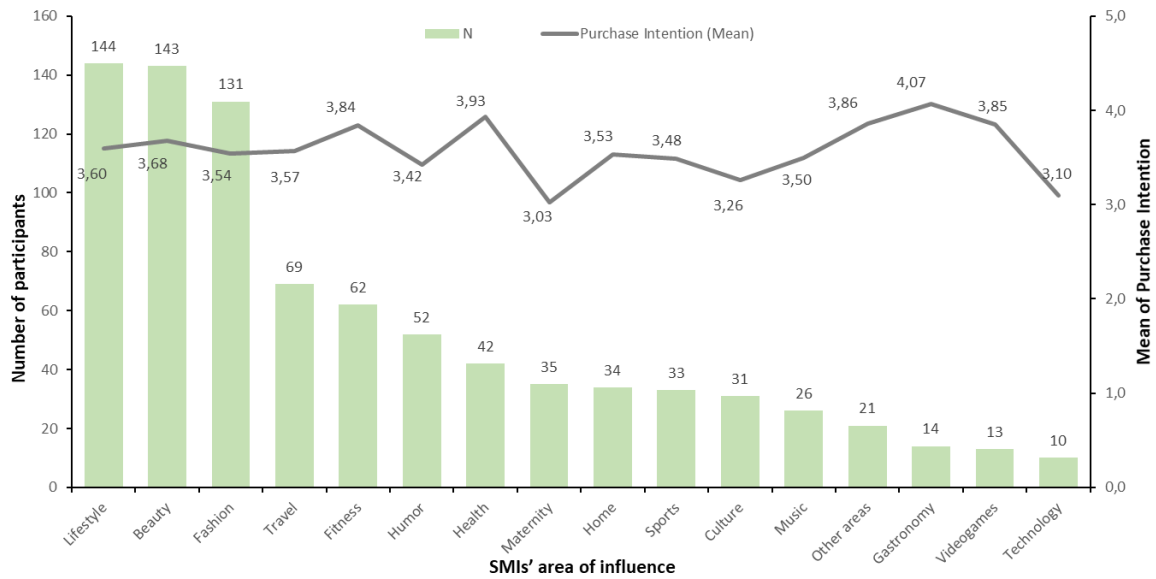
In relation to the SMIs mentioned, there were 132 different SMIs named by the participants with the five most frequently referred being Helena Coelho (9.2%), Mafalda Sampaio (3.6%), Catarina Gouveia (2.6%), Bárbara Corby, and Inês Rochinha, with 2.3% each (Appendix 3). Some of the participants preferred not to disclose the name of the SMI of their preference (27.5%).

Additionally, concerning the number of followers, the majority of the SMIs mentioned (62.0%) belong to the category of macro-influencers (100.000 to one million followers), 24.7% are mega-influencers (more than one million followers), and 13.3% correspond to micro-influencers (less than 100.000 followers).

Regarding the SMI's area of influence, we verified that the top five most frequent areas of influence are lifestyle (16.7%), beauty (16.6%), fashion (15.2%), travel (8.0%), and fitness (7.2%). However, when analyzing the means of purchase intention based on the area of influence, we observed that gastronomy is the area of influence with the highest value of purchase intention ( $M = 4.07$ ), followed by health ( $M = 3.93$ ), then other areas of influence ( $M = 3.86$ ), in which were mentioned areas such as television, arts, relationships, and politics, then videogames ( $M = 3.85$ ), and fitness ( $M = 3.84$ ). These results contrast the ones found for the areas of maternity/paternity ( $M = 3.03$ ) and technology ( $M = 3.10$ ), which present the lowest values (Figure 6). It is pertinent to note that the sum of the SMIs in all categories exceeds the sample size ( $N = 306$ ), because this was a multiple choice question with the option for respondents to choose all the areas applicable, since the same SMI can belong to several areas of influence.

**Figure 6**

*SMI's area of influence and respective mean values of purchase intention*



Furthermore, out of the 306 respondents that compose the sample, only 5.6% did not answer the main questionnaire items according to the most recent endorsement, but according to the SMI's endorsements in general instead. The remaining participants referred that the most recent endorsement was very easy to find (52.0%) or relatively easy (34.0%). Moreover, the majority of the participants considered that the most recent endorsement was very representative (62.5%) of the usual endorsements of the SMI and 23.7% found it to be reasonably representative.

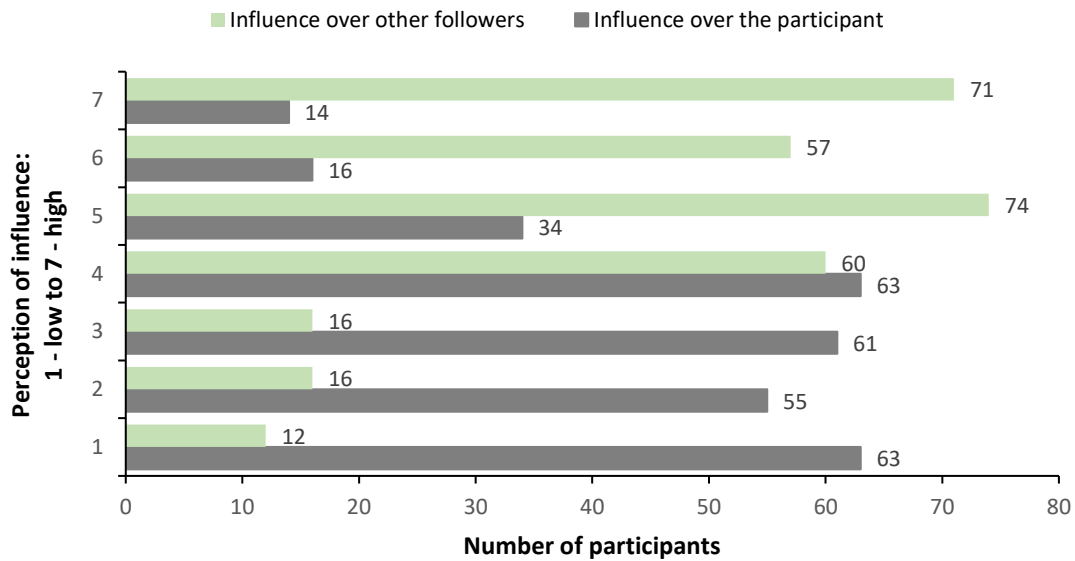
When analyzing the most recent endorsements, referred by 70.0% of the participants, we observed that the most recurrent categories were cosmetics (e.g., L'Oreal, Nivea, Vichy), sports nutrition and clothing (e.g., Prozis, Nike, Sportzone), fashion (e.g., Calzedonia, H&M), and videogames (e.g., Nintendo, Playstation). Among other recurring brands are Trident, Continente, HBO, and SMI's own brands.

Lastly, the social influence that the respondents perceive the SMI to have over themselves and over others was also analyzed. The results show that 58.5% of the participants believe SMIs have none or little influence over themselves, which contrasts starkly with 66.0% of the participants believing SMIs have much influence power over their other followers (Figure 7). These results were confirmed through a paired t-test, that revealed statistically significant differences between the perceived social influence ( $t_{(305)} = -18.92, p < .001$ ), meaning that the participants believe themselves to be less easily influenced than others.



**Figure 7**

Participants perceived influence of the SMI over themselves versus over other followers



Thereafter, the descriptive analysis was conducted for the main constructs under study. Taking into account that a seven-point Likert scale ranging from strongly disagree (1) to strongly agree (7) was used to measure the main questionnaire items, and that the results of each construct were calculated by adding the values assigned to the items that compose them, the higher the average value, the more positive is the respondent's opinion about the SMI's effectiveness factors, their perception about the product and purchase intention. The respective means and standard deviations of the constructs are shown below (Table 8).

