Understanding how Generation Z perceives social media influencers and its impact on the adoption of COVID safe behaviours

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CATÓLICA – Lisbon School of Business and Economics

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By Carolina Pinto Barbosa

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Abstract

The emergence of the internet and the development of technology led to increasingly more digital consumers, who are tired of being marketed to. Thus, many companies started adopting Influencer marketing to reach people on social media. This new approach to marketing is also being used as a tool in social marketing to promote behaviour change, especially in public health matters.

This dissertation was developed with the aim of understanding how Generation Z consumers, the first true digital natives, perceive social media influencers as endorsers of COVID safe behaviours, through the lens of the Source Credibility and Source-Attractiveness Models. These objectives were addressed using a quantitative research method, that adopted both descriptive and exploratory research approaches. Previous literature was reviewed and an online questionnaire was conducted. Moreover, the message effort level was considered as a moderator in the analysis, which was yet to be done in literature.

The main results from this dissertation indicate that influencers are perceived as more trustworthy, more attractive and less expert than the DGS. The difference between endorsers' effectiveness on conveying COVID safe behaviours is not significant. However, in the presence of attractiveness, influencers have a more persuasive effect than expert endorsers. Moreover, Generation Z consumers are always more willing to adopt COVID safe behaviours when the message is considered "low effort".

Keywords: Endorsement marketing; Social media influencers; Source Credibility model; Source Attractiveness model; COVID safe behaviours; Generation Z; Health information dissemination; Social marketing

CATÓLICA – Lisbon School of Business and Economics

Perceção de influenciadores digitais pela Geração Z e o impacto na adoção de comportamentos preventivos face à COVID-19

Por Carolina Pinto Barbosa
Janeiro 2021

Resumo

O surgimento da internet e o desenvolvimento da tecnologia geraram cada vez mais consumidores digitais, os quais estão cansados de serem abordados por campanhas de marketing. Assim, muitas empresas começaram a utilizar o marketing de influenciadores para abordar pessoas nas redes sociais. Esta nova abordagem ao marketing também é usada como uma ferramenta no marketing social, para promover mudanças comportamentais, especialmente em questões de saúde pública.

Esta tese foi desenvolvida com o objetivo de compreender qual a perceção que os consumidores da Geração Z, os primeiros verdadeiros nativos digitais, têm dos influenciadores digitais como indutores de comportamentos preventivos face à COVID-19, usando a perspetiva dos Modelos de Credibilidade e de Atratividade. Estes objetivos foram abordados através de métodos quantitativos de pesquisa, nos quais se adotaram as perspetivas da pesquisa descritiva e exploratória. Foi revista a literatura existente sobre o tema e foi preparado e conduzido um questionário online. Além disso, o nível de esforço da mensagem foi considerado como moderador na análise, o que ainda não tinha sido feito na literatura.

Os principais resultados desta dissertação indicam que os influenciadores digitais são considerados mais confiáveis, mais atraentes e menos especialistas do que a DGS. A diferença entre a eficácia dos indutores da mensagem não é significativa. Porém, na presença de atratividade, os influenciadores tem maior poder de persuasão comparativamente aos especialistas. Além disso, os consumidores da Geração Z estão sempre mais dispostos a adotar comportamentos preventivos à COVID quando a mensagem é considerada de "baixo esforço".

Palavras-chave: Marketing de endossador; Influenciadores digitais; Modelo de Credibilidade; Modelo de Atratividade; Comportamentos preventivos COVID; Geração Z; Disseminação de informação de saúde; Marketing Social

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List of Contents

List of Figures

List of Tables

1.Introduction

1.1.Topic Presentation

With the advancement of technology and the internet, as well as the evolution of mediums of communication, consumers are increasingly becoming more digital, more educated and consequently more critical of companies' advertising and promotional activities.
Organizations realize that consumers are tired of being marketed to and therefore, many started adopting influencer marketing as a new marketing approach to reach people on social media. Companies used celebrities and experts as brand endorsers in the past, but the new concept of influencer endorsement goes beyond what had previously been done in the sense that the "new influencers" have higher independence in the way they communicate the message to their audience. Thus, influencer marketing is the use of an independent third-party endorser to shape audience attitudes through the use of their own social media networks (Freberg et al., 2011).

Moreover, influencer marketing can be used as a tool in social marketing to promote behaviour change, which is extremely useful regarding public health matters, such as the global pandemic we are currently facing. COVID-19 was declared a worldwide pandemic on March 2020, by the World Health Organization (Susie Neilson, 2020), and since then there has been information regarding the disease spread throughout all social media platforms. Health organizations and several other type of endorsers, such as celebrities and influencers, have been using their social media networks to raise awareness and promote good practices and coronavirus prevention measures. Therefore, it is important to understand which type of endorsers are most effective on conveying COVID safe behaviours through social media.

Furthermore, different consumers may perceive endorsers differently and therefore, this research will focus on Generation Z. By focusing on a generation that represents the first true digital natives, that is open-minded and technologically savvy (Williams, 2015), it will be possible to understand how effective is influencer endorsement marketing on influencing them to adopt COVID safe behaviours.

It is also important to acknowledge how this younger generation perceives influencer and expert endorsers in terms of their credibility. A source's credibility can be measured on its perceived trustworthiness, expertise and attractiveness (Erdogan, 1999; Goldsmith et al., 2000; Ohanian, 1990). The latter does not only refer to physical attractiveness. In fact, similarity, likability and familiarity of the endorser may also be considered (Ohanian, 1990).

Moreover, this research will understand whether the willingness to adopt a COVID safe behaviour depends on the message itself. In fact, two types of message that may require different levels of effort to comply with will be introduced in this study.

1.2. Problem Statement

The aim of this dissertation is to evaluate how effective are influencers on conveying COVID safe behaviours to Generation Z.

With the purpose of understanding the effectiveness of Influencers, compared to health experts, on the adoption of public health behaviours during a global pandemic, the following research questions were developed.

The first research question was developed with the aim of understanding which type of endorser is more effective on conveying COVID safe behaviours on social media:

RQ1: Are influencers more effective than health experts on conveying COVID safe behaviours to Generation Z, through social media?

The second research question was developed to explore whether or not the effectiveness of the two types of endorsers is moderated by the specific behaviour they are trying to convey to their followers on social media, especially when the behaviours require different levels of effort from consumers. This is extremely important for managers of health organizations, in order to understand if the type of endorser used to reach Generation Z on social media should differ for specific message types:

RQ2: Is the effectiveness of influencers and experts significantly affected by the type of message conveyed?

The following research questions were developed with the aim of understanding how Generation Z followers perceive influencers, compared to health experts, as endorsers of COVID safe behaviours, through the lens of the Source credibility Model, namely in terms of Expertise, Trustworthiness, Attractiveness and Familiarity. Moreover, this questions were developed in order to understand the impact of these four constructs on willingness to adopt the COVID safe behaviours:

RQ3: Does the Expertise of the endorser have an impact on Generation's Z willingness to adopt the behaviours?

RQ4: Does the Trustworthiness of the endorser have an impact on Generation's Z willingness to adopt the behaviours?

RQ5: Does the Attractiveness of the endorser have an impact on Generation's Z willingness to adopt the behaviours?

RQ6: Does Familiarity with the endorser have an impact on Generation's Z willingness to adopt the behaviours?

The last research question was developed with the aim of understanding how Generation Z followers perceive influencers, compared to health experts, through the lens of the Source credibility Model:

RQ7: According to the Source Credibility Model, how do Generation Z consumers perceive influencers compared to health experts?

1.3. Scope of Analysis

In order to avoid cultural biases, as COVID safe behaviours can vary between countries and the adoption of these may depend on cultural factors, only Portuguese people will be considered for the study.

Moreover, since the aim of this research is to test the credibility perceptions of Generation Z consumers towards influencer endorsement in the context of public health information dissemination and to measure their willingness to adopt COVID safe behaviours, facing two different types of messages, only responses from people within the Generation Z age range will be taken into account.

In order to facilitate the gathering of responses that will actually add value to this dissertation, only one social media platform will be considered for this study, which is Instagram. So, the effectiveness of Instagram influencers compared to the DGS (Direção-Geral da Saúde) on persuading people through Instagram will be studied.

1.4. Academic and Managerial Relevance

The findings from this dissertation will provide managers and marketeers, especially from health organizations, such as the DGS and WHO, with relevant insights on influencer marketing and the relevance of this type of endorsement during a global pandemic. Furthermore, by understanding the Source Credibility dimensions of an influencer that positively or negatively impact the adoption of COVID safe behaviours, managers and marketeers will be able to make better choices regarding Influencers they partner with and the nature of those partnerships , in order to obtain the maximum health benefit for the society.

From an academic viewpoint, this study will add to existing literature on the Source Credibility Model, since it focuses on Instagram influencers as endorsers and on Generation Z as the potential adopters of the health behaviours promoted through social media, which has

not been studied previously. Finally, the analysis will be made in the context of the Coronavirus outbreak, which is yet to be done in the academic literature.

1.5. Dissertation Outline

This dissertation is divided into 5 chapters. Chapter 1 is the introduction to this research, which contains Topic Presentation, Problem Statement, Scope of Analysis and Academic and Managerial Relevance. Chapter 2 is the Literature Review and it provides previous findings and models from academic articles and papers, that are useful for the study. Chapter 3 informs the readers about the methodology used for the research and the data collection. Following, Chapter 4 has the analysis and interpretation, according to the hypothesis proposed, of the results of the questionnaire. At last, Chapter 5 presents the main conclusions of this study, as well as, limitations and recommendations for future research on the topic.

2. Literature Review

2.1. Generation Z

Generation Z is the demographic group that succeeds the Millennials or Generation Y. Several names have been proposed for this generation by researchers, such as the iGeneration, Homelanders, post-Millennials, Gen Tech, Gen Wii and Digital Natives (Dimock, 2019; Strauss & Howe, 1991). Most of the literature agrees that this Generation starts mid-to-late 1990s, but there is no agreement regarding the ending birth years (Strauss & Howe, 1991). According to a report from Pew Research Center (Dimock, 2019), Millennials are everyone born between 1981 and 1996, whereas individuals born from 1997 onwards are considered as part of the Generation Z. The time frame used for this study will be from 1997 to 2002, which means participants will have between 18 and 23 years old.

They were born a decade after the emergence of the World Wide Web, so whereas Generation Y had to adapt to the new technologies as they came of age, innovations where part of Generation Z's lives since they were born (Dimock, 2019; Wood, 2013). Thus, they are extremely technologically savvy, conscientious, open-minded and the first true digital natives (Williams, 2015).

As consumers, they want to feel like they are a part of something instead of feeling like they are being marketed to. They want to know the person behind the camera and feel a close connection to the brand because they strive for realness (Patel, 2017). Another main characteristic of this generation is its preference for self-directed learning (Shatto & Erwin, 2016). Thus, Gen Zers consider influencers as movement leaders, educators and role models, and they often use social media networks for education (Patel, 2017).

2.2. Covid-19 and new behaviours demanded by DGS

COVID-19 started in China in 2019 and was declared a worldwide pandemic by the World Health Organization (WHO) on March 11, 2020 (Susie Neilson, 2020). According to the DGS (Direção-Geral da Saúde), as of September 30, 2020, there have been 75,542 confirmed cases and 1,971 deaths in Portugal ("Relatório de Situação", 2020). The most common symptoms of coronavirus are fever, dry cough and difficulty breathing.

The main COVID Safe behaviours recommended by the DGS are Social Distancing, where people must keep at least 1,5-2 meters between themselves and others, use of mask covering the mouth and nose when around others, personal and environmental hygiene measures, such as washing hands often and disinfecting frequently touched surfaces ("Saúde e

Trabalho - Medidas de prevenção", 2020). Moreover, on October 14, 2020, the Portuguese Prime-Minister announced additional new measures taken to control the virus in Portugal, which include gatherings limited to 5 people on public areas, with the exception of family events, such as weddings and baptisms, which are limited to 50 participants. Even in these situations, social distancing and use of mask are mandatory (Lusa, 2020).

2.3. Social media usage and how it became a tool in social marketing

The concept of social marketing is defined by Kotler & Zaltman (1971) as "the design, implementation and control of programs calculated to influence the acceptability of social ideas and involving considerations of product planning, pricing, communication, distribution and marketing research". Social marketing can also be defined as the application of marketing principles and techniques to provide value with the intent of influencing target audience behaviours (Kotler & Lee, 2008). So, social marketing benefits individuals or society as a whole, whereas commercial marketing benefits the marketer's organizations, meaning that what distinguishes them is the purpose (Weinreich, 2010). Over the years, social marketing has been widely used for health promotion, environmental protection, community mobilization and injury prevention (Cheng et al., 2011).

According to a report from Pew Research Center (Perrin, 2015), as of 2015, 90% of young adults (ages between 18 and 29) are social media users, which represents a 78-percentage point increase from 2005. Social media became the fastest and most cost-effective way of communicating with an intended audience, due to no geographical or time boundaries (Adewuyi & Adefemi, 2016). Therefore, social media gathered attention from health professionals as a tool to spread public health information and incentivize behaviour change (Freeman et al., 2015). Behaviour change communication (BCC) is used to promote positive health behaviour changes on individuals through providing specific messages (Briscoe & Aboud, 2012). Influencing behaviours is inserted in the social marketing field.

Some organizations in the health field, such as the World Health Organization, have already a social media presence established. However, most times they use social media for mass health information dissemination, instead of trying to engage audiences in a real conversation (Heldman et al., 2013).

2.3.1 Social media usage and Covid-19

Since the Coronavirus outbreak, social media usage worldwide has been increasing because people are on the lookout for online entertainment, meaningful interactions, inspiration, and information, where there is no risk of contagion (Snyder, 2020). Social media is commonly used for disseminating health information (Ma et al., 2020).

Reliance on social media platforms to obtain news regarding the virus has increased, especially among younger generations. According to Washington Post (Lerman, 2020), this enhances concerns about the spread of misinformation online. The increased level of information seeking related to Coronavirus and the potential exposure to misinformation is addressed as "infodemic" (Basch et al., 2020). According to the World Health Organization, controlling the COVID-19 pandemic includes managing the infodemic (WHO, 2020). With this goal in mind, several social media platforms started implementing ways to minimize the spread of misinformation regarding Coronavirus on their apps. For instance, Facebook hired fact-checking organizations around the world that review all content published in 50 different languages. In case the content is false, the platform proceeds by reducing its distribution and showing warning labels with additional context, as well as redirecting people to resources from health authorities (Rosen, 2020).