**Table 9**

Descriptive statistics

Constructs	Minimum	Maximum	Mean	Std. Deviation
Source credibility (global scale)	1	7	5.40	1.12
Expertise	1	7	5.27	1.23
Trustworthiness	1	7	5.52	1.23
Source attractiveness (global scale)	1	7	4.38	1.02
Similarity	1	7	3.42	1.25
Familiarity	1	7	4.64	1.36
Likeability	1	7	4.96	1.26
Product match-up	1	7	5.65	1.31
Communication (global scale)	2	7	5.32	1.00
Hedonic motivation	2	7	5.36	1.17
Informativeness	1	7	5.17	1.34
Interactivity	1	7	5.44	1.26
Consumer perception about the product	1	7	4.46	1.39
Purchase intention	1	7	3.72	1.56

The data analysis revealed that respondents consider their chosen SMI as generally trustworthy and expert, which makes them a credible source. Moreover, we verified that the participants have a relatively positive evaluation of the SMI's attractiveness, as they are familiar with the SMI and think of them as very likeable in terms of personality and physical appearance, even if they do not consider themselves much similar to the SMI. Regarding product match-up, the consumers believe the SMI is a good fit with the product they endorse, which means they perceive a satisfactory match-up between the SMI's qualities and the product features. Additionally, we confirmed that the participants regard the SMI as having good communication skills, for being highly interactive and entertaining, both in their regular posts and in their endorsements, and for being a good source of information about the products.

Finally, we assessed that the respondents have a reasonably good perception about the products endorsed by the SMI, which indicates they regard the product as having value. Nevertheless, the results showed that despite the respondents' positive perception about the SMI and their endorsements, the purchase intention is slightly below the scale's middle point.

### ***Differential Analysis***

Subsequently, we proceeded to a comparative analysis of the results obtained according to the sociodemographic characteristics of the respondents such as gender, age category to which the participants belong, and education level. All three analysis showed that there were no significant differences between the means of the groups ( $p > .05$ ). Accordingly, the fact that 74.2% of the participants are female does not constitute a limitation, because this characteristic has no significant impact on purchase intention.

Additionally, the differential analysis was performed according to the SMI's characteristics, such as the number of followers of the SMI and whether they are considered a celebrity, and according to the participant's use of social media, namely frequency of use, most used social media, number of SMIs the respondent follows, and frequency of interactions with SMIs.

The results revealed no significant differences between the means of the groups concerning the number of followers of the SMI, the SMI celebrity status nor the respondent's frequency of use of social media ( $p > .05$ ). These results indicate that the purchase intention does not change depending on the SMI being a celebrity or perceived as such, which is also corroborated by the fact that a higher number of followers of the SMI does not affect the respondents' purchase intention.

On the other hand, the analysis indicated significant differences on purchase intention [ $F_{(5, 300)} = 2.44, p = .034$ ] depending on the **most used social media**, exhibiting the highest value for people

who mostly use YouTube ( $M = 4.46$ ,  $SD = 1.83$ ), followed by Facebook ( $M = 3.78$ ,  $SD = 1.47$ ), Instagram ( $M = 3.69$ ,  $SD = 1.50$ ), and Twitter ( $M = 2.87$ ,  $SD = 2.04$ ), in contrast to users of TikTok ( $M = 1.50$ ,  $SD = 0.70$ ), who present the lowest values. Besides, we could assess that communication also differs significantly depending on the most used social media  $F_{(5, 300)} = 2.24$ ,  $p = .050$ ], presenting the highest mean values for YouTube, Instagram, and Facebook.

Concerning the **number of SMIs the respondent follows**, it was possible to verify that there are statistically significant differences between the groups on purchase intention [ $F_{(3, 302)} = 6.59$ ,  $p < .001$ ], registering higher values for participants who follow ten or more SMIs ( $M = 4.27$ ,  $SD = 1.50$ ), in contrast with those who follow less SMIs: 1 ( $M = 3.53$ ,  $SD = 1.39$ ), 2 to 5 ( $M = 3.40$ ,  $SD = 1.49$ ) or 6 to 9 ( $M = 3.52$ ,  $SD = 1.63$ ). Similarly, the analysis also revealed significant differences on source attractiveness depending on the number of SMIs followed by the participant  $F_{(3, 302)} = 3.61$ ,  $p = .014$ ], with the highest values for respondents who follow at least ten SMIs.

Lastly, we could observe significant differences on purchase intention [ $F_{(5, 300)} = 2.84$ ,  $p = .016$ ], as well as on three SMIs effectiveness factors, namely: source credibility [ $F_{(5, 300)} = 3.10$ ,  $p = .009$ ], source attractiveness [ $F_{(5, 300)} = 4.13$ ,  $p = .001$ ], and communication [ $F_{(5, 300)} = 2.83$ ,  $p = .016$ ], depending on **the frequency of interactions with SMIs** when considering only likes.

Likewise, there are significant differences on source attractiveness [ $F_{(5, 295)} = 3.02$ ,  $p = .011$ ], consumer perception about the product [ $F_{(5, 295)} = 3.31$ ,  $p = .006$ ], and purchase intention [ $F_{(5, 295)} = 2.72$ ,  $p = .020$ ] when considering **other interactions** with SMIs (except likes). This indicates that when the respondents interact more frequently with the SMI, independently of the type of interaction, they have more positive perception about the SMIs and the endorsed products, and higher purchase intention.

Due to the high number of categories, these differential statistics could not be represented in tables.

#### **4.4. CORRELATIONS**

Afterwards, the associations between the variables were analyzed using the Pearson Correlation coefficient. We verified a significantly moderate positive correlation between all the constructs ( $r$  between .30 and .70), with the higher correlation being between product match-up and communication ( $r = .628$ ,  $p < .001$ ). When analyzing the correlations with the dependent variable, we observed that the association is higher between purchase intention and the mediator variable consumer perception about the product ( $r = .515$ ,  $p < .001$ ), followed by the correlation between purchase intention and source attractiveness ( $r = .366$ ,  $p < .001$ ), as

presented in Table 9. This indicates that the more positive the respondents' opinions about the endorsed products is and the more attractive the SMI is perceived to be, the higher the consumer purchase intention will be as well.

**Table 10**  
*Correlations between the constructs*

	1	2	3	4	5
Source credibility (1)	-				
Source attractiveness (2)	.560**	-			
Product match-up (3)	.348**	.357**	-		
Communication (4)	.571**	.555**	.628**	-	
Consumer perception about the product (5)	.331**	.294**	.456**	.421**	-
Purchase intention (6)	.312**	.366**	.353**	.364**	.515**

**Note:** \*\*  $p < .001$

#### 4.5. LINEAR MULTIPLE REGRESSIONS

Taking into account the previous results, we conducted a linear multiple regression using the Enter method, to explore the impact of the SMIs effectiveness factors on purchase intention (**H1**), presented in Table 10.

These results demonstrate that the linear model is statistically significant [ $F_{(1, 304)} = 73.56, p < .001$ ] and that this set of SMIs effectiveness factors has a significant positive influence on consumer purchase intention ( $\beta = 0.441, p < .001$ ), explaining 19.2% of its total variance (Adjusted  $R^2 = .192$ ).

**Table 11**  
*Predictors of purchase intention*

Predictors	Purchase intention ( $\beta$ )	Semipartial $R^2$ (%)
SMIs effectiveness factors	0.441**	19.448
Adjusted $R^2$	.192	
$F_{(1,304)}$	73.56**	
Source credibility	0.084	0.409
Source attractiveness	0.204*	2.528
Product match-up	0.204*	2.528
Communication	0.075	0.240
Adjusted $R^2$	.190	
$F_{(4,301)}$	18.83**	

**Note:** \*  $p < .05$ ; \*\* $p < .001$

Additionally, it was considered pertinent to explore the influence of each of the SMIs effectiveness factors within this set, to ascertain which ones have the most impact on purchase intention. When interpreting the results, it is possible to conclude that the linear model is statistically significant [ $F_{(4, 301)} = 18.83, p < .001$ ] and that 19.0% of the variance of purchase intention (Adjusted  $R^2 = 0.190$ ) is explained by source credibility, source attractiveness, product match-up, and communication. Moreover, we determined that, within this combined group of SMIs effectiveness factors, source attractiveness and product match-up ( $\beta = 0.204, p = .002$ ) are the only constructs with a significant impact on consumer purchase intention and each contribute 2.5% to its variance.

Considering that when studied together only two of these constructs have an impact on consumer purchase intention, further analysis was done in order to determine if, individually, each of the SMIs effectiveness factors actually influence purchase intention or if they are still not statistically significant on their own (**H1a to H1d**).

**Table 12**  
*Individual impact of predictors of purchase intention*

Predictors		Purchase intention ( $\beta$ )
Source credibility		0.312**
	Adjusted $R^2$	0.094
	$F_{(1,304)}$	32.76**
Source attractiveness		0.366**
	Adjusted $R^2$	0.131
	$F_{(1,304)}$	46.95**
Product match-up		0.353**
	Adjusted $R^2$	0.122
	$F_{(1,304)}$	43.32**
Communication		0.364**
	Adjusted $R^2$	0.130
	$F_{(1,304)}$	46.52**

**Note:** \*\* $p < .001$

These analyses reveal that the four linear models are statistically significant and that all the SMIs effectiveness factors: source credibility ( $\beta = 0.312, p < .001$ ), source attractiveness ( $\beta = 0.366, p < .001$ ), product match-up ( $\beta = 0.353, p < .001$ ), and communication ( $\beta = 0.364, p < .001$ ), have a significant positive influence on purchase intention, as can be observed in Table 11.

When studied individually, source attractiveness is the factor that most contributes to the variance of purchase intention, explaining 13.1% of its total variance (Adjusted  $R^2 = 0.131$ ),

followed closely by communication, which presents an explained variance of 13.0% (Adjusted  $R^2 = 0.130$ ), and then product match-up, which explains 12.2% of the total variance (Adjusted  $R^2 = 0.122$ ). Source credibility is the effectiveness factor that least contributes for the variance of purchase intention, with an explained variance of 9.4% (Adjusted  $R^2 = 0.094$ ).

In addition, the impact of the SMIs effectiveness factors on the mediator variable consumer perception about the product was also studied (**H2**), as shown in Table 12.

**Table 13**  
*Predictors of consumer perception about the product*

Predictors	Consumer perception about the product ( $\beta$ )	Semipartial $R^2$ (%)
SMIs effectiveness factors	0.481**	23.136
	Adjusted $R^2$	0.229
	$F_{(1,304)}$	91.45**
Source credibility	0.126	0.921
Source attractiveness	0.039	0.096
Product match-up	0.318**	6.100
Communication	0.128	0.705
	Adjusted $R^2$	0.242
	$F_{(4,301)}$	25.30**

**Note:** \*\* $p < .001$

This analysis indicates that the first linear model is statistically significant [ $F_{(1, 304)} = 91.45, p < .001$ ] and that this set of SMIs effectiveness factors has a significant positive influence on consumer perception about the product ( $\beta = 0.481, p < .001$ ), explaining 22.9% of its variance (Adjusted  $R^2 = 0.229$ ).

Moreover, a second statistically significant linear model [ $F_{(4, 301)} = 25.30, p < .001$ ] was analyzed in order to understand which of the SMIs effectiveness factors have the most impact on consumer perception about the product. It was possible to conclude that even though source credibility, source attractiveness, product match-up, and communication explain 24.2% of the variance of consumer perception about the product (Adjusted  $R^2 = 0.242$ ), the only construct with a significant impact on the mediator variable, when studied within this group, is product match-up ( $\beta = 0.318, p < .001$ ), which contributes 6.1% to the variance of consumer perception about the product. Individually, all the SMIs effectiveness factors have a significant positive impact on consumer perception about the product (Appendix 4).

#### 4.6. MEDIATION

Finally, we analyzed the impact of consumer perception about the product on purchase intention (**H3**) and the mediation effect of consumer perception about the product in the relationship between SMIs effectiveness factors and consumer purchase intention (**H4**).

With the first analysis, we can verify that the linear model is statistically significant [ $F_{(1, 304)} = 109.45, p < .001$ ] and that consumer perception about the product has a significant positive impact on purchase intention ( $\beta = 0.515, p < .001$ ), explaining 26.2% of its variance (Adjusted  $R^2 = 0.262$ ). Secondly, the results show that the linear model that includes the mediator variable is statistically significant [ $F_{(2, 303)} = 69.24, p < .001$ ] and that 30.9% of the variance of consumer purchase intention (Adjusted  $R^2 = 0.309$ ) is explained by SMIs effectiveness factors and consumer perception about the product (Table 13).

**Table 14**

*Mediation effect of consumer perception about the product in the relationship between SMIs effectiveness factors and purchase intention*

Predictors		Purchase intention ( $\beta$ )
SMIs effectiveness factors		0.441**
	Adjusted $R^2$	0.192
	$F_{(1,304)}$	73.56**
SMIs effectiveness factors		0.252**
Consumer perception about the product		0.393**
	Adjusted $R^2$	0.309
	$F_{(2,303)}$	69.24**

**Note:** \*\* $p < .001$

We can also verify that, with the inclusion of the mediator variable, the set of SMIs effectiveness factors, including source credibility, source attractiveness, product match-up, and communication, continues to have a significant impact on purchase intention, but its effect is lower, decreasing from  $\beta = 0.441, p < .001$  to  $\beta = 0.252, p < .001$ . In this case, we have a statistically significant partial mediation (Sobel  $Z = 5.773, p < .001$ ; Preacher, 2021) of the impact of consumer perception about the product, as we verify an indirect effect of SMIs effectiveness factors on purchase intention. Lastly, when studied individually, all the relationships between each of the SMIs effectiveness factors and purchase intention are mediated by consumer perception about the product. In these situations, there is a partial mediation effect for all the constructs (source credibility, source attractiveness, product match-up, and communication), because their effect is lower when in the presence of the mediator variable (Appendix 5).

## 5. DISCUSSION

Many studies on celebrity endorsements have been done throughout the years, most of which regarding the traditional mass media context (Khan et al., 2019; Osei-Frimpong et al., 2019; Wang et al., 2017). However, SMIs are a relatively recent phenomenon and are only now beginning to be studied.

With the evolution of influencer marketing, there has been a growing recognition of the need to explore how the information spread by SMIs on social media, where consumers are persuaded every day on what to think, do, and buy, influences consumers' perceptions about the products and their consequent purchase intentions. In this context, it is essential to understand the characteristics that most affect SMIs' endorsement effectiveness (Pophal, 2019), in order to identify and select the SMIs with the most influence and who are more suited for the brand's objectives (Roelens et al., 2016). Considering that nowadays the number of followers does not necessarily mean influence, other characteristics related with SMIs have been suggested and studied in the literature as important predictors of consumer perception about the product and purchase intention (De Veirman et al., 2017), such as source credibility, source attractiveness, and product match-up (Lim et al., 2017).

Moreover, the way SMI's communicate their message through their endorsements and its impact on purchase intention was scarcely studied until the moment, to the best of our knowledge. As such, to fill this gap in the literature, this study sought to explain the relationship between the characteristics of the SMIs and their endorsement effectiveness measured through consumer perception about the product and purchase intention, with special focus on communication.

Accordingly, the main objective of this study was to understand how the SMIs effectiveness factors, namely source credibility, source attractiveness, product match-up, and communication, influence consumer perception about the products endorsed by the SMI and purchase intention. Besides, the study intended to explore to what extent consumer perception about the product impacts purchase intention and mediates the relationship between the SMIs effectiveness factors and purchase intention.

The results to the proposed research questions validated the existence of a positive influence of all the SMIs effectiveness factors on both purchase intention and consumer perception about the product, a positive impact of consumer perception about the product on purchase intention, and the presence of the mediation effect.



Firstly, our findings showed that, in general, participants think their favorite SMI is a credible and attractive source, who fits well with the product they endorse and has good communication skills. Moreover, we verified that the consumers' perception about the SMI's endorsed products is relatively positive. Still, even though the respondents show a positive perception about the SMI's characteristics and the endorsed products, their purchase intention is not very high.

Also, the analysis showed that the most preferred social media to follow SMIs is Instagram, which goes accordingly with the findings of Mediakix (2019), stating that Instagram is the most popular platform for influencer marketing.