2.3.2. Use of Social media by the DGS

According to their website (DGS, 2020), the DGS has a social media presence on four main platforms, namely Facebook, Instagram, Twitter and YouTube.

On the first three mentioned social media platforms, the DGS is sharing very similar content and implementing the same communication strategy. In fact, the organization is promoting awareness of the virus, sharing prevention measures and providing information on how people should act in case of experiencing coronavirus symptoms (DGS – Conta Oficial, n.d.; DGS, n.d.; Direção-Geral da Saúde, n.d.). Moreover, both on Facebook and Twitter, the DGS shares daily COVID-19 situation reports by region of the country. Instead of utilizing influencer or celebrity endorsements on these platforms, the images on the posts are either common citizens, doctors, or avatars. However, on their YouTube channel, they upload several videos of Portuguese singers, actors and sports players giving advice on the best COVID practices people should follow (Direção-Geral da Saúde, n.d.). Thus, they utilize celebrity endorsers to reach the intended audience.

2.4. The growth of influencer marketing within social media

Influencer marketing is not a new concept in the marketing industry. Traditionally, celebrities have been used as endorsers in print media and TV commercials (Glucksman, 2017). However, with the evolution of technology and the appearance of social media, a new type of celebrity emerged. This new type is referred to as "micro-celebrity" and it is described by past research as all ordinary individuals who have an audience that is possible to maintain through ongoing communication (Khamis et al., 2017).

2.4.1 Who are social media influencers nowadays?

Digital influencers are classified differently depending on the number of followers they have, their motivation to act and the social media platform they use to communicate with their audience (Wielki, n.d.). Therefore, there is a broad categorization of the term "Influencer", which can include experts, common citizens, or even celebrities with large followings, even though influencer marketing swore off celebrity endorsement (Hub, 2018).

According to Freberg et al. (2011), social media influencers (SMIs), also known as digital influencers, are nowadays "a new type of independent third party endorser who shape audience attitudes through blogs, tweets, and the use of other social media", in coexistence with professional media (del Fresno Garcia et al., 2016). Influencers on social media have built a reputation for their expertise or knowledge around a given niche or topic (Hub, 2018). In the social media space, SMIs are also considered "opinion leaders". The major characteristics that make an individual be considered an influencer are having a follower base, promotion of brands and products, and active engagement (Jin et al., 2019).

2.4.2. What is the importance of influencer marketing on social media?

Social media influencer marketing has changed the way that brands and consumers interact (Glucksman, 2017). In recent years, organizations started heavily investing on advertising and promotional online activities (Wielki, n.d.). However, people are tired of being advertised to as promotional strategies are becoming more and more excessive and intrusive. Consumers are looking for people online who are genuinely helpful, which is decreasing the effectiveness of advertising (by Gareth Bell, 2012; Wielki, n.d.). Social media makes it possible for consumers to look at other consumers and their favourite personalities, instead of looking to brands as before (Talavera, 2015). For instance, Influencer opinions are trusted over traditional celebrities by 70% of teenage YouTube subscribers (Duran, 2016).

2.5. The mechanisms of influence

Marketeers share the belief that the persuasiveness of a message is significantly affected by the communicator's character (Ohanian, 1990), which resulted in the use of celebrities as product and brand endorsers across multiple industries. The use of celebrity endorsements in marketing communications is described as the investment of brands and organizations in endorser's qualities, such as trustworthiness, likability and attractiveness, with the objective of transferring those qualities to the product being endorsed through repeated exposure (Erdogan, 1999; Goldsmith et al., 2000).

There are two main models that have been applied to endorsement marketing in previous literature: Source-Credibility Model and Source-Attractiveness Model, which derive from the Social Influence Theory (Erdogan, 1999). According to Kelman (1961), there are 3 processes of social influence that lead to opinion change, namely compliance, identification and internalization. Identification occurs when the audience accepts an information because they desire to identify with the endorser (Erdogan, 1999), and therefore it is often related to the attractiveness of the communicator. In turn, internalization was described by Kelman (1961) as the acceptance of influence due to the induced behaviour being intrinsically congruent with the person's value system, which explains the reason why credible sources are able to influence behaviours. Through a combination of the processes of identification and internalization, the typical consumer is able to influence attitudes and behaviours (Friedman & Friedman, 1979). Lastly, compliance occurs when an individual accepts influence from an influencing agent in order to either achieve a favourable reaction from him or to avoid a specific punishment. This last mechanism refers to complying with the norms or authority. Therefore, the individual adopts a desired behaviour, not because he personally believes in it, but due to the fact that it creates a satisfying social effect (Kelman, 1961).

In the literature, the concept of Source Credibility has consistently included the Trustworthiness and Expertise Dimensions. According to a study conducted by Sternthal et al (1978), a highly credible communicator is perceived to be more expert and trustworthy than a moderately credible source. Regarding the attractiveness dimensions, there was no difference between the highly and moderately credible communicators. Despite this finding, some authors considered a third dimension of Source Credibility, which is Attractiveness (Erdogan, 1999; Goldsmith et al., 2000; Ohanian, 1990). Thus, following the rationale of these authors, all three dimensions will be used in this research as part of Source Credibility.

2.5.1. Expertise

According to Ohanian (1991), Expertise can be defined as the knowledge the endorser has in order to support the claims made in the advertisements. It can also be described as the "extent to which a communicator is perceived to be a source of valid assertions" (Erdogan, 1999). For instance, athletes and doctors would be appropriate endorsers for products and services related to their profession.

An endorser must be perceived as "Expert", "Experienced", "Knowledgeable", "Skilled" and "Qualified" in order to be effective (Erdogan, 1999; Ohanian, 1990). An endorser who is perceived by the consumer to have a high level of expertise is more persuasive than an endorser with low perceived expertise (Wang & Scheinbaum, 2018). Thus, the endorser's effectiveness depends on the different levels of perceived expertise.

2.5.2. Trustworthiness

Trustworthiness is probably the most important dimension when it comes to source credibility (Friedman & Friedman, 1979). As Ohanian (1991) described "Trustworthiness refers to the consumer's confidence in the source for providing information in an objective and honest manner". In order to be perceived as trustworthy, an endorser needs to be perceived by the target audience as honest, believable and dependable (Erdogan, 1999).

According to several authors, the trustworthiness of an endorser has a positive effect on brand attitude, brand credibility and on the effectiveness of the message conveyed (Amos et al., 2008; Wang & Scheinbaum, 2018).

2.5.3. Attractiveness

People tend to make inferences about an endorser's personality based on their physical attractiveness, and therefore an advertisement that contains an attractive model is rated higher than one that uses a physically unattractive endorser (Baker & Churchill, 1977). However, in the case of the advertised product being unrelated to attractiveness, a physically attractive endorser can actually be less effective (Joseph, 1982).

Physical attractiveness is not the only dimension of the source-attractiveness model. This model also takes into account the "similarity", "likability" and "familiarity" of the endorser as factors of message effectiveness (Ohanian, 1990). "Similarity" is defined as the resemblance between the message endorser and the receiver, "likability" as the affection towards an endorser that results from the source's behaviour and physical appearance, and

"familiarity" as the knowledge of the endorser through exposure (Erdogan, 1999; McCracken, 1989). In this dissertation, familiarity with the endorser will also be used as an independent variable, since it seems to have high explanation power.

In summary, attractive endorsers increase a communication's effectiveness. In fact, perceived attractive sources are able to enhance brand and advertising recall, as well as persuade consumers into making more favourable evaluations of the product being advertised and of the advertising itself, when compared to their less attractive counterparts (Joseph, 1982; Kahle & Homer, 1985).

2.6. Summary of the Literature Review

According to the literature, Generation Z consumers consider influencers as movement leaders, educators and role models. These social media influencers are often able to influence attitudes and behaviours through the processes of identification and internalization. However, in the literature there is a third process of social influence, named compliance. The latter occurs when an individual adopts a desired behaviour because this creates a satisfying social effect, even though the behaviour may be against his/hers personal beliefs. As compliance is related to authority, it may be the mechanism through which expert endorsers influence individuals.

Nevertheless, it is also known that Generation Z values connection and realness. Thus, we propose that their willingness to adopt COVID safe behaviours will be higher for influencer endorsers, through identification and internalization, than for the DGS, with whom they would have to comply with. Accordingly, the following hypothesis was developed:

RQ1: Are influencers more effective than health experts on conveying COVID safe behaviours to Generation Z, through social media?

H1: Consumers' willingness to adopt COVID safe behaviours is higher for influencer than for the DGS.

Furthermore, we have seen that the DGS recommended social distancing and the use of mask when around others. The Portuguese government added the additional restriction of gatherings limited to 5 people and use of masks even in that case. Thus, we argue that these two messages might require a different level of effort to comply with and consequently the type of message can influence the endorser's effectiveness. The second hypothesis was developed following this rationale:

RQ2: Is the effectiveness of influencers and experts significantly affected by the type of message conveyed?

H2: The type of message moderates the effect of endorser type on consumers' willingness to adopt the behaviour.

From the literature previously presented, it is yet to be understood how Generation Z consumers perceive influencer endorsers regarding the Source Credibility dimensions, as well as the impact these social media influencers have on the adoption of COVID safe behaviours. Marketeers agree that the persuasiveness of a message can be significantly affected by the communicator's character, which led to two main models, Source-Credibility Model and Source-Attractiveness Model, being applied to endorsement marketing in the past. The concept of Source Credibility has consistently included the Trustworthiness and Expertise Dimensions, but some authors also included Attractiveness as a third dimension. The latter does not refer only to physical attractiveness, it can also include "similarity", "likability" and "familiarity" of the endorser as factors of message effectiveness. Thus, for this dissertation four of these factors were chosen to be tested and the following hypotheses were developed accordingly:

RQ3: Does the Expertise of the endorser have an impact on Generation's Z willingness to adopt the behaviours?

H3: The Expertise of the endorser mediates the effect between the endorser and consumer's willingness to adopt COVID safe behaviours.

RQ4: Does the Trustworthiness of the endorser have an impact on Generation's Z willingness to adopt the behaviours?

H4: The Trustworthiness of the endorser mediates the effect between the endorser and consumer's willingness to adopt COVID safe behaviours.

RQ5: Does the Attractiveness of the endorser have an impact on Generation's Z willingness to adopt the behaviours?

H5: The Attractiveness of the endorser mediates the effect between the endorser and consumer's willingness to adopt COVID safe behaviours.

RQ6: Does familiarity with the endorser have an impact on Generation's Z willingness to adopt the behaviours?

H6: The Familiarity with the endorser mediates the effect between the endorser and consumer's willingness to adopt COVID safe behaviours.

RQ7: According to the Source Credibility Model, how do Generation Z consumers perceive influencers compared to health experts?

H7a: Influencers are perceived as more trustworthy than the DGS.

H7b: Influencers are perceived as having less expertise than the DGS.

H7c: Influencers are perceived to be more attractive than the DGS.

Moreover, the conceptual framework for the determinants of willingness to adopt the behaviour is presented in Figure 1. We suggest that the endorser's credibility and the message type are related to the consumer's adoption of COVID safe behaviours.

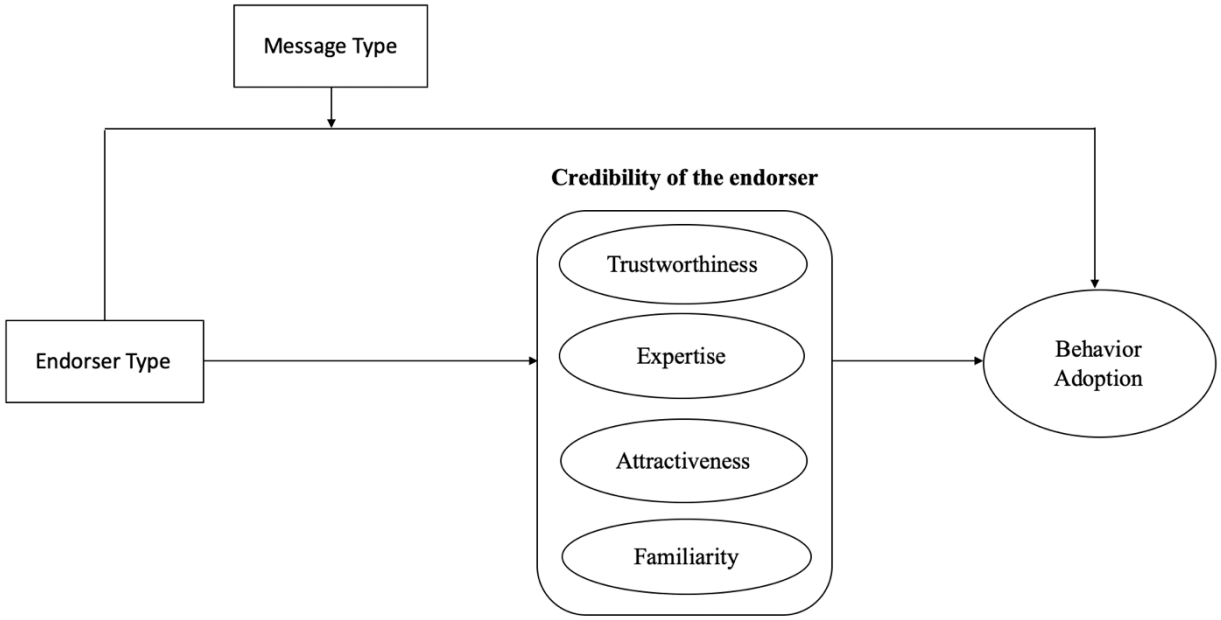


Figure 1. Conceptual Framework

3. Methodology and Data Collection

3.1. Research Approach

This study aims to comprehend the role of social media influencers on Generation Z's adoption of COVID safe behaviours, taking into account two different message types conveyed. In addition, it is important to understand how this generation perceives influencer and expert endorsers, as well as, which source's characteristics have an impact on willingness to adopt a behaviour. Therefore, to accomplish these objectives, concepts and models were withdrawn from relevant academic journals, as shown in the Literature section of this paper.