When comparing the constructs under study according to sociodemographic characteristics, we verified that there are no significant differences on the respondents' answers concerning purchase intention depending on their gender, age category, and education level. On the other hand, we found that participants whose most used social media is YouTube have higher purchase intention, followed by Facebook and Instagram, in opposition with users of TikTok, who present the lowest values. Regarding the frequency of interactions with SMIs, it was possible to conclude that the more frequently the participants interact with the SMI, the more positive is their perception about the products the SMI endorses and the higher is their intent to purchase those products. Also, we verified that participants who follow more SMIs have higher purchase intention than those who follow less SMIs.

Subsequently, the correlation analysis allowed to determine that there is a significant positive correlation between all the constructs, with the strongest association with the dependent variable purchase intention being consumer perception about the product, followed by source attractiveness. This indicates that when the respondents have a more positive opinion about the endorsed products and/or perceive the SMI as more attractive, their intention to buy the products will be superior.

Finally, we proceeded to the validation of the research hypothesis previously formulated. The **first hypothesis** intended to study the impact of the proposed set of SMIs effectiveness factors, including source credibility, source attractiveness, product match-up, and communication, on consumer purchase intention. As the novelty of this project, there is little literature that explores the impact of SMI's communication on consumer's purchase intention, either alone or along with the other three variables.

Nevertheless, Lim et al. (2017) recommended that it would be very pertinent to add communication as a new construct to be studied in this context, because communication is the first interaction between consumers and brands. Moreover, communication on social media has

great influence in changing consumer's beliefs and their consequent purchase intentions (Alalwan et al., 2017), which is the reason why communication is included in this set of SMIs effectiveness factors.

Indeed, the first hypothesis was supported by the results obtained, which revealed a significant positive influence of this set of SMIs effectiveness factors on purchase intention. These findings are similar to Kumar's (2011) who found that all three constructs, excluding communication, positively affect consumer's purchase intentions, meaning that an endorser who is perceived as credible, attractive, and well-fitting with the product, increases their follower's intentions to buy the products featured in their endorsements. Looking at these results, we can also ascertain that, adding to those factors, it is important for an SMI to have good communication skills too, in order to stimulate consumer's purchase intentions.

It was then hypothesized the individual effect of each of the SMIs effectiveness factors on purchase intention. First, the results showed that source credibility positively influences consumers purchase intention, which validates **H1a**.

These findings go accordingly with the ones of Seiler and Kucza (2017), who indicated that a more credible source will more likely result in higher purchase intention. Moreover, these results are similar to those obtained by Gayathri and Anwar (2019) and Ismagilova et al. (2020), who found a positive impact of both dimensions of source credibility, namely expertise and trustworthiness, on purchase intention.

Additionally, Chapple and Cownie (2017) proved that a more trustworthy digital influencer is highly effective in influencing consumer's intentions to purchase the products featured in their endorsements, for trustworthiness is key to make consumers believe the information shared and want to follow the recommendations.

These results corroborate the importance of selecting a SMI that is perceived as more expert and trustworthy, because when consumers perceive SMIs to have these characteristics, the SMI is deemed a credible source of information. As such, their followers believe in the message being transmitted and the endorsement has higher value for the consumers, which leads to a positive impact on purchase intentions, as shown by Weismueller et al. (2020).

Subsequently, **H1b** was also supported, meaning that there is a positive influence of source attractiveness on consumer purchase intention. Source attractiveness also proved to be the factor with most influence on purchase intention, compared to the other SMIs effectiveness factors' individual impact.

These results are in line with those found by Wang and Scheinbaum (2018), stating that the more attractive the source is, the more positive the impact on consumer's intention to purchase the endorsed products will be. In a related study, Osei-Frimpong et al. (2019) argued that source attractiveness is a very important aspect in endorsement promotional activities and suggested that it is easier for consumers to recall the endorsed product due to the source's attractiveness, which increases their intentions to purchase.

Similarly, Spry et al. (2011) debated that consumers more often remember the message being communicated when the source is attractive, which in turn influences brand recognition and endorsement effectiveness, resulting in higher purchase intention in short or long term. Moreover, Kumar (2011) determined that all three factors of source attractiveness, namely familiarity, similarity, and likeability, positively impact consumer purchase intention. Likewise, Chun et al. (2018) found evidence that SMIs perceived as similar and familiar lead to higher purchase intentions.

In the opposite direction are the findings of Lim et al. (2017) that failed to confirm a positive influence between source attractiveness and purchase intention. This can be explained by the fact that the authors considered only the physical appearance of the SMI as a determinant of source attractiveness, while this study also considered similarity, familiarity, and personality, as suggested by Seiler and Kucza (2017).

Furthermore, the results corroborated **H1c**, demonstrating that product match-up positively influences consumer purchase intention. These findings are similar to the results found by Khan et al. (2019), who argued that the perceived match-up between SMIs and the endorsed product is key for the success of the endorsement, and that the more the product features fit with the SMI's characteristics, the more positive is the effect on purchase intention.

Additionally, a study by Gong and Li (2017) comparing the effects of high and low celebrity-product congruence revealed stronger purchase intentions for products that fit better with the endorser. Similarly, Schouten et al. (2020) proved that product match-up directly impacts purchase intention, with well-fitting endorsements leading consumers to higher intention to purchase the endorsed products than poor-fitting endorsements.

That being so, it is essential that brands take into account the congruence between the SMI and the product they are endorsing, in order to generate positive outcomes and increase consumer's purchase intention (Anwarl & Jalees, 2017).

Finally, regarding the individual effect of communication on purchase intention, the results revealed that communication has a positive influence on consumer's intention to purchase the

products featured in the SMI's endorsements, which supports **H1d**. Moreover, compared to the other SMIs effectiveness factors' individual impact, communication is one of the two most influencing factors explaining purchase intention.

These findings are in line with those of Alalwan's (2018) which proved that all three components of communication, namely hedonic motivation, informativeness, and interactivity, are key predictors of purchase intention. Likewise, research by Sarraf and Teshnizi (2020) indicated that when the endorsements are interactive, entertaining, and a good source of information, consumer purchase intention is positively impacted.

Moreover, Dao et al. (2014) found that both informativeness and entertainment have a positive influence on consumer's perceived value of the endorsement, thus enhancing the endorsement effectiveness and subsequently consumer's purchase intention. Similarly, Lou and Yuan (2019) demonstrated that when the SMIs message has informative value it reflects in an increase of consumer's trust and intention to purchase the products featured in the endorsements. Additionally, Kharajo and Kharajo's (2020) study revealed that both hedonic motivation and interactivity on social media endorsements have a significant impact on consumer purchase intention.

Accordingly, it is essential for brands to select SMIs that reflect this communication style and include all three communication features on the messages transmitted through their endorsements, because hedonic motivation, interactivity, and informativeness lead to the success of the endorsement by increasing its effectiveness, which results in consumers' stronger intentions to purchase the products, as corroborated by Lutfie and Marcelino (2020).

The **second hypothesis** was also validated through the results obtained, which indicated that the set of SMIs effectiveness factors, composed by source credibility, source attractiveness, product match-up, and communication, have a significantly positive influence on consumer perception about the product. Furthermore, it was found that product match-up is the most impactful variable on consumer perception about the product both individually and when in the presence of the other variables.

These findings go in the same direction of those found by Seiler and Kuzca (2017), stating that both source credibility and source attractiveness positively impact attitude towards the brand and its products, revealing that these characteristics are relevant when selecting the SMI to endorse the brand's products. According to Wang et al. (2017) the endorser's expertise, trustworthiness, and overall attractiveness, increase endorsement effectiveness and have a significant effect on brand attitude. In a similar way, Wardani et al. (2019) confirmed that a

credible and attractive endorser generates positive perceptions on consumers towards the endorsed products.

Moreover, Lim et al. (2017) demonstrated that both source attractiveness and product match-up are key for endorsements effective outcomes, because an attractive SMI whose characteristics are congruent with the product's features, significantly stimulates consumer's positive perceptions of the products being endorsed. In this line, Breves et al. (2019) recognized that choosing a SMI that matches with the endorsed products is beneficial for brands, as the fit between the SMI and the product directly affects consumer's perception of the brand's products.