The research objectives will be addressed using a quantitative research method, that adopts both descriptive and exploratory research approaches.

Regarding the descriptive research, the concepts of Social Media Influencers, Source Credibility Model, COVID safe behaviours and Generation Z were examined in depth in order to gather the foundations for the next phase of the study. Regarding the Exploratory Research, primary data was collected through an online questionnaire, where participants were subject to four possible conditions: Influencer endorser with low effort message, Influencer endorser with high effort message, Expert endorser with low effort message, or Expert endorser with high effort message. In each condition, expertise, trustworthiness, attractiveness, familiarity and willingness to adopt a behaviour were assessed. The use of an online survey was due to budget and time constraints.

3.2. Message Type Selection

In the literature section of this dissertation, it can be observed that some of the new behaviours demanded by the DGS in what regards the Covid-19 pandemic are the use of mask when around others, social distancing of 2 meters, and even gatherings limited to 5 people.

However, all the suggested behaviours may not involve the same level of effort to comply with. In fact, in this study we argue that messages that require different effort levels may lead to different willingness to adopt the stated behaviours. Thus, two message types were created: one that we assumed to be "low effort" and another that we considered "high effort". The perceived level of effort of each message was validated in the survey.

The low effort message selected for this dissertation was "use of mask in closed spaces and in open spaces whenever a distance of 2 meters is not possible" and the high effort message selected was "gatherings limited to 5 people and use of mask even in these situations".

3.3. Influencer Endorser Selection

Since this research will only be focused in Portugal, the DGS (Direção-Geral da Saúde) is the expert endorser being evaluated. However, in order to select an influencer that is well-known within Generation Z consumers, respondents that are subject to this endorser condition will be asked to name influencers that they follow regularly, who share content related to Health and Lifestyle. Then, the participant is asked to choose one of those named influencers and specifically answer the questionnaire about him or her. This approach ensures that respondents are answering the questions regarding influencers they actually follow.

The fact that respondents were asked about influencers who have content specifically related to Health and Lifestyle was based on the Match-up Hypothesis. According to this Hypothesis, endorsers are more effective when they match, fit or are congruent with the brand being advertised (Breves et al., 2019). Fit refers to the consistency or similarity between the brand and the endorser (Bergkvist et al., 2016). Influencer-brand fit was found to have a positive impact on the perceived image of the influencer, as well as, on the advertising effectiveness (Breves et al., 2019). On the other hand, being exposed to a low-fit endorsement was found to generate negative cognitions and have a negative effect on evaluation of the brand (Bergkvist et al., 2016). Finally, Friedman & Friedman (1979) found that the type of endorser and the type of product need to match in order to enhance the endorser's effectiveness.

In the context of this dissertation, it is important to guarantee that there is a fit between the chosen influencer and Health or Lifestyle, since the adoption of health-related behaviours is being tested. Thus, Influencer-brand fit was assessed in this study as a control variable. When there was a mismatch between the chosen influencer and Health or Lifestyle, the respondent's questionnaire answer was not taken into account. In fact, the data from these participants was removed from the data base, before the analysis of results.

3.4. Main study: Online questionnaire

The questionnaire was developed using Qualtrics and the SPSS software was used to analyse the results. The survey was distributed through private messages, on WhatsApp and Messenger, mainly to friends and acquaintances.

The questionnaire had the main objective of evaluating the Source Credibility Dimensions (namely, trustworthiness, expertise, attractiveness and familiarity) and willingness to adopt COVID safe behaviours of Generation Z for two types of messages being endorsed by two types of endorsers, influencers and experts.

On each of the four conditions randomly assigned, respondents were presented with two Instagram posts during the questionnaire. The posts were exactly the same on each condition, with the only difference being the message type and endorser type combination. Moreover, all the posts included in the questionnaire were fictitious and were created taking into account the overall message and its clarity.

It is relevant to mention that participants assigned to the Influencer endorser conditions were asked to imagine that those posts were from the one influencer they chose to answer the questionnaire about.

Participants were asked the same questions regarding their perceptions of the endorser in terms of the Source Credibility dimensions and their willingness to adopt the COVID safe behaviour being promoted, regardless of the condition they were assigned to in the beginning of the questionnaire.

3.4.1. Measurements

The willingness to adopt and the Source Credibility model measures that were used in the questionnaire were withdrawn and adapted from previous literature featured in Top Journals. Familiarity is the only dimension for which the measure was adopted from literature, but not from a Top Journal. The seven-point Likert scale and the seven-point semantic differential scale were the two scaling formats utilized.

With the intent of measuring the willingness to adopt the COVID safe behaviours, respondents were asked to rate several statements on a seven-point Likert scale ranging from "Completely disagree" to "Completely agree". The seven-point scale is adapted from the Dodds et al. (1991) study on Purchase intentions. The willingness to buy statements used in the previously mentioned study were adapted for willingness to adopt the behaviours. Therefore, the following statements were created: "I intend to adopt the behaviour present in the posts", "It is likely that I would consider adopting the behaviour present in the posts", and "I am willing to adopt the behaviour present in the posts".

The respondents were asked to rate the two types of endorsers on the most relevant characteristics that measure the 3 dimensions of Source Credibility, as studied by Ohanian (1990). A seven-point semantic differential scale, adopted from the previously mentioned study, was used to measure the dimensions. Moreover, five bipolar descriptors were used to measure each mentioned dimension.

In order to measure Familiarity, participants were asked to rate 3 descriptors regarding their familiarity with the assigned endorser (DGS or the influencer they chose), on a seven-

point semantic differential scale. The scale was the same used to measure expertise, trustworthiness and attractiveness, which was adopted from Ohanian (1990). The three measurement items utilized were adopted from the Spry et al. (2008) study.

Lastly, respondents were asked about their age, gender, occupation and school degree, in order to assess their socio-demographic profile. Neither nationality or country of residency were mentioned because the study was restricted to the Portuguese context.

To measure age, an open-ended question was created, since ages for this questionnaire could range between 18 and 23 years old. To measure gender, respondents were presented with a multiple-choice question with three options: Male, Female or Other. Moreover, to assess occupation, respondents had five options: Full-time student, Student and Part-time worker, Full-time worker, Unemployed and Other. Last but not least, to evaluate education degree, participants had to answer to a multiple-choice question with four options: Primary School degree, High School Degree, Bachelor's degree and Master's degree.

Source	Construct	Measurement Items	Scale
Adapted from the study: Dodds et al. (1991)	Willingness to Adopt	I intend to adopt the behaviour present in the posts. It is likely that I would consider adopting the behaviour present in the posts. I am willing to adopt the behaviour present in the posts.	(1) Completely Disagree to (7) Completely Agree

Table 1. Willingness to adopt the behaviour

Source	Expertise	Trustworthiness	Attractiveness
Adopted Ohanian (1990)	Not Expert – Expert	Undependable -Dependable	Unattractive – Attractive
	Unqualified – Qualified	Dishonest – Honest	Not classy- Classy
	Inexperienced - Experienced	Unreliable – Reliable	Ugly – Beautiful
	Unknowledgeable –Knowledgeable	Insincere – Sincere	Plain – Elegant
	Unskilled – Skilled	Untrustworthy - Trustworthy	Not sexy - Sexy

Table 2. Source Credibility scale

Source	Familiarity
Adopted from Spry et al. (2008)	Not Familiar – Very Familiar Do not recognize – Do recognize Have not heard of before – Have heard of before

Table 3. Familiarity Scale

3.4.2. Participants

The participants of this study were, both men and women, born between 1997 to 2002 (ages between 18 and 23 years old). The age range of Generation Z also involves younger individuals, but in order to ensure trustworthy responses that will not compromise the study, we considered 18 years old to be the minimum age of participants, since it is the age of majority in Portugal. Moreover, the target population was limited to Portuguese people, excluding other nationalities with the intent of avoiding cultural biases in the analysis.

For this study, a non-probabilistic convenience sampling was used. This technique relies on the researcher randomly selecting respondents that are either easily accessible or believed to be representative of the population (Kitchenham & Pfleeger, 2002). Thus, this technique is less expensive and less time-consuming.

3.4.3. Procedure

The link to enter the questionnaire was provided through messaging apps. The respondents were then randomly assigned to one of the four possible endorsement type and message type combinations.

After entering the survey and being assigned to one of the four conditions, participants were presented with an introduction section, which stated all the relevant information regarding the study. This part included the university of the researcher, as well as the approximate duration of the questionnaire. Respondents were also assured of the anonymity and confidentiality of their answers.

The second section included screening or initial questions, regarding the use of the Instagram platform and the following of Instagram influencers, who share content related to Health and Lifestyle. The latter was only presented to participants in the influencer endorser conditions. This section is important in order to ensure that only people who have an Instagram account and who follow influencers, which have the right fit with the COVID messages, are participating in this study. Thus, if the respondents answered negatively to either of the

questions, they were immediately led to the end of the questionnaire and were not included in the study.

The following section contained questions regarding participants' familiarity with the endorser they were assigned to. Furthermore, people that were assigned to the influencer condition were asked to answer the whole questionnaire about one of the influencers they mentioned in the previous section of the survey.

In the fourth section of the questionnaire, participants' perceptions of the assigned endorser according to the Source Credibility dimensions were measured. The same three dimensions, namely Trustworthiness, Expertise and Attractiveness, were assessed for both the influencer and the DGS conditions.

The fifth section of the survey included two Instagram posts featuring the same COVID message. The only difference between the two posts used for each condition was the endorser type and the message itself. In each of the four conditions, participants were asked exactly the same questions. The first question was about the perceived level of effort the specific message conveyed in the posts involved, which served as control since we assume there is a difference between the messages when it comes to effort. The following question was about the respondent's level of agreement with three statements regarding the posts. This served as a manipulation check to observe whether or not they carefully read the messages presented. Lastly, there was a third question, which was regarding their willingness to adopt the specific COVID safe behaviour conveyed in the posts.

The last section of the questionnaire gathered respondents socio-demographic information, which included age, gender, occupation and maximum school degree.

3.4.4. Design

The questionnaire was developed following an experimental 2 (endorser type: influencer versus DGS) x 2 (message type: "low effort" versus "high effort" messages) between-subjects design. In total, four different questionnaires were created and participants were randomly assigned to one endorser type and message type combination. This method of distribution was chosen in order to be less tiring for participants, since it takes less time than a within-subjects design.

4. Results and Findings

4.1. Data Collection and Data Cleaning

Before analysing the results gathered from this questionnaire, the data collected was subject to data cleaning. From a total of 304 participants who initiated the survey, only 218 were considered valid answers and therefore were appropriate for further analysis.

First, respondents who had incomplete surveys (39 respondents) were excluded from the study. Second, there were two or three filter questions, depending on the condition each participant was randomly assigned to. As the main target sample was only Instagram users, the question "Do you have an Instagram account?" served as filter. Furthermore, in the influencer endorsement conditions, there was an additional screening question ("Do you currently follow any Instagram influencers, who share content related to Health & Lifestyle?"). Finally, the age question was also considered as filter in order to ensure that all respondents were between 18 and 23 years old.

The option "evenly present elements" was selected in Qualtrics, in order to ensure a similar number of responses for each condition. The randomization was ensured at the beginning of the questionnaire, but data was further subject to cleaning, which led to different number of responses for each condition. From the ultimate target sample (218 participants), 44 were randomly assigned to the influencer endorser with low effort message condition, 47 to the influencer with high effort message condition, 61 were allocated to the DGS with low effort message condition, and finally, 66 were allocated to the DGS with high effort message condition.

4.2. Sample Description

A descriptive statistics was conducted in order to study the socio-demographic profile of our sample. From the total of 218 respondents, 53.7% were male and 46.3% were female. Regarding their age, 42.2% of participants were between 18 and 21 years old, whereas 58.8% of them were either 22 or 23, which we considered as the upper cut off point of Generation Z's age range for the purpose of this study. Regarding their occupation, full-time students accounted for 70.2% of the respondents. Moreover, as of the maximum school degree completed, 0.9% of the participants reported "primary school degree", 24.8% reported "high school degree", 49.1% reported "bachelor's degree" and 25.2% reported "master's degree".

The full breakdown of the demographic information for each assigned condition is shown in Appendix 2.

Conditions	Number of participants
Influencer endorser with "low effort" message	44
Influencer endorser with "high effort" message	47
DGS with "low effort" message	61
DGS with "high effort" message	66
Total	**218**

Table 4. Number of participants in each condition

4.3. Reliability Analysis

As previously mentioned in the Methodology chapter of this dissertation, the scales used in this study were adapted from previous literature. Thus, it is important to ensure their reliability, which is why further analysis was conducted using the Cronbach's Alpha test.

According to Gliem & Gliem (2003), an Alpha value above 0.7 indicates that the scale is acceptable and above 0.8 indicates that it is good. Cronbach's alpha reliability coefficient has an upper limit of 1. The closer it is to 1, "the greater the internal consistency of the items in the scale". As all the scales utilized in this study have a Cronbach's Alpha value higher than 0.7 (Table 5), we can confirm that there is good internal consistency between the measurement items of each construct and therefore the scale is reliable.

Dimensions	Scales	Number of Items	Cronbach's Alpha
Influencer endorser	Familiarity	3	0.861
	Trustworthiness	5	0.899
	Expertise	5	0.966
	Attractiveness	5	0.964
	Willingness to Adopt- Low effort message	3	0.874
	Willingness to Adopt- High effort message	3	0.967
	Familiarity	3	0.887
	Trustworthiness	5	0.927

	Expertise	5	0.940
DGS	Attractiveness	5	0.943
(Expert endorser)	Willingness to Adopt- Low effort message	3	0.776
	Willingness to Adopt- High effort message	3	0.972

Table 5. Reliability analysis – Cronbach's Alpha test

4.4. Principal Component Analysis

A Principal Component Analysis (PCA) was performed with the aim of validating the constructs for unidimensionality. When conducting the Factor Analysis, the rotation method utilized was the *Varimax Rotation*, which enables a better interpretation of the factor by minimizing the number of variables with high loadings on that same factor.

In order to determine the number of factors, the *Eigenvalues Criteria* was used. Thus, only factors that have eigenvalues higher than 1.0 are retained. The Principal Component Analysis method extracted 5 factors, which explain 84.6% of the total variance. The first factor explained 21.2% of the variable, the second factor explained 20.7%, the third 17.8%, the fourth 13.1%, and last but not least, the fifth factor explained 11.7% (Appendix 3).

Rotated Component Matrix

Variables	Component				
	1	2	3	4	5
Not familiar – Very Familiar	0.011	0.081	0.198	-0.012	0.853
Do not recognize – Do recognize	0.028	0.060	0.115	0.011	0.925
Have not heard of before – have heard of before	-0.050	0.051	0.206	-0.005	0.859
Undependable - Dependable	0.069	0.155	0.629	-0.134	0.236
Dishonest – Honest	0.133	0.184	0.865	0.078	0.164
Unreliable – Reliable	0.160	0.297	0.855	-0.055	0.072
Insincere – Sincere	0.162	0.154	0.894	0.038	0.114
Untrustworthy – Trustworthy	0.144	0.314	0.825	-0.029	0.123
Not expert – Expert	-0.119	0.911	0.140	0.020	0.076
Unqualified – Qualified	-0.104	0.911	0.179	-0.005	0.019
Inexperienced – Experienced	-0.063	0.875	0.231	0.025	0.057

Unknowledgeable – Knowledgeable	-0.006	0.897	0.230	0.076	0.072
Unskilled – Skilled	0.007	0.901	0.239	0.020	0.044
Unattractive – Attractive	0.925	-0.080	0.156	0.084	0.015
Not classy – Classy	0.913	0.041	0.115	0.025	0.003
Ugly – Beautiful	0.945	-0.088	0.140	0.044	0.014
Plain – Elegant	0.941	-0.048	0.106	0.052	-0.017
Not sexy – Sexy	0.917	-0.094	0.089	0.080	-0.012
I intend to adopt the behaviour present in the posts.	0.091	0.071	-0.025	0.936	-0.034
It is likely that I would consider adopting the behaviour present in the posts.	0.058	0.004	-0.039	0.951	0.031
I am willing to adopt the behaviour present in the posts.	0.084	0.033	-0.012	0.956	-0.009

Table 6. Rotated component matrix

Regarding the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) test, it can take values between 0 and 1. KMO values higher or equal to 0.6 are considered good. Moreover, the Bartlett's Test of Sphericity should be statistically significant. In fact, at least one of these two measures needs to be met in order to conduct factorial analysis. From Table 7, we can observe that the KMO has a value of 0.872 and the Bartlett's test is statistically significant at a 95% confidence level (p-value < 0.05). These results revealed that the variables are related and the factorial analysis is appropriate.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.872
Bartlett's Test of Sphericity	X^2	4685.505
	df	210
	p-value	0.000

Table 7. KMO and Bartlett's test

4.5. Variables Added

In order to evaluate results and test the hypothesis in this dissertation, it was necessary to create some new variables, besides the ones provided by the survey.

The first variables computed were dummy variables: "Endorser_Type" and "Message_ Type". The former assumed the value of "0" for the influencer condition and "1" for the DGS condition. The latter assumed the value of "0" if the participant was presented with the Low effort message stimulus and "1" if the participant belonged to the High effort message group.

Moreover, each construct evaluated in this study included several measurement items. The willingness to adopt and the familiarity included 3 measurement items, whereas expertise, trustworthiness and attractiveness had 5 measurement items. Consequently, 5 new variables were created by computing a summated average between the measurement items in every possible condition of the questionnaire: "Average_Expertise", "Average_Trustworthiness", "Average_Attractiveness", "Average_Familiarity" and "Average_Willingness_Adopt".

4.6. Manipulation Check

One manipulation check was performed in the questionnaire, by asking respondents to rate their perception of the level of effort the message shown to them involved, on a 7-point Likert Scale (1-"Extremely Low Effort", 7-"Extremely High Effort").

The manipulation check for message type effort was conducted through an independent samples T-test. Respondents attached a higher level of effort for the designated high effort stimulus (mean of 4.32) than for the low effort stimulus (mean of 3.85). This difference is statistically significant at a 90% confidence level, as the p-value is lower than 0.1 (Table 8), which is acceptable in the human science field. Thus, we can conclude that different effort levels were perceived and thus, the manipulation was successful.

Message Type Effort				
Low effort message		High effort message		
Mean	SD	Mean	SD	P-value
3.8476	1.83335	4.3186	2.04968	0.086

Table 8. Independent samples T-test – Message type effort

Moreover, another manipulation check was performed by asking participants to rate three statements, regarding the Instagram posts they had just seen, on a 7-point Likert Scale (1-"Completely Disagree", 7-"Completely agree"). This question was created as a control question

in order to make sure that the respondents were paying attention to the posts and the messages conveyed.

The manipulation check was conducted through a One-way ANOVA. By looking at the Tables below it is possible to confirm that for both statements (Table 9 and 10), the p-value is significant at a 95% confidence level, which means that at least two of the conditions have different means. In order to figure out with means are different, Post-Hoc tests were used. Looking at Tukey HSD and Scheffe tests (Appendix 4), we can observe that condition 1 (Influencer with "low effort" message) and condition 3 (DGS with "low effort" message) have the same mean, as p-value is bigger than 0.1. The same happens for condition 2 (Influencer with "high effort" message) and condition 4 (DGS with "high effort" message). However, conditions 1 and 2, as well as conditions 3 and 4 are different (p-value is lower than 0.1). Thus, we can infer that respondents carefully read the posts. So, the manipulation was successful.

Statement: "The posts recommend that I use mask in closed spaces and open spaces, when 2 meters distance is not possible" (low effort message)			
Conditions	Mean	SD	P-value
1- Influencer with "low effort" message	6.7955	0.79474	
2- Influencer with "high effort" message	2.8298	1.88032	
3- DGS with "low effort" message	6.4098	1.40685	0.000
4- DGS with "high effort" message	3.2424	2.20531	

Table 9. Descriptives and ANOVA table – Low effort message

Statement: "The posts recommend that I only do gatherings of up to 5 people and use mask even in these situations" (high effort message)			
Conditions	Mean	SD	P-value
1- Influencer with "low effort" message	2.0909	1.72287	
2- Influencer with "high effort" message	6.2128	1.60076	
3- DGS with "low effort" message	2.5574	1.97083	0.000
4- DGS with "high effort" message	6.1212	1.63157	

Table 10. Descriptives and ANOVA table – High effort message

4.7. Hypothesis Analysis

As the sample is large (N>200), parametric tests were used for the hypothesis analysis under the assumption of a normal distribution.

4.7.1. Hypothesis 1

Hypothesis 1: Consumers' willingness to adopt COVID safe behaviours is higher for influencers than for the DGS.

To compare the mean willingness to adopt behaviours of each endorser type, a One-way ANOVA was performed. The endorser type is a dummy categorical variable (0 = "Influencer", 1= "DGS") and the summated average willingness to adopt, which is the dependent variable, was measured using a 7-point Likert Scale (1- "Completely disagree").

In order to test the equality of means between Influencer endorser and the DGS, we need to first test the homogeneity of variances, as this is an assumption of ANOVA, using the Levene's test. By looking at Appendix 5, we can observe that the p-value based on the mean is 0.262, which is higher than 0.05. This means that the assumption is met and the analysis using ANOVA can proceed. As the sample size is large and is homogeneous, we will assume that the dependent variable is approximately normally distributed for each category of the independent variable.

Descriptives

	N	Mean	St. Deviation	St. Error	95% confidence interval for mean		Min	Max
					Lower Bound	Higher Bound		
Influencer	91	5.1282	1.64787	0.17274	4.7850	5.4714	1.00	7.00
DGS	127	5.4567	1.51466	0.13440	5.1907	5.7227	1.00	7.00
Total	218	5.3196	1.57629	0.10676	5.1092	5.5300	1.00	7.00

Table 11. One-way ANOVA – Descriptives table

Moreover, analysing the ANOVA table (Table 12), the p-value is 0.129, which is not statistically significant at a 95% confidence interval. Thus, the null hypothesis (H_0= means of both endorser types are equal) cannot be rejected.

In sum, ***Hypothesis 1 is rejected***.

ANOVA Table					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.720	1	5.720	2.316	0.129
Within Groups	533.461	216	2.470		
Total	539.181	217			

Table 12. One-way ANOVA – ANOVA table

4.7.2. Hypothesis 2

Hypothesis 2: The type of message moderates the effect of endorser type on consumers' willingness to adopt the behaviour.

A One-way ANOVA was conducted in order to compare the four conditions or groups. In this hypothesis, we suggest that the type of message affects the direction and/or the strength of the relation between the endorser type and consumer's willingness to adopt the behaviour.

By looking at Appendix 6, we can observe that the p-value of the Levene's test based on the mean is 0.000, which is lower than 0.05. This means that the ANOVA assumption is not met and the analysis should be conducted using the Welch and Brown-Forsythe tests.

From the descriptives table below (Table 13), it seems that for both type of endorsers the mean willingness to adopt COVID safe behaviours is always higher for "low effort" messages than for "high effort" messages.

Descriptives		
	N	Mean
Influencer with "low effort" message (condition 1)	44	5.7879
Influencer with "high effort" message (condition 2)	47	4.5106
DGS with "low effort" message (condition 3)	61	6.0000
DGS with "high effort" message (condition 4)	66	4.9545
Total	218	5.3196

Table 13. One-way ANOVA – Descriptives table

Moreover, from the Robust tests of equality of means (Table 14), we observe that p-value = 0.000, which is lower than 0.05 and therefore we can reject the null hypothesis that the means of all conditions are equal. However, in order to find out which means are different, we need to look at the Post Hoc Tests. Looking at table 15, we can observe that the differences in the mean willingness to adopt of condition 1 (Influencer endorser with "low effort" message)

and condition 2 (Influencer endorser with "high effort" message) are statistically significant (p-value <0.05). The same holds for the difference between condition 3 (DGS with "low effort" message) and condition 4 (DGS with "high effort" message).

In summary, the message type moderates the effect of endorser type on willingness to adopt a behaviour. Thus, ***Hypothesis 2 is accepted***.

Robust Tests of Equality of Means				
	Statistic	df1	df2	Sig
Welch	13.234	3	105.414	0.000
Brown-Forsythe	12.094	3	162.096	0.000

Table 14. Robust tests of equality of means – Welch and Brown-Forsythe

Post Hoc Tests			
	Condition (I)	**Condition (J)**	**P-value**
Tukey HSD	Influencer with "low effort" message (condition 1)	2	0.000
		3	0.885
		4	0.020
	Influencer with "high effort" message (condition 2)	1	0.000
		3	0.000
		4	0.390
	DGS with "low effort" message (condition 3)	1	0.885
		2	0.000
		4	0.000
	DGS with "high effort" message (condition 4)	1	0.020
		2	0.390
		3	0.000
Scheffe	Influencer with "low effort" message (condition 1)	2	0.001
		3	0.911
		4	0.039
	Influencer with "high effort" message (condition 2)	1	0.001
		3	0.000
		4	0.476
	DGS with "low effort" message (condition 3)	1	0.911
		2	0.000
		4	0.001

DGS with "high effort" message (condition 4)	1	0.039
	2	0.476
	3	0.001

Table 15. Post-Hoc Tests: Tukey HSD and Scheffe

4.7.3. Hypothesis 3

Hypothesis 3: The Expertise of the endorser mediates the effect between the endorser and consumer's willingness to adopt COVID safe behaviours.

To test this hypothesis and all the following mediation hypothesis, the Process Macro for SPSS was used. In this specific case, the independent variable used was the dummy variable "endorser type" (0= influencer, 1= DGS) and the dependent variable was the average willingness to adopt. Then, we analysed if this direct relationship may be fully or partly caused by a third variable, the mediator, which is the average expertise. The entire sample was used for this hypothesis analysis.

Looking at the Bootstrap limits in Table 16, it is possible to observe that the 95% confidence intervals include zero, which indicates that the indirect effect of Average Expertise is not statistically significant. Nevertheless, average expertise was influenced by endorser type, as p-value = 0.000, which is lower than 5% (unstandardized coefficient = 0.7186). However, average willingness to adopt was not influenced by expertise.

Indirect effect of Endorser type on Average willingness to adopt				
	Effect	BootSE	BootLLCI	BootULCI
Average Expertise	0.0243	0.0707	-0.1080	0.1705

Table 16. Mediation analysis – Average expertise

In conclusion, Expertise does not mediate the direct effect between endorser type and willingness to adopt a behaviour. Therefore, ***Hypothesis 3 is not accepted***.

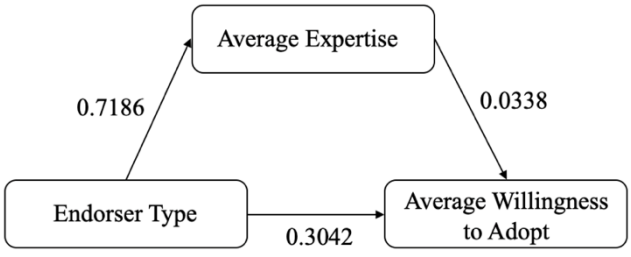


Figure 2. Mediation by Average Expertise

4.7.4. Hypothesis 4

Hypothesis 4: The Trustworthiness of the endorser mediates the effect between the endorser and consumer's willingness to adopt COVID safe behaviours.

The independent variable used was the dummy variable "endorser type" (0= influencer, 1= DGS) and the dependent variable was the average willingness to adopt. Then, we hypothesized that the average trustworthiness may mediate this direct relationship. The entire sample was used for this hypothesis analysis.

The type of endorser has a marginally significant effect on trustworthiness (non-standardized coefficient= -0.2923, p-value= 0.0472). Thus, it was anticipated that the indirect effect would be non-significant. In fact, the Bootstrap 95% confidence intervals (Table 17) indicate that the indirect effect of Average Trustworthiness is not statistically significant, since zero is included.

Indirect effect of Endorser type on Average willingness to adopt				
	Effect	BootSE	BootLLCI	BootULCI
Average Trustworthiness	0.0058	0.0307	-0.0583	0.0732

Table 17. Mediation analysis – Average Trustworthiness

In sum, ***hypothesis 4 is rejected*** because Trustworthiness is not a mediator of the relationship between endorser type and consumer's willingness to adopt behaviours.