Additionally, Kim et al. (2010) found that hedonic motivation improves consumer's perception about the products. Likewise, Smink et al. (2019) corroborated that both enjoyment and informativeness had a positive direct effect on brand attitude. Finally, Jun and Yi (2020) verified that SMI's interactivity significantly increases the trust in the brand and therefore forms consumer's positive perceptions towards the brand and the endorsed products.

Moreover, the results obtained supported the **third hypothesis**, meaning that consumer perception about the product has a significant positive influence on purchase intention. In this line are the findings of Wang and Scheinbaum (2018) who argued that positive attitude towards the brand and its products, significantly increases consumer's purchase intention.

Additionally, Breves et al. (2019) determined that the more positive is consumer's evaluation of the brand's products, the more likely they are to display favorable behavioral intentions, namely purchase intention. Further research by Wardani et al. (2019) also demonstrated a positive impact on consumer's purchase intention due to SMIs significant relationship with brand attitude and their consequent positive influence on consumer's perception about the products.

Likewise, a previous study by Schivinski and Dabrowski (2016) proved that there is a strong relation between the product's perceived quality and purchase intention, meaning that the higher the consumer's perception of the quality or superiority of the product, the stronger is consumer's intention to purchase the endorsed products.

Regarding the **fourth and final hypothesis**, it was found that consumer perception about the product has a partial mediation role in the relationship between the set of SMIs effectiveness factors and purchase intention, which validates this hypothesis. Moreover, the individual relationships between each of the SMIs effectiveness factors, namely source credibility, source attractiveness, product match-up, and communication, and purchase intention are all mediated by consumer perception about the product.

These findings are identical to the ones described by Wardani et al. (2019), who determined that when consumers believe a SMI is trustworthy and has a significant level of expertise, the SMI's credibility reflects on consumer's positive perceptions about the endorsed products, which subsequently leads to greater purchase intention. Moreover, Lim et al. (2017) indicated that there is a mediation effect of consumer attitude in the relationship between source attractiveness and purchase intention and between product match-up and purchase intention. These results reveal that an attractive SMI will form a highly favorable perception of the products featured in their endorsements, increasing, in turn, consumers' intention to purchase. In a similar fashion, when the SMIs' characteristics match with the product's, consumer perception about the products improves and results in positive purchase intention.

Finally, Lou and Yuan (2019) demonstrated that when SMI's content has informative value, it generally has a positive influence in their followers' trust in the endorsed products/brands and, consequently, their purchase intentions are greater. Besides, Novela et al. (2020) found that hedonic motivation has an indirect effect on online purchase intentions through brand attitude, meaning that when consumers perceive online content to be entertaining, they believe the brand and its products are superior and, as such, it improves their purchase intentions. Taking this into account, these findings are also corroborated in the context of SMIs' communication through their endorsements.

An overview of the hypothesis and respective results found in this study is shown in Table 15.

**Table 15**  
*Hypothesis overview and results*

<b>Hypothesis</b>	<b>Relationship</b>	<b>Result</b>
<b>H1</b>	SMIs effectiveness factors → Purchase intention	Supported
<b>H1a</b>	Source credibility → Purchase intention	Supported
<b>H1b</b>	Source attractiveness → Purchase intention	Supported
<b>H1c</b>	Product match-up → Purchase intention	Supported
<b>H1d</b>	Communication → Purchase intention	Supported
<b>H2</b>	SMIs effectiveness factors → Consumer perception about the product	Supported
<b>H3</b>	Consumer perception about the product → Purchase intention	Supported
<b>H4</b>	SMIs effectiveness factors → Consumer perception about the product → Purchase Intention	Supported

## 6. CONCLUSIONS

This study aimed to explore the influence of SMIs effectiveness factors, namely source credibility, source attractiveness, product match-up, and communication, on consumer perception about the product and purchase intention, and study the mediation effect of consumer perception about the product in the relationship between SMIs effectiveness factors and purchase intention.

The study followed a hypothetical-deductive, quantitative approach to test the research hypothesis, and the data was collected through an online self-administered questionnaire, composed by five parts: (i) qualification questions, (ii) social media, (iii) SMIs, (iv) SMIs' endorsements, and (v) sociodemographic questions. The sample was constituted by 306 participants who follow SMIs, aged between 18 and 57 years old.

The results indicated moderately high values for the respondents' opinions regarding the credibility and attractiveness of the SMI, as well as the match between the SMI and the endorsed products, and the communication aspects of SMIs featured in their endorsements, which reveals positive opinions of these characteristics in the selected SMI. Besides, participants also exhibited a positive perception about the products endorsed by the SMIs, but did not show great intention to purchase the products.

When comparing the values of purchase intention according to the participants' gender, age category, and education level, the differential analysis showed no significant differences between the means of the groups of each of these sociodemographic characteristics. Otherwise, the analysis allowed to find that the purchase intention is higher for participants who mostly use YouTube, followed by participants' who prefer Facebook and Instagram, in contrast with users of TikTok, who have the lowest intention to purchase. Also, participants who follow more SMIs and/or interact frequently with them, display more positive perceptions about the endorsed products and higher purchase intention.

Additionally, through the correlation analysis it was possible to verify significant positive associations in all the relationships between SMIs effectiveness factors, consumer perception about the product, and purchase intention. This analysis also indicated that the strongest correlation with purchase intention is consumer perception about the product, followed by the SMI effectiveness factor related with source attractiveness.

Finally, the research hypotheses were tested and we determined that the set of SMIs effectiveness factors has a significant positive influence on consumer purchase intention, which

validated the first hypothesis. Additionally, we ascertained that, when studying these factors together, source attractiveness and product match-up are the constructs with most impact on purchase intention, for they are the only statistically significant variables.

Regarding hypothesis H1a to H1d, we verified that, individually, all the SMIs effectiveness factors influence purchase intention, meaning that source credibility, source attractiveness, product match-up, and communication, all have a significant positive impact on purchase intention, with source attractiveness and communication having the highest effect.

The results also showed that there is a significant positive impact of the set of SMIs effectiveness factors on consumer perception about the product, which corroborates the second hypothesis. Moreover, it was possible to conclude that product match-up is the construct that most influences consumer perception about the product, individually and within this group of effectiveness factors. Furthermore, even though product match-up is the only construct with a significant effect on the mediator variable when studied together, individually all the SMIs effectiveness factors have a significant positive impact on consumer perception about the product.

In relation to hypothesis 3, we verified that consumer perception about the product positively impacts purchase intention, which allowed us to validate this hypothesis.

Lastly, we concluded that consumer perception about the product partially mediates the relationship between the set of SMIs effectiveness factors and purchase intention, which supports the fourth hypothesis. Besides, the relationships between each of the SMIs effectiveness factors and purchase intention are all mediated by consumer perception about the product when studied individually, with the mediation effect being partial for all cases.

## **6.1. THEORETICAL AND MANAGERIAL IMPLICATIONS**

SMIs are regarded as more credible, trusted, and likeable sources of information due to their ability to establish closer relationships with consumers, and are considered to be the most cost-efficient and effective marketing tendencies (Talaverna, 2015). In this context, evaluating SMIs' effectiveness as endorsers regarding source credibility, source attractiveness, product match-up, and communication, in influencing consumers' perception about the endorsed products and their consequent purchase intention, brings important practical outcomes for marketing practitioners.

The knowledge of consumers' buying behavior and the perceptions consumers develop resultant of the contact with SMIs' and their endorsements, helps brands select the most



adequate SMIs to endorse their products according to their most effective and influential characteristics (De Veirman et al., 2017). Additionally, the ability to predict purchase intention will help companies develop marketing strategies, because by understanding the psychology of the consumers as to how they are influenced to perceive a brand or product, brands can reach consumers more successfully, shape positive and impactful decision-making towards their products, and gain competitive advantages in the market (Lim et al., 2017).