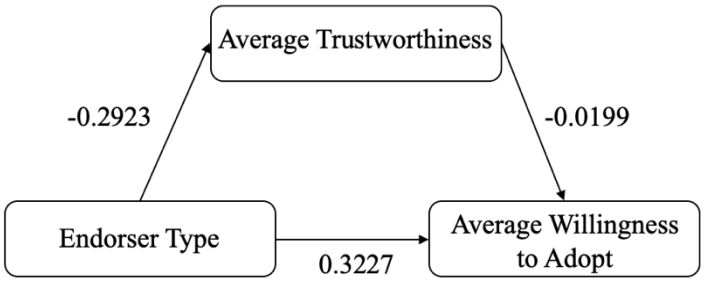


Figure 3. Mediation by Average Trustworthiness

4.7.5. Hypothesis 5

Hypothesis 5: The Attractiveness of the endorser mediates the effect between the endorser and consumer's willingness to adopt COVID safe behaviours.

The independent variable used was the dummy variable "endorser type" (0= influencer, 1=DGS) and the dependent variable was the average willingness to adopt. Then, we hypothesized that the average attractiveness might mediate this direct relationship. The entire sample was used for this hypothesis analysis.

The type of endorser has a statistically significant effect on average attractiveness (non-standardized coefficient= -2.0834, p-value= 0.0000 < 0.05). The latter also has a significant effect on average willingness to adopt (coefficient= 0.2525, p-value= 0.0004 < 0.05). Therefore, it was anticipated that the indirect effect would be significant.

Looking at the Bootstrap limits in Table 18, it is possible to observe that the 95% confidence intervals do not include zero, which indicate that the indirect effect of Average Attractiveness is statistically significant.

Indirect effect of Endorser type on Average willingness to adopt				
	Effect	BootSE	BootLLCI	BootULCI
Average Attractiveness	-0.5261	0.1618	-0.8615	-0.2250

Table 18. Mediation analysis – Average Attractiveness

Furthermore, the direct effect of the type of endorser on willingness to adopt COVID safe behaviours becomes statistically significant in the presence of attractiveness (Appendix 9), as p-value= 0.0010, which is lower than 5%.

Summarizing, the attractiveness of the endorser mediates the effect between the endorser and consumer's willingness to adopt the behaviours. Thus, ***Hypothesis 5 is accepted.***

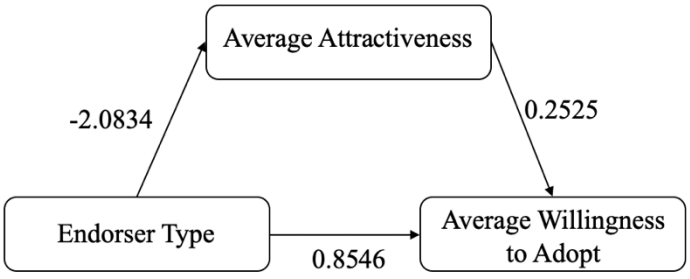


Figure 4. Mediation by Average Attractiveness

4.7.6. Hypothesis 6

Hypothesis 6: The Familiarity with the endorser mediates the effect between the endorser and consumer's willingness to adopt COVID safe behaviours.

The independent variable used was the dummy variable "endorser type" (0= influencer, 1= DGS) and the dependent variable was the average willingness to adopt. Then, we analysed if this direct relationship may be fully or partly caused by the average familiarity with endorser.

In this case, neither average familiarity was influenced by endorser type, nor average willingness to adopt was influenced by familiarity (both p-values > 0.05). Moreover, from the Bootstrapping Procedure (Table 19), it is assumed that a mediation effect does not exist, i.e. the indirect effect of Average Familiarity is not statistically significant.

Indirect effect of Endorser type on Average willingness to adopt				
	Effect	BootSE	BootLLCI	BootULCI
Average Familiarity	0.0008	0.0127	-0.0206	0.0326

Table 19. Mediation analysis – Average Familiarity

Succinctly, **Hypothesis 6 is not accepted** as Familiarity with the endorser does not mediate the effect of endorser type on willingness to adopt COVID safe behaviours.

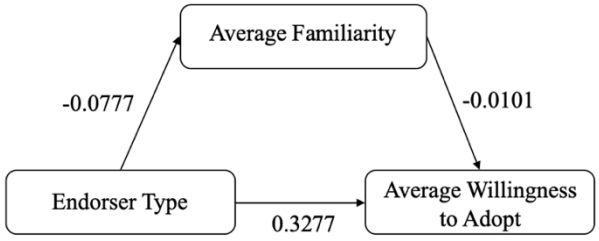


Figure 5. Mediation by Average Familiarity

4.7.7. Hypothesis 7

H7a: Influencers are perceived as more trustworthy than the DGS.

To compare the mean trustworthiness for each endorser type, a One-way ANOVA was performed. By looking at the homogeneity of variances table (Appendix 11), we can observe that the p-value based on the mean is 0.893 (higher than 0.05), which means that the ANOVA assumption is met. Furthermore, looking at Table 20, it is possible to observe that the mean trustworthiness was higher for the Influencer endorser (5.68) than for the DGS (5.39), which supports the hypothesis.

Descriptives – Trust								
					95% confidence interval for mean			
	N	Mean	St. Deviation	St. Error	Lower Bound	Higher Bound	Min	Max
Influencer	91	5.6813	1.06374	0.11151	5.4598	5.9029	1.00	7.00
DGS	127	5.3890	1.07388	0.09529	5.2004	5.5776	1.60	7.00
Total	218	5.5110	1.07693	0.07294	5.3672	5.6548	1.00	7.00

Table 20. One-way ANOVA, Descriptives table - Trustworthiness

Lastly, from the ANOVA table (Table 21), the p-value is 0.048, which is statistically significant at a 95% confidence interval. Thus, the null hypothesis (H_0= means of both endorser types are equal) can be rejected. In summary, ***Hypothesis 7a is accepted***.

ANOVA Table – Trust					
	Sum of Squares	df	Mean Square	F	Sig.
Between-Groups	4.531	1	4.531	3.960	0.048
Within-Groups	247.143	216	1.144		
Total	251.674	217			

Table 21. One-way ANOVA, ANOVA table - Trustworthiness

H7b: Influencers are perceived as having less expertise than the DGS.

To compare the mean expertise for each endorser type, a One-way ANOVA was also performed. In this case, the ANOVA assumption of homogeneity of variances is violated (p-value based on mean = 0.000 < 0.05) and consequently the Welch and Brown-Forsythe tests were used in alternative of the ANOVA test (Appendix 11).

Looking at Table 22, it is possible to observe that the mean expertise was lower for the Influencer endorser (4.96) than for the DGS (5.68), which supports the hypothesis.

Descriptives – Expertise								
					95% confidence interval for mean			
	N	Mean	St. Deviation	St. Error	Lower Bound	Higher Bound	Min	Max
Influencer	91	4.9648	1.48521	0.15569	4.6555	5.2741	1.00	7.00
DGS	127	5.6835	0.95997	0.08518	5.5149	5.8520	2.00	7.00
Total	218	5.3835	1.25544	0.08503	5.2159	5.5511	1.00	7.00

Table 22. One-way ANOVA, Descriptives table - Expertise

Furthermore, from the Robust tests of equality of means (Table 23), we observe that both p-values are 0.000, which is statistically significant at a 95% confidence interval. Thus, we can reject that the mean expertise is equal for both endorsers.

In sum, ***Hypothesis 7b is accepted***.

Robust Tests of Equality of Means -Expertise				
	Statistic	df1	df2	Sig
Welch	16.396	1	142.807	0.000
Brown-Forsythe	16.396	1	142.807	0.000

Table 23. Robust test of equality of means - Expertise

H7c: Influencers are perceived to be more attractive than the DGS.

In order to compare the mean attractiveness of each endorser type, a One-way ANOVA was once again performed. In this case, the ANOVA assumption of homogeneity of variances was met (p-value based on mean = 0.840 > 0.05).

Looking at Descriptives table (Table 24), it is possible to observe that the mean attractiveness was higher for the Influencer endorser (5.51) than for the DGS (3.42), which supports the hypothesis.

Descriptives – Attractive								
					95% confidence interval for mean			
	N	Mean	St. Deviation	St. Error	Lower Bound	Higher Bound	Min	Max
Influencer	91	5.5055	1.56328	0.16388	5.1799	5.8311	1.00	7.00
DGS	127	3.4220	1.42366	0.12633	3.1720	3.6720	1.00	7.00
Total	218	4.2917	1.80303	0.12212	4.0511	4.5324	1.00	7.00

Table 24. One-way ANOVA, Descriptives table – Attractiveness

Moreover, by analysing the ANOVA table (Table 25), we observe that the p-value is 0.000, which is statistically significant at a 95% confidence interval. Therefore, we can reject the null hypothesis that the means of both endorsers are equal. So, ***Hypothesis 7c is accepted***.

ANOVA Table – Attractive					
	Sum of Squares	df	Mean Square	F	Sig.
Between-Groups	230.120	1	230.120	104.572	0.000
Within-Groups	475.326	216	2.201		
Total	705.445	217			

Table 25. One-way ANOVA, ANOVA table – Attractiveness

Hypothesis	Results
H1: Consumers' willingness to adopt COVID safe behaviours is higher for influencer than for the DGS.	Not accepted
H2: The type of message moderates the effect of endorser type on consumers' willingness to adopt the behaviour.	Accepted
H3: The Expertise of the endorser mediates the effect between the endorser and consumer's willingness to adopt COVID safe behaviours.	Not accepted
H4: The Trustworthiness of the endorser mediates the effect between the endorser and consumer's willingness to adopt COVID safe behaviours.	Not accepted
H5: The Attractiveness of the endorser mediates the effect between the endorser and consumer's willingness to adopt COVID safe behaviours.	Accepted
H6: The Familiarity with the endorser mediates the effect between the endorser and consumer's willingness to adopt COVID safe behaviours.	Not accepted
H7a: Influencers are perceived as more trustworthy than the DGS.	Accepted
H7b: Influencers are perceived as having less expertise than the DGS.	Accepted
H7c: Influencers are perceived to be more attractive than the DGS.	Accepted

Table 26. Summary of the findings

5. Discussion and Conclusions

The main objective of this research was to understand the effectiveness of social media influencers on Generation Z's adoption of COVID safe behaviours, taking into account two different message types, which involve different effort levels to comply with. With this objective in mind, seven research questions were developed and a quantitative research method was utilized. This method adopted both descriptive (through literature) and exploratory (use of an online questionnaire) research approaches.

The first research question was developed with the aim of understanding if influencer endorsers were more effective than expert endorsers on conveying COVID safe behaviours to Generation Z, through social media. However, the results show that influencers and the DGS generate comparable willingness to adopt behaviours, since there is no statistical difference between the two mentioned endorser types. Therefore, contrary to what was hypothesised, Generation Z's willingness to adopt COVID safe behaviours is equal for influencer endorsers, probably through identification and internalization, as mentioned in the Literature section of this dissertation, and for the DGS, through compliance.

The second research question aimed at exploring whether or not the effectiveness of both endorser types is significantly affected by the type of message conveyed. As shown in Chapter 4 of this dissertation, Generation Z consumers are more willing to adopt COVID safe behaviours for "low effort" messages than for "high effort" messages. Therefore, it was possible to confirm the existence of a moderator, namely message type.

From the analysis of these two previously mentioned research questions, it is possible to conclude that what truly generates different willingness to adopt COVID safe behaviours on this younger generation is the type of message conveyed, not the endorser type conveying it.

The following four research questions were developed in order to understand the impact of four source credibility constructs (expertise, trustworthiness, attractiveness and familiarity) on willingness to adopt the COVID safe behaviours. Through the analysis of the data gathered, it was possible to observe that neither the expertise, trustworthiness or familiarity with the endorser is a mediator. However, the effect of endorser type on willingness to adopt is explained by attractiveness. So, when evaluating the mechanisms of influence, Influencers and the DGS are comparable in most aspects, except when it comes to attractiveness, in which the presence of an influencer acts as a more effective persuasion mechanism than the DGS. This result was expected as literature states that identification, a process of social influence, occurs when the audience accepts an information because they desire to identify with the endorser (Erdogan, 1999), and thus, this is often related to the attractiveness of the communicator. Moreover,

according to Friedman & Friedman (1979), the typical consumer is able to influence behaviours through both identification and internalization. In this regard, it makes sense that in the presence of attractiveness, influencers have a more persuasive effect, through identification, than the DGS, through compliance with authority.

Last but not least, the final research question was developed with the aim of understanding how Generation Z followers perceive influencers, compared to health experts, through the lens of the Source credibility Model. From the analysis of the collected data, it is possible to conclude that influencers are perceived as more trustworthy and more attractive than the DGS, but are perceived as less expert, which is aligned with our hypothesis.

In summary, there is no significant difference between the effectiveness of social media influencers and the DGS on conveying COVID safe behaviours to Generation Z. On the contrary, the key factor is the type of message conveyed, which leads to different willingness to adopt. In fact, Generation Z consumers are always more willing to adopt COVID safe behaviours when they involve a low effort to comply with. Moreover, influencers are perceived as more trustworthy, more attractive and less expert than the DGS. Nonetheless, regarding the mechanisms of influence, Influencers and the DGS are equally efficient in persuading consumers when trustworthiness, expertise and familiarity are taken into account. However, in the presence of attractiveness, influencers have a more persuasive effect than the DGS, even though at the end, Generation Z's willingness to adopt COVID safe behaviours is the same for both endorsers.

5.1. Theoretical and Managerial Implications

Theoretical Implications

From an academic point of view, this dissertation adds to the Source Credibility Model literature. Even though, there is existing literature dedicated to the perceived credibility of influencers and to social marketing, there are no studies up to this moment that focus specifically on Generation Z consumers as the potential adopters of the health behaviours promoted exclusively through Instagram. Moreover, there are not many studies on the adoption of COVID safe behaviours, since the Coronavirus outbreak is a recent context, and focusing on the Portuguese environment. Lastly, no studies explore the difference between degrees of message effort.

The findings from this academic paper add to the emerging literature, in three main aspects, by investigating the impact of influencers on the adoption of COVID safe behaviours by Generation Z, taking into account two messages that involves different effort levels.

Firstly, even though endorsement marketing has been previously studied, there are no previous studies on endorsers ability to convey health messages to Generation Z consumers, in the midst of a global pandemic. The results from this dissertation showed that Generation Z's willingness to adopt COVID safe behaviours is equal for influencer endorsers and for the DGS. Thus, there is no significant difference in persuasion by influencer and expert endorsers.

Secondly, this academic paper contributed to the understanding of the role of message type in the consumer's willingness to adopt a behaviour. Consumers are more willing to adopt COVID safe behaviours when the message conveyed involves low effort, instead of high effort.

Thirdly, this research contributes to the literature on mechanisms of influence. In fact, this paper demonstrates that the persuasion effectiveness of influencers and expert endorsers is comparable in what regards trustworthiness, expertise and familiarity. However, in regards to attractiveness, influencers are more effective in persuading consumers than expert endorsers.

Managerial Implications

The findings from this dissertation provide managers from firms and health organizations, such as the DGS, with important insights on endorsement marketing.

The results show that, at least in Portugal, the younger generation of consumers can be influenced to adopt health behaviours, both by social media influencers and expert endorsers. However, when choosing endorsers to partner with on the promotion of health related behaviours it is important that firms consider and understand the Source credibility dimensions that may impact negatively or positively that behaviour adoption, as well as how consumers perceive endorsers on these same dimensions.

From this study, it is possible to conclude that Generation Z perceives social media influencers as more trustworthy, more attractive and less expert than expert endorsers. Additionally, the type of endorser only leads to different persuasion effectiveness in the presence of attractiveness. This is, attractive influencers are more effective on conveying health behaviours, when compared to attractive experts. With these insights, managers will be able to make better choices regarding the endorsers they partner with and the nature of those partnerships , in order to obtain the maximum health benefit for the society.

Last but not least, understanding the effect of different message types on willingness to adopt a behaviour is relevant for companies to decide for which messages they can effectively leverage endorsement or influencer marketing. In this research, it was demonstrated that younger consumers are more willing to adopt a health behaviour, when the message conveyed is perceived as low effort than for high effort messages.

In conclusion, a suggestion for managers and firms that need to convey the adoption of health behaviours to Generation Z would be to partner with both influencers and experts, since these two endorsers are equally effective on persuading consumers to adopt a certain behaviour. Regarding the nature of these partnerships, the main aspect that should be taken into account is attractiveness, as this mediates the effect between the type of endorser and consumer's willingness to adopt. Thus, the chosen influencers and experts should be considered physically attractive by this younger generation. Moreover, companies should be aware that this endorsement strategy will be more effective, the lower the perceived message effort.

5.2. Limitations and Future Research

This academic dissertation provided some important insights regarding the adoption of COVID safe behaviours by Generation Z and the perceived credibility of endorsers, especially social media influencers. Nevertheless, there are some main limitations that need to be discussed in order to suggest recommendations for future research.

Firstly, this study has geographic limitations. In order to avoid cultural biases, the study sample was restricted to Portugal, which means that the findings may not be generalizable outside of the Portuguese context. Therefore, future research should go beyond the Portuguese population.

Secondly, the study was conducted assuming only one chosen social media platform, which was Instagram. The findings could have been different for other platforms, which share a different type of content, such as YouTube or TikTok. Consequently, future studies could benefit from focusing on a broader scope of social media platforms or by focusing specifically on the YouTube context, since video content could be used as stimulus, instead of images.

Thirdly, not all Generation Z was considered for this study. In fact, the participants were, both men and women, born between 1997 and 2002 (ages between 18 and 23 years old). However, the age range of Generation Z also involves younger individuals, which means that the findings may not be applicable to the whole generation. Taking this into account, future research should be done on consumers born after 2003 (less than 18 years old).

Lastly, some authors have proposed other constructs of the Source-Attractiveness model, which were not incorporated in this study due to time constraints. According to Ohanian (1990), this model takes into account the physical attractiveness, similarity, likability, and familiarity of the endorser as factors of message attractiveness. Neither "similarity", which is defined as the resemblance between the message endorser and the receiver, nor "likability", which is the affection towards an endorser that results from the source's behaviour and physical appearance (Erdogan, 1999; McCracken, 1989), were studied. For future research, it is proposed to incorporate new constructs, especially similarity and likability.

6. References

Adewuyi, E. O., & Adefemi, K. (2016). Behavior change communication using social media: A review. *International Journal of Communication and Health*, *9*, 109–116.

Amos, C., Holmes, G., & Strutton, D. (2008). Exploring the relationship between celebrity endorser effects and advertising effectiveness: A quantitative synthesis of effect size. *International Journal of Advertising*, *27*(2), 209–234.

Baker, M. J., & Churchill, G. A. (1977). The Impact of Physically Attractive Models on Advertising Evaluations. *Journal of Marketing Research*, *14*(4), 538–555. https://doi.org/10.1177/002224377701400411

Basch, C. H., Hillyer, G. C., & Jaime, C. (2020). COVID-19 on TikTok: harnessing an emerging social media platform to convey important public health messages. *International Journal of Adolescent Medicine and Health*, *1*(ahead-of-print).

Bergkvist, L., Hjalmarson, H., & Mägi, A. W. (2016). A new model of how celebrity endorsements work: attitude toward the endorsement as a mediator of celebrity source and endorsement effects. *International Journal of Advertising*, *35*(2), 171–184.

Breves, P. L., Liebers, N., Abt, M., & Kunze, A. (2019). The Perceived Fit between Instagram Influencers and the Endorsed Brand: How Influencer–Brand Fit Affects Source Credibility and Persuasive Effectiveness. *Journal of Advertising Research*, *59*(4), 440–454.

Briscoe, C., & Aboud, F. (2012). Behaviour change communication targeting four health behaviours in developing countries: a review of change techniques. *Social Science & Medicine*, *75*(4), 612–621.

by Gareth Bell, I. (2012). Create a buzz around your business through influence marketing: interview with Mark W. Schaefer, author of Return on Influence. *Strategic Direction*, *28*(9), 33–36.

Cheng, H., Kotler, P., & Lee, N. (2011). *Social marketing for public health: global trends and success stories*. Jones & Bartlett Learning.

del Fresno Garcia, M., Daly, A. J., & Segado Sanchez-Cabezudo, S. (2016). Identifying the new Influences in the Internet Era: Social Media and Social Network Analysis. *Revista Española de Investigaciones Sociológicas*, *153*.

DGS – Conta Oficial [@direcao_geral_saude]. (n.d.) Posts [Instagram Profile]. Retrieved October 17, 2020, from https://www.instagram.com/direcao_geral_saude/

DGS [@DGSaude]. (n.d.). Tweets [Twitter Profile]. Twitter. Retrieved October 17, 2020, from https://twitter.com/dgsaude?lang=en

DGS. (n.d.). Retrieved October 17, 2020, from https://covid19.min-saude.pt/

Dimock, M. (2019). Defining generations: Where Millennials end and Generation Z begins. *Pew Research Center*, *17*, 1–7.

Direção-Geral da Saúde. (n.d.). Home [Facebook Page]. Facebook. Retrieved October 17, 2020, from https://www.facebook.com/direcaogeralsaude/ Direção-Geral da Saúde. (n.d.). Home [Youtube Channel]. Retrieved from https://www.youtube.com/user/dgsportugal/featured

Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of Marketing Research*, *28*(3), 307–319.

Duran, H. B. (2016, December 15). 10 Essential Stats For Influencer Marketing In 2017. *Retrieved December*, *31*, 2020.

Erdogan, B. Z. (1999). Celebrity Endorsement: A Literature Review. *Journal of Marketing Management*, *15*(4), 291–314. https://doi.org/10.1362/026725799784870379

Freberg, K., Graham, K., McGaughey, K., & Freberg, L. A. (2011). Who are the social media influencers? A study of public perceptions of personality. *Public Relations Review*, *37*(1), 90–92.

Freeman, B., Potente, S., Rock, V., & McIver, J. (2015). Social media campaigns that make a difference: what can public health learn from the corporate sector and other social change marketers. *Public Health Res Pract*, *25*(2), e2521517.

Friedman, H. H., & Friedman, L. (1979). Endorser effectiveness by product type. *Journal of Advertising Research*.

Gliem, J. A., & Gliem, R. R. (2003). *Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-type scales*.

Glucksman, M. (2017). The rise of social media influencer marketing on lifestyle branding: A case study of Lucie Fink. *Elon Journal of Undergraduate Research in Communications*,

8(2), 77–87.

Goldsmith, R. E., Lafferty, B. A., & Newell, S. J. (2000). The impact of corporate credibility and celebrity credibility on consumer reaction to advertisements and brands. *Journal of Advertising*, *29*(3), 43–54.

Heldman, A. B., Schindelar, J., & Weaver, J. B. (2013). Social media engagement and public health communication: implications for public health organizations being truly "social." *Public Health Reviews*, *35*(1), 13.

Hub, I. M. (2018). What is an Influencer. *Marketing Hub. Recuperado de Https://Influencermarketinghub. Com/What-Is-an-Influencer*.

Jin, S. V., Muqaddam, A., & Ryu, E. (2019). Instafamous and social media influencer marketing. *Marketing Intelligence & Planning*.

Joseph, W. B. (1982). The Credibility of Physically Attractive Communicators: A Review. *Journal of Advertising*, *11*(3), 15–24. https://doi.org/10.1080/00913367.1982.10672807

Kahle, L. R., & Homer, P. M. (1985). Physical attractiveness of the celebrity endorser: A social adaptation perspective. *Journal of Consumer Research*, *11*(4), 954–961.

Kelman, H. C. (1961). Processes of opinion change. *Public Opinion Quarterly*, *25*(1), 57–78.

Khamis, S., Ang, L., & Welling, R. (2017). Self-branding, 'micro-celebrity' and the rise of Social Media Influencers. *Celebrity Studies*, *8*(2), 191–208. https://doi.org/10.1080/19392397.2016.1218292

Kitchenham, B., & Pfleeger, S. L. (2002). Principles of survey research: part 5: populations and samples. *ACM SIGSOFT Software Engineering Notes*, *27*(5), 17–20.

Kotler, P., & Lee, N. (2008). *Social marketing: Influencing behaviors for good*. Sage.

Kotler, P., & Zaltman, G. (1971). Social Marketing: An Approach to Planned Social Change. *Journal of Marketing*, *35*(3), 3–12. https://doi.org/10.1177/002224297103500302

Lerman, R. (2020, June 17). WhatsApp, Instagram surge in popularity as people search for coronavirus news. Retrieved October 17, 2020, from https://www.washingtonpost.com/technology/2020/06/16/whatsapp-instagram-covid-news/

Ma, R., Deng, Z., & Wu, M. (2020). Effects of Health Information Dissemination on User Follows and Likes during COVID-19 Outbreak in China: Data and Content Analysis. *International Journal of Environmental Research and Public Health*, *17*(14), 5081.

McCracken, G. (1989). Who is the celebrity endorser? Cultural foundations of the endorsement process. *Journal of Consumer Research*, *16*(3), 310–321.

Ohanian, R. (1990). Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness, and attractiveness. *Journal of Advertising*, *19*(3), 39–52. https://doi.org/10.1080/00913367.1990.10673191

Ohanian, R. (1991). The impact of celebrity spokespersons' perceived image on consumers' intention to purchase. *Journal of Advertising Research*.

Patel, D. (2017, November 27). 5 Differences Between Marketing To Millennials Vs. Gen Z. Retrieved December 31, 2020, from https://www.forbes.com/

Perrin, A. (2015). Social media usage. *Pew Research Center*, 52–68.

Portugal entra em Situação de Contingência no dia 15 de setembro. (n.d.). Retrieved October 17, 2020, from https://www.dgs.pt/em-destaque/portugal-entra-em-situacao-de-contingenciano-dia-15-de-setembro.aspx Relatório de Situação. (n.d.). Retrieved October 17, 2020, from https://covid19.minsaude.pt/relatorio-de-situacao/

Rosen, G. (2020, June 23). An Update on Our Work to Keep People Informed and Limit Misinformation About COVID-19. Retrieved October 17, 2020, from https://about.fb.com/news/2020/04/covid-19-misinfo-update/ Saúde e Trabalho - Medidas de prevenção da COVID-19. (n.d.). Retrieved October 17, 2020, from https://www.dgs.pt/documentos-e-publicacoes/saude-e-trabalho-medidas-de-prevencaoda-covid-19-.aspx

Shatto, B., & Erwin, K. (2016). Moving on from millennials: Preparing for generation Z. *The Journal of Continuing Education in Nursing*, *47*(6), 253–254.

Snyder, V. (2020, August 10). How COVID-19 Has Changed Social Media Habits. Retrieved October 17, 2020, from https://www.business.com/articles/social-media-patterns-during-thepandemic/

Spry, A., Pappu, R., & Cornwell, T. (2008). Celebrity endorsement, brand credibility and brand equity. In *European Journal of Marketing* (Vol. 45).

Sternthal, B., Dholakia, R., & Leavitt, C. (1978). The persuasive effect of source credibility: Tests of cognitive response. *Journal of Consumer Research*, *4*(4), 252–260.

Strauss, W., & Howe, N. (1991). *Generation Z*.

Susie Neilson, A. (2020, September 29). A comprehensive timeline of the coronavirus pandemic at 9 months, from China's first case to the present. Retrieved October 17, 2020, from https://www.businessinsider.com/coronavirus-pandemic-timeline-history-major-events-2020- 3

Talavera, M. (2015, July 14). Reasons why influencer marketing is the next big thing. *Retrieved June*, *3*, 2019.

Till, B. D., & Busler, M. (2000). The match-up hypothesis: Physical attractiveness, expertise, and the role of fit on brand attitude, purchase intent and brand beliefs. Journal of Advertising, 29(3), 1–13.

Wang, S. W., & Scheinbaum, A. C. (2018). Enhancing brand credibility via celebrity endorsement trustworthiness trumps attractiveness and expertise. *Journal of Advertising Research*. https://doi.org/10.2501/JAR-2017-042

Weinreich, N. K. (2010). *Hands-on social marketing: a step-by-step guide to designing change for good*. Sage Publications.