Besides, bearing in mind the results found, we can predicate that it is pertinent to develop and invest in marketing strategies that include SMIs, for it is confirmed that influencer marketing has positive effects on consumer perceptions about the products and purchase intention. Moreover, when selecting the most adequate SMIs to endorse the brand's products, the four studied SMIs effectiveness factors must be taken into account, for they all positively influence consumers' opinions about the products and their purchase intention.

This means that brands should choose a SMI who is regarded as credible, for being expert and trustworthy; who is attractive in terms of both physical appearance and social aspects; who fits well with the products being endorsed, and with the brand's image and goals; and who adds entertaining, informative, and interactive value to their endorsement communication. Also, it is recommended that brands should direct more focus to source attractiveness and communication when considering these SMIs effectiveness factors individually, or to source attractiveness and product match-up when preferring a SMI complete with all these characteristics, for these are the factors that most influence purchase intention directly and that have more impact on consumer perception about the product, which in turn also leads to a greater will to purchase.

## **6.2. LIMITATIONS AND FUTURE RESEARCH**

As in any research, there are several limitations resulting from this study that can lead to future recommendations.

Firstly, the sample size is fairly small to represent the population of Portugal, which means the data is not representative of all the target population under study and, therefore, the results of this project are not enough to generalize the findings. Besides, because the data was collected using a convenience sample and through an online questionnaire, the majority of the participants were aged between 20 and 24 years old. In future studies it could be of interest to reach a broader age group and further validate if there are differences on perception about the product and purchase intention according to the participants' age.

Secondly, some sociodemographic factors were not taken into consideration for this study, such as income level. Thus, in future projects it would be interesting to assess possible differences on purchase intention according to the income level of the participants, which may impact their purchasing power and, consequently, their purchase intention.

In this line of thought, it is also pertinent to refer that the data was collected during the COVID-19 pandemic. The fact that the respondents were living in this situation of crisis may have influenced the answers regarding purchase intention due to the economic repercussions that affected many people's purchasing power, and due to the constraints enforced that changed the normal hobbies and daily lives of the participants and their consequent buying behaviors.

Moreover, taking into account that the consumer perception about the product and purchase intention were evaluated based on the most recent endorsement of the selected SMI, some of the respondents' answers could be biased in case they had previously had a less positive experience with the particular brand or type of product being endorsed.

Finally, considering that there are content variations on SMIs' messages and endorsements across different social media platforms, which may generate diverse opinions and attitudes towards SMIs and their sponsored recommendations depending on the platform they are using, future researches could replicate this study for specific social media platforms.

Likewise, it would be relevant to apply this study in different countries to understand if there are differences in consumers' opinions regarding the studied SMIs effectiveness factors, consumer perception about the product, and purchase intention, depending on the participants' background, culture, and values.

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## 8. APPENDICES

### Appendix 1. Measurement Scales (Portuguese translation)

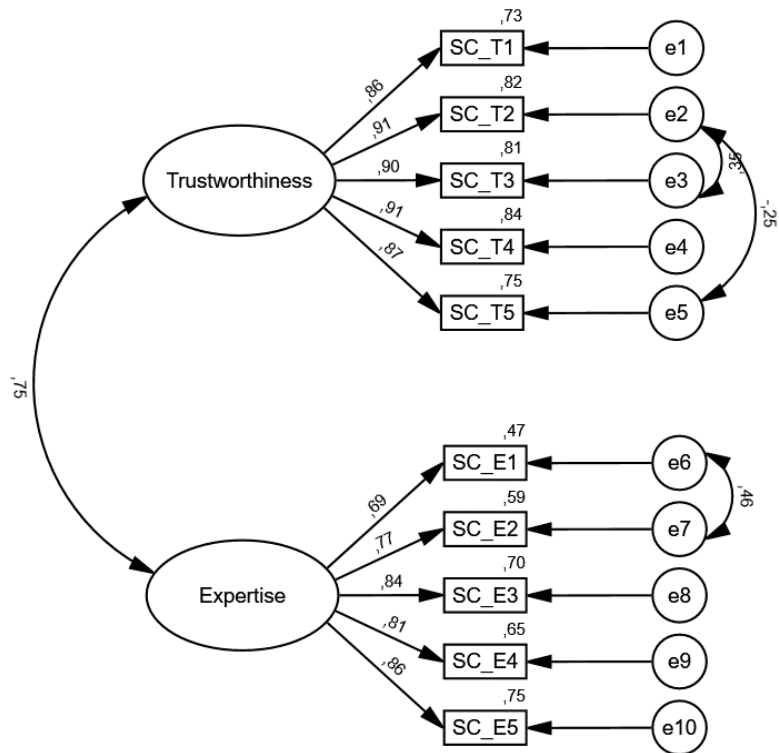
Constructs	Items	Sources
<b>Source credibility</b>		
Trustworthiness	O(a) influencer é confiável. O(a) influencer é honesto(a). O(a) influencer é fiável. O(a) influencer é sincero(a). O(a) influencer é credível.	Ohanian (1990)
Expertise	O(a) influencer é especialista. O(a) influencer é experiente. O(a) influencer é bem informado(a). O(a) influencer é qualificado(a). O(a) influencer é competente.	Ohanian (1990)
<b>Source attractiveness</b>		
Similarity	O meu estilo de vida geral é semelhante ao do(a) influencer. O meu background cultural é semelhante à do(a) influencer. A minha aparência física é semelhante à do(a) influencer. Os meus valores são semelhantes aos do(a) influencer. Os meus interesses são semelhantes aos do(a) influencer.	Whittler and Dimeo (1991)
Familiarity	Estou familiarizado com o(a) influencer. Tenho conhecimentos sobre o(a) influencer. Sigo sempre o(a) influencer. Reconheço facilmente o(a) influencer. Conheço bem o(a) influencer.	Kent and Allen (1994)
Likeability: (Physical)	Considero o(a) influencer muito atraente fisicamente. Considero o(a) influencer muito bonito(a). O(a) influencer é muito sexy.	Lee and Watkins (2016)
(Personality)	O(a) influencer é sociável. É fácil gostar do(a) influencer. O(a) influencer é amigável.	Dimofte et al., (2003)
<b>Product match-up</b>		
	Considero que o(a) influencer é apropriado para recomendar o produto. Considero que o(a) influencer é eficiente a recomendar o produto. Considero que o(a) influencer se enquadra com o produto. Considero que o(a) influencer combina bem com o produto.	Till and Busler (2000)

<b>Constructs</b>	<b>Items</b>	<b>Sources</b>
<b>SMI's communication style</b>		
Hedonic motivation	As publicações/posts do(a) influencer são divertidas. As publicações/posts do(a) influencer são agradáveis. As publicações/posts do(a) influencer entretêm-me.	Venkatesh et al. (2012)
Interactivity	O(a) influencer é eficiente a recolher o feedback dos seguidores. Sinto que o(a) influencer quer ouvir os seus seguidores. O(a) influencer incentiva os seguidores a dar feedback. O(a) influencer dá oportunidade aos seus seguidores para lhe responderem/deixarem comentários. O(a) influencer facilita a comunicação entre si e os seus seguidores.	Alalwan (2018)
<b>SMI's communication style in endorsements</b>		
Hedonic motivation	As publicações/posts do(a) influencer com publicidade de produtos são divertidas. As publicações/posts do(a) influencer com publicidade de produtos são agradáveis. As publicações/posts do(a) influencer com publicidade de produtos entretêm-me.	Venkatesh et al. (2012)
Informativeness	O(a) influencer é uma boa fonte de informação relevante sobre o produto. O(a) influencer fornece informação atempada sobre o produto. O(a) influencer é uma boa fonte de informação atualizada do produto. O(a) influencer é uma fonte conveniente de informação sobre o produto. O(a) influencer fornece informações completas sobre o produto.	Logan et al. (2012)
<b>Consumer perception about the product</b>		
	Acho que este produto é muito benéfico. Na minha opinião este produto é muito útil. Na minha opinião este produto resolve realmente um problema. Na minha opinião este produto satisfaz uma necessidade.	Qureshi (2012)
<b>Purchase intention</b>		
	Comprarei os produtos promovidos por este(a) influencer. Quero comprar os produtos promovidos por este(a) influencer. É provável que compre os produtos promovidos por este(a) influencer. Pretendo comprar os produtos promovidos por este(a) influencer.	Alalwan (2018)