WHO. (2020, September 23). Managing the COVID-19 infodemic: Promoting healthy behaviours and mitigating the harm from misinformation and disinformation. Retrieved December 31, 2020, from https://www.who.int/news/item/23-09-2020-managing-the-covid-19-infodemic-promoting-healthy-behaviours-and-mitigating-the-harm-from-misinformation-and-disinformation

Wielki, J. (n.d.). *The Phenomenon of Digital Influencers in Light of Empirical Research on Heavy Internet Users Belonging to Generation Z*.

Williams, A. (2015). Move over, millennials, here comes Generation Z. *The New York Times*, *18*.

Wood, S. (2013). Generation Z as consumers: trends and innovation. *Institute for Emerging Issues: NC State University*, 1–3.

7. Appendix

Appendix 1. Questionnaire Transcript

Dear Participant,

My name is Carolina Barbosa and the survey you will respond to was developed within the scope of the final Dissertation at Católica-Lisbon School of Business and Economics. This questionnaire is expected to take about 5 minutes to complete. It is important to mention that the survey is anonymous and all data gathered will be kept strictly confidential. Please answer with honesty and know that there are no right or wrong answers.

Thank you for your attention and participation in this study!

Section 1: Screening Questions

Q1: Do you have an Instagram account?

- Yes
- No

(If the answer was Yes, the participant would continue with the next question. Otherwise, would be directed to the end of the questionnaire).

Q2: Do you currently follow any Instagram influencers, who share content related to Health & Lifestyle? If Yes, please name the influencers you follow.

- Yes. _____
- No

(This question was only presented to participants assigned to the Influencer endorsement condition. If the answer was No, the participant was directed to the end of the survey).

Section 2: Endorser Familiarity

a) **Influencer Condition:**

If you named only one influencer in the previous question, please answer to all the remaining questions in this survey regarding that influencer. If you named more than one, select only one of those influencers and answer the questions about him/her.

Q3: Please rate how familiar are you with the influencer you just mentioned:

Not Familiar _ _ _ _ _ _ _ Very Familiar

Do not recognize _ _ _ _ _ _ _ Do recognize

Have not heard of before _ _ _ _ _ _ _ Have heard of before

b) **DGS Condition:**

Q3: Please rate how familiar you are with the DGS (Direção-Geral da Saúde):

Not Familiar _ _ _ _ _ _ _ Very Familiar

Do not recognize _ _ _ _ _ _ _ Do recognize

Have not heard of before _ _ _ _ _ _ _ Have heard of before

Section 3: Source Credibility Dimensions

a) **Influencer Condition:**

Q4: Please rate the chosen influencer according to the following characteristics:

Undependable _ _ _ _ _ _ _ Dependable

Dishonest _ _ _ _ _ _ _ Honest

Unreliable _ _ _ _ _ _ _ Reliable

Insincere _ _ _ _ _ _ _ Sincere

Untrustworthy _ _ _ _ _ _ _ Trustworthy

Q5: Please rate the chosen influencer according to the following characteristics:

Not Expert _ _ _ _ _ _ _ Expert

Unqualified _ _ _ _ _ _ _ Qualified

Inexperienced _ _ _ _ _ _ _ Experienced

Unknowledgeable _ _ _ _ _ _ _ Knowledgeable

Unskilled _ _ _ _ _ _ _ Skilled

Q6: Please rate the chosen influencer according to the following characteristics:

Unattractive _ _ _ _ _ _ _ Attractive

Not classy _ _ _ _ _ _ _ Classy

Ugly _ _ _ _ _ _ _ Beautiful

Plain _ _ _ _ _ _ _ Elegant

Not sexy _ _ _ _ _ _ _ Sexy

b) DGS Condition

Q4: Please rate the DGS according to the following characteristics:

Undependable _ _ _ _ _ _ _ Dependable

Dishonest _ _ _ _ _ _ _ Honest

Unreliable _ _ _ _ _ _ _ Reliable

Insincere _ _ _ _ _ _ _ Sincere

Untrustworthy _ _ _ _ _ _ _ Trustworthy

Q5: Please rate the DGS according to the following characteristics:

Not Expert _ _ _ _ _ _ _ Expert

Unqualified _ _ _ _ _ _ _ Qualified

Inexperienced _ _ _ _ _ _ _ Experienced

Unknowledgeable _ _ _ _ _ _ _ Knowledgeable

Unskilled _ _ _ _ _ _ _ Skilled

Q6: If DGS was a person, how would you rate it according to the following characteristics?

Unattractive _ _ _ _ _ _ _ Attractive

Not classy _ _ _ _ _ _ _ Classy

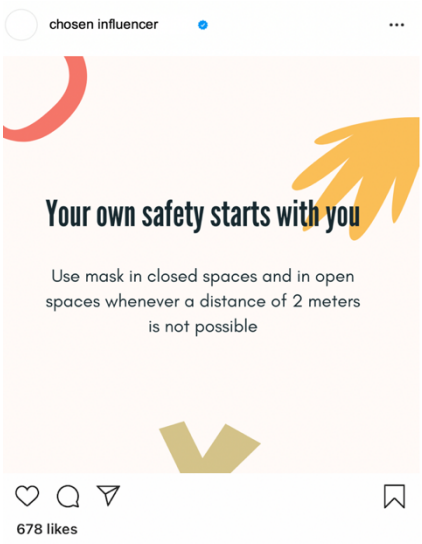
Ugly _ _ _ _ _ _ _ Beautiful

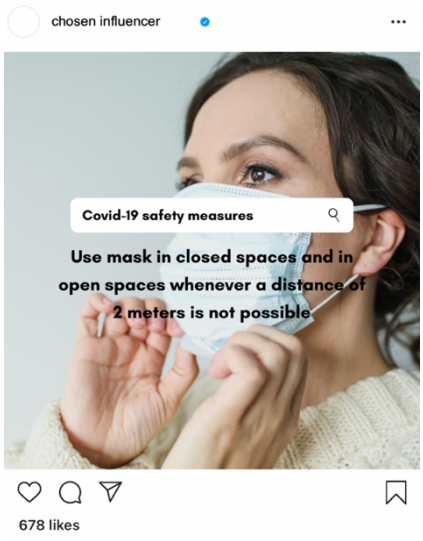
Plain _ _ _ _ _ _ _ Elegant

Not sexy _ _ _ _ _ _ _ Sexy

<u>Section 4 a) Influencer endorser with "Low effort message"</u>

In this part of the questionnaire you will be presented with two Instagram posts, that convey the same message. Imagine that these were posted by your chosen influencer and please answer the following questions carefully.





Q7: Please rate the following statements on a scale from 1 ("Completely Disagree") to 7 ("Completely Agree"):

	Completely Disagree	Disagree	Somewhat Disagree	Neither agree or disagree	Somewhat Agree	Agree	Completely Agree
The posts recommend total lockdown							
The posts recommend that I use of mask in closed spaces and open spaces when 2 meters distance is not possible							
The posts recommend that I only do gatherings of up to 5 people and use mask in these situations.							

Q8: Please rate on a scale of 1 ("Extremely Low Effort") to 7 ("Extremely High Effort") how you perceive the level of effort the above message involves:

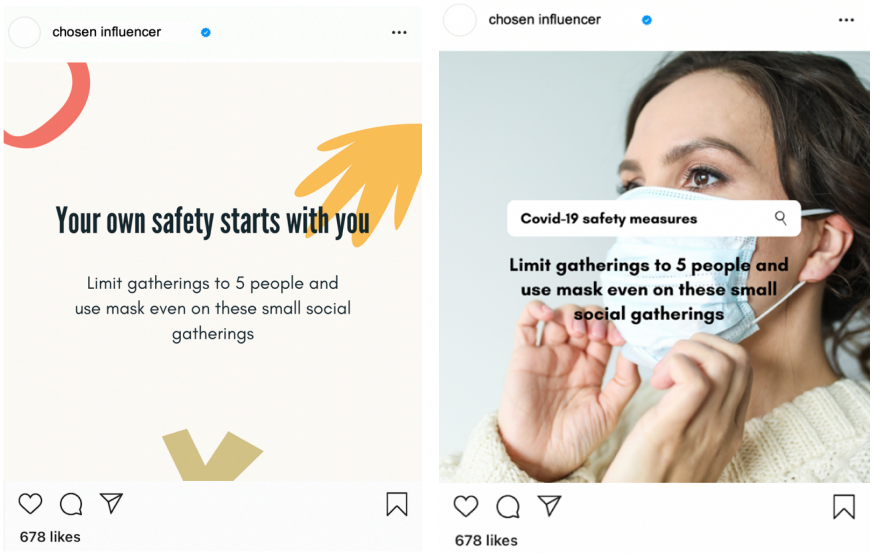
	Extremely Low Effort	Low Effort	Somewhat Low Effort	Neither High or Low Effort	Somewhat High Effort	High Effort	Extremely High Effort
Perceived message effort							

Q9: Regarding your willingness to adopt the behaviour promoted by the chosen influencer, rate the following statements on a scale from 1 ("Completely Disagree") to 7 ("Completely Agree"):

	Completely Disagree	Disagree	Somewhat Disagree	Neither agree or disagree	Somewhat Agree	Agree	Completely Agree
I intend to adopt the behavior present in the posts							
It is likely that I would consider adopting the behavior present in the posts							
I am willing to adopt the behavior present in the posts							

Section 4 b) Influencer endorser with "High effort" message

In this part of the questionnaire you will be presented with two Instagram posts, that convey the same message. Imagine that these were posted by your chosen influencer and please answer the following questions carefully.



Q7: Please rate the following statements on a scale from 1 ("Completely Disagree") to 7 ("Completely Agree"):

	Completely Disagree	Disagree	Somewhat Disagree	Neither agree or disagree	Somewhat Agree	Agree	Completely Agree
The posts recommend total lockdown							
The posts recommend that I use of mask in closed spaces and open spaces when 2 meters distance is not possible							
The posts recommend that I only do gatherings of up to 5 people and use mask in these situations.							

Q8: Please rate on a scale of 1 ("Extremely Low Effort") to 7 ("Extremely High Effort") how you perceive the level of effort the above message involves:

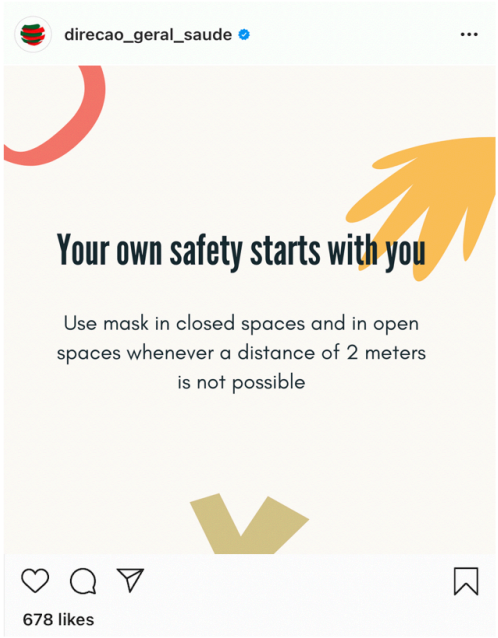
	Extremely Low Effort	Low Effort	Somewhat Low Effort	Neither High or Low Effort	Somewhat High Effort	High Effort	Extremely High Effort
Perceived message effort							

Q9: Regarding your willingness to adopt the behaviour promoted by the chosen influencer, rate the following statements on a scale from 1 ("Completely Disagree") to 7 ("Completely Agree"):

	Completely Disagree	Disagree	Somewhat Disagree	Neither agree or disagree	Somewhat Agree	Agree	Completely Agree
I intend to adopt the behavior present in the posts							
It is likely that I would consider adopting the behavior present in the posts							
I am willing to adopt the behavior present in the posts							

Section 4 c) DGS with "Low effort" message

In this part of the questionnaire you will be presented with two Instagram posts, that convey the same message. These are fictitious but imagine they were posted by the DGS and please answer the following questions carefully.



Q7: Please rate the following statements on a scale from 1 ("Completely Disagree") to 7 ("Completely Agree"):

	Completely Disagree	Disagree	Somewhat Disagree	Neither agree or disagree	Somewhat Agree	Agree	Completely Agree
The posts recommend total lockdown							
The posts recommend that I use of mask in closed spaces and open spaces when 2 meters distance is not possible							
The posts recommend that I only do gatherings of up to 5 people and use mask in these situations.							

Q8: Please rate on a scale of 1 ("Extremely Low Effort") to 7 ("Extremely High Effort") how you perceive the level of effort the above message involves:

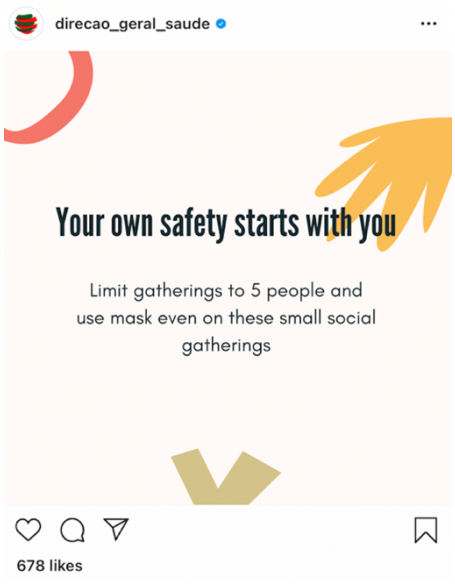
	Extremely Low Effort	Low Effort	Somewhat Low Effort	Neither High or Low Effort	Somewhat High Effort	High Effort	Extremely High Effort
Perceived message effort							

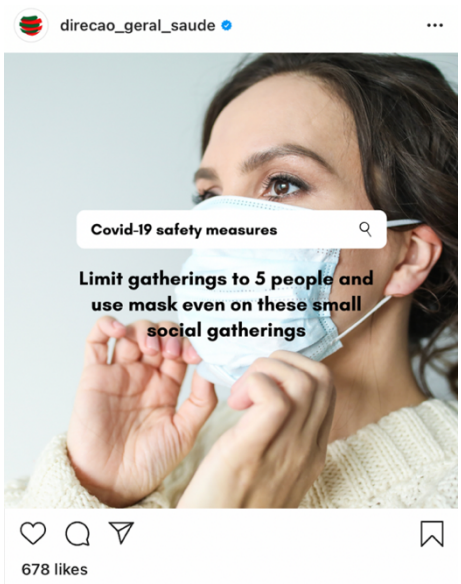
Q9: Regarding your willingness to adopt the behaviour promoted by the DGS, rate the following statements on a scale from 1 ("Completely Disagree") to 7 ("Completely Agree"):

	Completely Disagree	Disagree	Somewhat Disagree	Neither agree or disagree	Somewhat Agree	Agree	Completely Agree
I intend to adopt the behavior present in the posts							
It is likely that I would consider adopting the behavior present in the posts							
I am willing to adopt the behavior present in the posts							

Section 4 d) DGS with "High effort" message

In this part of the questionnaire you will be presented with two Instagram posts, that convey the same message. These are fictitious but imagine they were posted by the DGS and please answer the following questions carefully.





Q7: Please rate the following statements on a scale from 1 ("Completely Disagree") to 7 ("Completely Agree"):

	Completely Disagree	Disagree	Somewhat Disagree	Neither agree or disagree	Somewhat Agree	Agree	Completely Agree
The posts recommend total lockdown							
The posts recommend that I use of mask in closed spaces and open spaces when 2 meters distance is not possible							
The posts recommend that I only do gatherings of up to 5 people and use mask in these situations.							

Q8: Please rate on a scale of 1 ("Extremely Low Effort") to 7 ("Extremely High Effort") how you perceive the level of effort the above message involves:

	Extremely Low Effort	Low Effort	Somewhat Low Effort	Neither High or Low Effort	Somewhat High Effort	High Effort	Extremely High Effort
Perceived message effort							

Q9: Regarding your willingness to adopt the behaviour promoted by the DGS, rate the following statements on a scale from 1 ("Completely Disagree") to 7 ("Completely Agree"):

	Completely Disagree	Disagree	Somewhat Disagree	Neither agree or disagree	Somewhat Agree	Agree	Completely Agree
I intend to adopt the behavior present in the posts							
It is likely that I would consider adopting the behavior present in the posts							
I am willing to adopt the behavior present in the posts							

Section 5: Socio-Demographic Questions

This is the last section of the questionnaire. Please, answer to these questions about yourself before finishing.

Q10: Please indicate your age.

_____

Q11: Please indicate your gender.

- Male
- Female
- Other _____

Q12: Please indicate your occupation.

- Full-time student
- Student and Part-time worker
- Full-time worker
- Unemployed
- Other _____

Q13: Please indicate the maximum school degree you completed.

- Primary School degree
- High School Degree
- Bachelor's degree
- Master's degree.

Thank you for your participation in this study!

Appendix 2. Survey Demographics

Statistic	N	Range	Minimum	Maximum	Mean	SD	Variance
Gender	218	1	1	2	1.46	0.500	0.250
Occupation	218	4	1	5	1.55	0.936	0.875
School Degree	218	3	1	4	2.99	0.734	0.539

Table 27. Demographic statistics: gender, occupation, school degree

Age	
18	7.8%
19	10.6%
20	9.6%
21	14.2%
22	36.7%
23	21.2%
Total	**100%**

Table 28: Frequencies: Age

Gender	
Male	53.7%
Female	46.3%
Total	**100%**

Table 29. Frequencies: Gender

Occupation	
Full-time student	70.2%
Student and Part-time worker	9.6%
Full-time worker	16.1%
Unemployed	3.2%
Other	0.9%
Total	**100%**

Table 30. Frequencies: Occupation

Maximum School Degree	
Primary school degree	0.9%
High school degree	24.8%
Bachelor's degree	49.1%
Master's degree	25.2%
Total	**100%**

Table 31. Frequencies: Maximum school degree

Gender			
	Male	**Female**	Total
Influencer with "low effort" message (condition 1)	24	20	44
Influencer with "high effort" message (condition 2)	29	18	47
DGS with "low effort" message (condition 3)	32	29	61
DGS with "high effort" message (condition 4)	32	34	66
Total	117	101	218

Table 32. Gender breakdown of the 4 groups

Age							
	18	**19**	**20**	**21**	**22**	**23**	Total
Influencer with "low effort" message (condition 1)	1	5	4	5	19	10	44
Influencer with "high effort" message (condition 2)	9	5	2	7	16	8	47
DGS with "low effort" message (condition 3)	2	4	8	10	21	16	61
DGS with "high effort" message (condition 4)	5	9	7	9	24	12	66
Total	17	23	21	31	80	46	218

Table 33. Age breakdown of the 4 groups

Occupation						
	Full-time student	**Student & part-time worker**	**Full-time worker**	**Unemployed**	**Other**	Total
Influencer with "low effort" message (1)	34	3	6	1	0	44
Influencer with "high effort" message (2)	36	4	5	0	2	47
DGS with "low effort" message (3)	38	6	15	2	0	61
DGS with "high effort" message (4)	45	8	9	4	0	66
Total	153	21	35	7	2	218

Table 34. Occupation breakdown of the 4 groups

	Maximum School Degree Completed				
	Primary school degree	**High school degree**	**Bachelor's degree**	**Master's degree**	Total
Influencer with "low effort" message (1)	1	9	17	17	44
Influencer with "high effort" message (2)	0	14	23	10	47
DGS with "low effort" message (3)	1	15	31	14	61
DGS with "high effort" message (4)	0	16	36	14	66
Total	2	54	107	55	218

Table 35. School degree breakdown of the 4 groups

Appendix 3. Principal Component Analysis

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	6.359	30.280	30.280	6.359	30.280	30.280	4.454	21.208	21.208
2	4.788	22.801	53.081	4.788	22.801	53.081	4.355	20.737	41.945
3	2.852	13.583	66.664	2.852	13.583	66.664	3.743	17.822	59.767
4	2.295	10.928	77.592	2.295	10.928	77.592	2.749	13.092	72.859
5	1.461	6.957	84.549	1.461	6.957	84.549	2.455	11.690	**84.549**
6	0.625	2.976	87.525						
7	0.354	1.685	89.210						
8	0.279	1.327	90.537						
9	0.241	1.149	91.686						
10	0.236	1.125	92.811						
11	0.218	1.040	93.851						
12	0.203	0.967	94.818						
13	0.173	0.822	95.641						
14	0.160	0.762	96.402						
15	0.148	0.703	97.105						
16	0.128	0.607	97.712						
17	0.113	0.539	98.251						
18	0.103	0.492	98.743						
19	0.094	0.447	99.190						
20	0.089	0.422	99.613						
21	0.081	0.387	100.000						

Extraction Method: Principal Component Analysis.

Table 36. Total Variance Explained

Appendix 4. Manipulation Check

Statement: Use of mask (low effort message)			
	Condition (I)	**Condition (J)**	**P-value**
Tukey HSD	Influencer with "low effort" message (condition 1)	2	0.000
		3	0.664
		4	0.000
	Influencer with "high effort" message (condition 2)	1	0.000
		3	0.000
		4	0.586
	DGS with "low effort" message (condition 3)	1	0.664
		2	0.000
		4	0.000
	DGS with "high effort" message (condition 4)	1	0.000
		2	0.586
		3	0.000
Scheffe	Influencer with "low effort" message (condition 1)	2	0.000
		3	0.729
		4	0.000
	Influencer with "high effort" message (condition 2)	1	0.000
		3	0.000
		4	0.660
	DGS with "low effort" message (condition 3)	1	0.729
		2	0.000
		4	0.000
	DGS with "high effort" message (condition 4)	1	0.000
		2	0.660
		3	0.000

Table 37 a) Post-Hoc Tests for "Low effort" message

Statement: Gatherings limited to 5 (high effort message)			
	Condition (I)	**Condition (J)**	**P-value**
Tukey HSD	Influencer with "low effort" message (condition 1)	2	0.000
		3	0.531
		4	0.000
	Influencer with "high effort" message (condition 2)	1	0.000
		3	0.000
		4	0.993
	DGS with "low effort" message (condition 3)	1	0.531
		2	0.000
		4	0.000
	DGS with "high effort" message (condition 4)	1	0.000
		2	0.993
		3	0.000
Scheffe	Influencer with "low effort" message (condition 1)	2	0.000
		3	0.610
		4	0.000
	Influencer with "high effort" message (condition 2)	1	0.000
		3	0.000
		4	0.995
	DGS with "low effort" message (condition 3)	1	0.610
		2	0.000
		4	0.000
	DGS with "high effort" message (condition 4)	1	0.000
		2	0.995
		3	0.000

Table 37 b) Post-Hoc Tests for "High effort" message

Appendix 5. Hypothesis 1 (comparing willingness to adopt for influencers vs DGS)

	Levene Statistic	df1	df2	Sig.
Based on Mean	1.263	1	216	0.262
Based on Median	1.306	1	216	0.254
Based on Median and with adjusted df	1.306	1	215.978	0.254
Based on trimmed mean	1.325	1	216	0.251

Table 38. Test of homogeneity of variances

Appendix 6. Hypothesis 2 (moderator: message type)

Test of Homogeneity of Variances				
	Levene Statistic	df1	df2	Sig.
Based on Mean	22.243	3	214	0.000
Based on Median	15.775	3	214	0.000
Based on Median and with adjusted df	15.775	3	178.138	0.000
Based on trimmed mean	20.936	3	214	0.000

Table 39. Test of Homogeneity of variances

Appendix 7. Hypothesis 3 (mediator: Expertise)

Outcome Variable: Average Expertise						
	coefficient	se	t	p-value	LLCI	ULCI
constant	4.9648	0.1265	39.2413	0.0000	4.7155	5.2142
Endorser Type	0.7186	0.1658	4.3353	0.0000	0.3919	1.0453

Table 40. Mediation Analysis: Outcome variable – Expertise

Outcome Variable: Average Willingness to Adopt						
	coefficient	se	t	p-value	LLCI	ULCI
constant	4.9604	0.4706	10.5397	0.000	4.0327	5.8880
Endorser Type	0.3042	0.2255	1.3491	0.1787	-0.1402	0.7486
Average Expertise	0.0338	0.0888	0.3808	0.7037	-0.1412	0.2088

Table 41. Mediation Analysis: Outcome variable – Willingness to Adopt

Appendix 8. Hypothesis 4 (mediator: Trustworthiness)

Outcome Variable: Average Trustworthiness						
	coefficient	se	t	p-value	LLCI	ULCI
constant	5.6813	0.1121	50.6667	0.000	5.4603	5.9023
Endorser Type	-0.2923	0.1469	-1.9899	0.0479	-0.5819	-0.0028

Table 42. Mediation Analysis: Outcome variable – Trustworthiness

Outcome Variable: Average Willingness to Adopt						
	coefficient	se	t	p-value	LLCI	ULCI
constant	5.2411	0.5927	8.8432	0.000	4.0729	6.4092
Endorser Type	0.3227	0.2183	1.4782	0.1408	-0.1076	0.7530
Average Trustworthiness	-0.0199	0.1002	-0.1983	0.8430	-0.2173	0.1776

Table 43. Mediation Analysis: Outcome variable – Willingness to Adopt

Appendix 9. Hypothesis 5 (mediator: Attractiveness)

Outcome Variable: Average Attractiveness						
	coefficient	se	t	p-value	LLCI	ULCI
constant	5.5055	0.1555	35.4037	0.0000	5.1990	5.8120
Endorser Type	-2.0834	0.2037	-10.2261	0.0000	-2.4850	-1.6819

Table 44. Mediation Analysis: Outcome variable – Attractiveness

Outcome Variable: Average Willingness to Adopt						
	coefficient	se	t	p-value	LLCI	ULCI
constant	3.7380	0.4183	8.9369	0.000	4.0729	6.4092
Endorser Type	0.8546	0.2560	3.3387	0.0010	-0.1076	0.7530
Average Attractiveness	-0.2525	0.0702	3.5987	0.0004	-0.2173	0.1776

Table 45. Mediation Analysis: Outcome variable – Willingness to Adopt

Appendix 10. Hypothesis 6 (mediator: Familiarity)

Outcome Variable: Average Familiarity						
	coefficient	se	t	p-value	LLCI	ULCI
constant	6.1538	0.1273	48.3226	0.000	5.9028	6.4049
Endorser Type	-0.0777	0.1668	-0.4659	0.6418	-0.4066	0.2511

Table 46. Mediation Analysis: Outcome variable – Familiarity

Outcome Variable: Average Willingness to Adopt						
	coefficient	se	t	p-value	LLCI	ULCI
constant	5.1902	0.5675	9.1464	0.000	4.0717	6.3087
Endorser Type	0.3277	0.2164	1.5141	0.1315	-0.0989	0.7543
Average Familiarity	-0.0101	0.0882	-0.1141	0.9092	-0.1840	0.1638

Table 47. Mediation Analysis: Outcome variable – Willingness to Adopt

Appendix 11. Hypothesis 7a, 7b and 7c (comparing Influencer and DGS)

Test of Homogeneity of variance: Trustworthiness				
	Levene Statistic	df1	df2	Sig.
Based on Mean	0.018	1	216	0.893
Based on Median	0.046	1	216	0.831
Based on Median and with adjusted df	0.046	1	215.873	0.831
Based on trimmed mean	0.053	1	216	0.818

Table 48. Test of homogeneity of variance: Trustworthiness

Test of Homogeneity of variance: Expertise				
	Levene Statistic	df1	df2	Sig.
Based on Mean	14.503	1	216	0.000
Based on Median	12.991	1	216	0.000
Based on Median and with adjusted df	12.991	1	178.367	0.000
Based on trimmed mean	13.791	1	216	0.000

Table 49. Test of homogeneity of variance: Expertise

Test of Homogeneity of variance: Attractiveness				
	Levene Statistic	df1	df2	Sig.
Based on Mean	0.041	1	216	0.840
Based on Median	0.219	1	216	0.640
Based on Median and with adjusted df	0.219	1	193.567	0.640
Based on trimmed mean	0.032	1	216	0.859

Table 50. Test of homogeneity of variance: Attractiveness