## Appendix 2. Confirmatory Factor Analysis

Figure 1

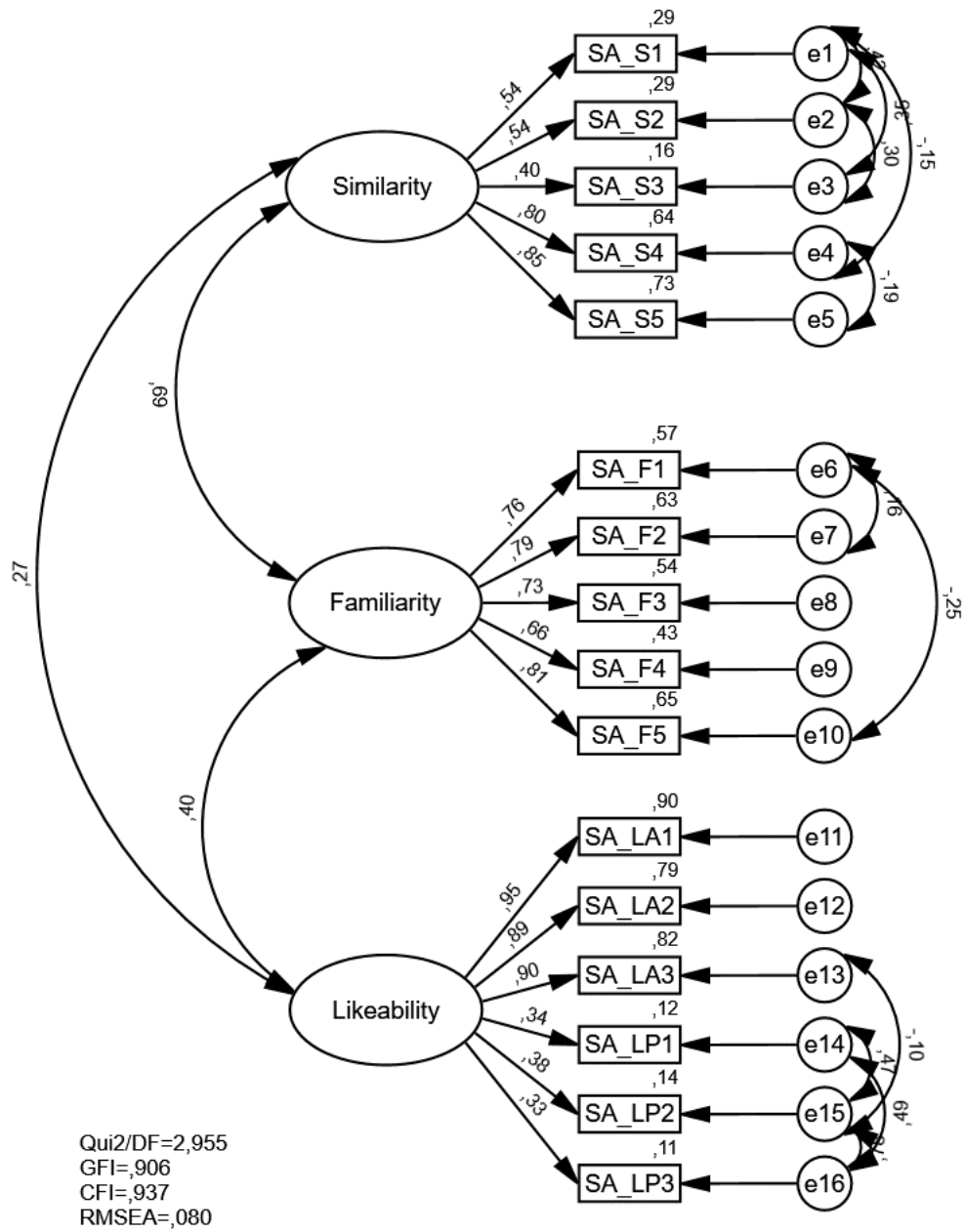
Confirmatory model with the two dimensions of source credibility



Qui2/DF=2,698  
GFI=.946  
CFI=.981  
RMSEA=.075

**Appendix 2. Confirmatory Factor Analysis (continuation)**

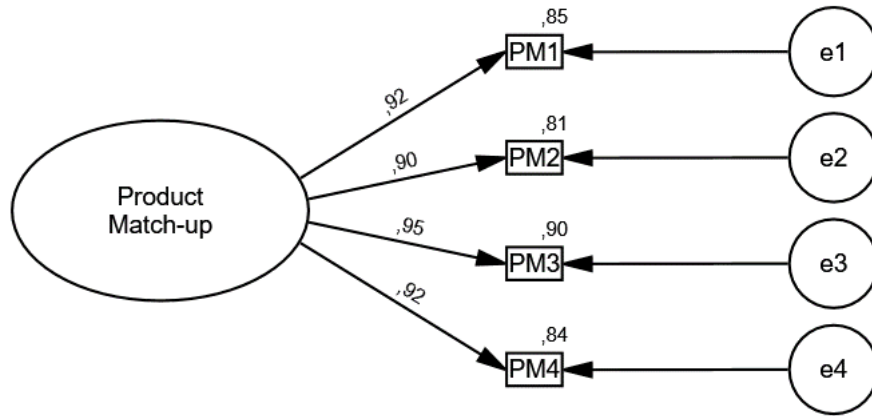
**Figure 2**  
Confirmatory model with the three dimensions of source attractiveness



## Appendix 2. Confirmatory Factor Analysis (continuation)

**Figure 3**

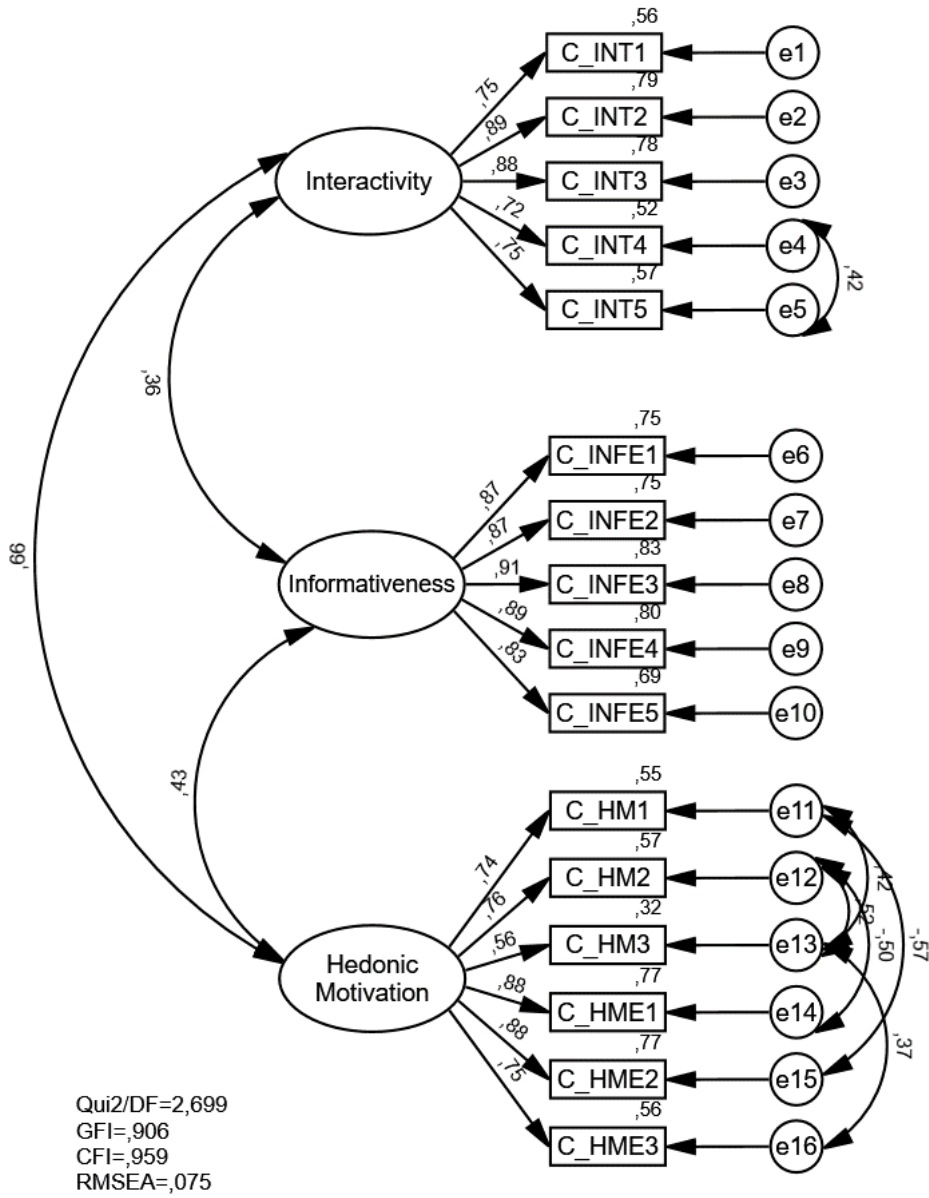
Confirmatory model with a single dimension of product match-up



Qui2/DF=7,778  
GFI=.974  
CFI=.990  
RMSEA=.149

**Appendix 2. Confirmatory Factor Analysis (continuation)**

**Figure 4**  
Confirmatory model with the three dimensions of communication

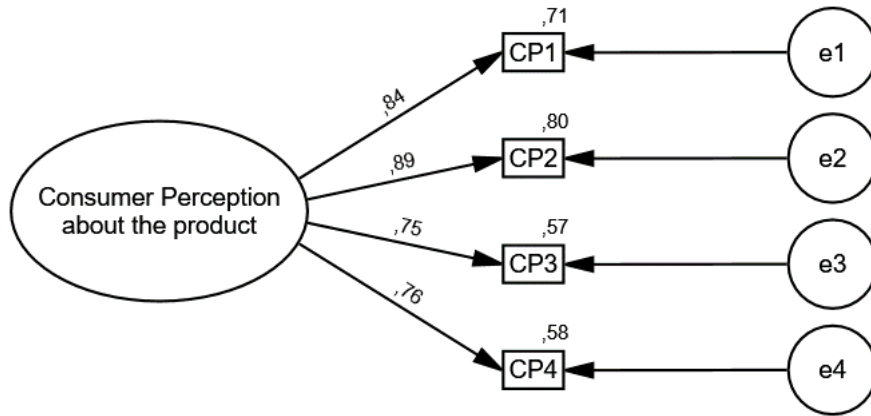




## Appendix 2. Confirmatory Factor Analysis (continuation)

**Figure 5**

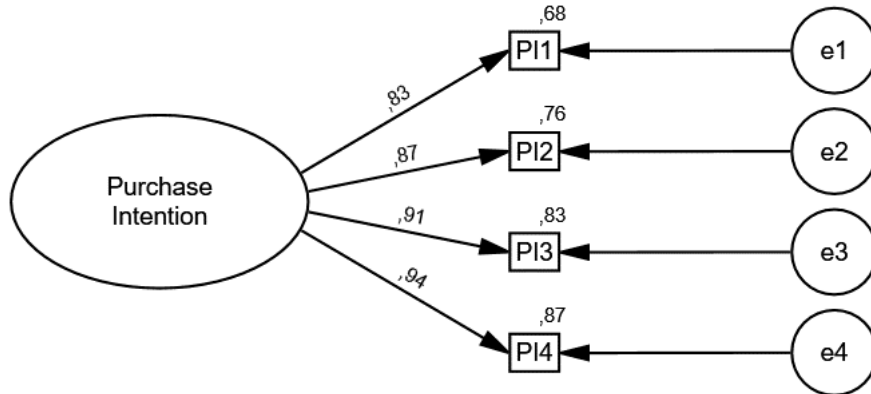
Confirmatory model with a single dimension of consumer perception about the product



Qui2/DF=1,976  
GFI=,993  
CFI=,997  
RMSEA=,057

**Figure 6**

Confirmatory model with a single dimension of purchase intention



Qui2/DF=5,098  
GFI=,985  
CFI=,992  
RMSEA=,116

### Appendix 3. Top 20 SMIs mentioned by the participants

	<b>SMI</b>	<b>Frequency</b>	<b>Percent</b>
1	Helena Coelho	28	9.2
2	Mafalda Sampaio	11	3.6
3	Catarina Gouveia	8	2.6
4	Bárbara Corby	7	2.3
5	Inês Rochinha	7	2.3
6	A Pipoca Mais Doce	6	2.0
7	Explorerssaurus	6	2.0
8	Rita Pereira	4	1.3
9	Adriana Silva	3	1.0
10	Alice Trewinnard	3	1.0
11	Franciny Ehlke	3	1.0
12	RicFazeres	3	1.0
13	Rita Serrano	3	1.0
14	Vanessa Martins	3	1.0
15	Carolina Patrocínio	2	0.7
16	Cristiano Ronaldo	2	0.7
17	Francisco Macau	2	0.7
18	Joana de Vivre	2	0.7
19	Joana Vaz	2	0.7
20	Keka Martinez	2	0.7

#### Appendix 4. Individual impact of predictors of consumer perception about the product

Predictors		Consumer perception about the product ( $\beta$ )
Source credibility		0.331**
	Adjusted $R^2$	0.107
	$F_{(1,304)}$	37.41**
Source attractiveness		0.294**
	Adjusted $R^2$	0.083
	$F_{(1,304)}$	28.78**
Product match-up		0.456**
	Adjusted $R^2$	0.205
	$F_{(1,304)}$	79.65**
Communication		0.421**
	Adjusted $R^2$	0.174
	$F_{(1,304)}$	65.40**

Note: \*\* $p < .001$

**Appendix 5. Mediation effect of consumer perception about the product in the individual relationships between SMIs effectiveness factors and purchase intention**

**Table 1**

*Mediation effect of consumer perception about the product in the relationship between source credibility and purchase intention*

Predictors		Purchase intention ( $\beta$ )
Source credibility		0.312**
	Adjusted $R^2$	0.094
	$F_{(1,304)}$	32.76**
Source credibility		0.159*
Consumer perception about the product		0.462**
	Adjusted $R^2$	0.283
	$F_{(2,303)}$	61.05**

**Note:** \* $p < .05$ ; \*\* $p < .001$

**Table 2**

*Mediation effect of consumer perception about the product in the relationship between source attractiveness and purchase intention*

Predictors		Purchase intention ( $\beta$ )
Source attractiveness		0.366**
	Adjusted $R^2$	0.131
	$F_{(1,304)}$	46.95**
Source attractiveness		0.235**
Consumer perception about the product		0.445**
	Adjusted $R^2$	0.311
	$F_{(2,303)}$	69.69**

**Note:** \*\* $p < .001$

**Appendix 5. Mediation effect of consumer perception about the product in the individual relationships between SMI effectiveness factors and purchase intention (continuation)**

**Table 3**

*Mediation effect of consumer perception about the product in the relationship between product match-up and purchase intention*

Predictors	Purchase intention ( $\beta$ )
Product match-up	0.353**
	Adjusted $R^2$ 0.122
	$F_{(1,304)}$ 43.32**
Product match-up	0.150*
Consumer perception about the product	0.446**
	Adjusted $R^2$ 0.278
	$F_{(2,303)}$ 59.65**

**Note:** \* $p < .05$ ; \*\* $p < .001$

**Table 4**

*Mediation effect of consumer perception about the product in the relationship between communication and purchase intention*

Predictors	Purchase intention ( $\beta$ )
Communication	0.364**
	Adjusted $R^2$ 0.130
	$F_{(1,304)}$ 46.52**
Communication	0.180**
Consumer perception about the product	0.439**
	Adjusted $R^2$ 0.287
	$F_{(2,303)}$ 62.26**

**Note:** \*\* $p < .001$

