

Beyond the scroll: A study on the effects and influence of social media brand communication elements on perceived brand credibility and consumer purchase intentions

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ABSTRACT

This quantitative research paper covers a gap in the literature by concentrating on the use of three brand communication elements on Instagram and the effect on two dependent variables. Therefore, this study focuses on uncovering the answer to the following central question: *To what extent do celebrity endorsements, factual claims, and emotional appeals influence consumers in establishing brand credibility and driving their purchase intentions within the context of brand communication on Instagram?*

This research is built on the theoretical frameworks of the credibility theory and the dual coding theory. Furthermore, the study is aimed at understanding the dynamic interplay between celebrity endorsements, factual claims and emotional appeals, and the impact they can have, whether on their own or combined, on the perceived brand credibility and consumer purchase intentions on social media platforms, particularly on one – Instagram. In addition, the data is collected through an online survey, whose experimental research design is meant to test the impact of the mentioned elements in the context of brand communication on Instagram. This experiment involves randomly assigning participants into eight different groups, each group being shown a different Instagram post that features either only one element or a combination of elements. Also, there is a control group which is exposed to none of the marketing elements.

In this context, the results are meant to help both marketers and academics, providing valuable insights into the brand-consumer interactions and influence on Instagram. Additionally, the research can help marketers design more efficient and targeted brand communication strategies on Instagram, which overall helps brands foster a more enhanced consumer engagement and purchase behaviour. While the hypotheses proposed were rejected based on the data collected and analyses conducted, however, it still provides useful insights for further research and points of improvement, for both academia and marketing professionals.

KEYWORDS: *brand credibility, consumer purchase intentions, brand communication, social media*

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1. Introduction

Social media has become significantly powerful in shaping consumer behaviour over the years, influencing purchase intentions and decisions throughout the years (Sharma & Verma, 2018, pp. 22–23). Alongside that, brand communication on social media has evolved into a pivotal aspect of modern marketing strategies, offering businesses unique opportunities to engage with diverse target audiences in real time. Facebook, Instagram, and TikTok stand out as the most popular and influential platforms, able to connect and entertain billions of users worldwide (Chu & Seock, 2020, pp. 93–94). Such platforms are becoming increasingly crucial tools for communication and marketing strategies, offering businesses the opportunity to connect with various target audiences and promote their brand quickly and cost-effectively (Jacobson et al., 2020, pp. 1–3).

Nowadays, social media represents this constantly dynamic landscape, which facilitates the increased prevalence of brand communication. Marketers emphasise the importance of including persuasive techniques in their brand communication efforts on social media in a strategic approach to build credibility, capture attention, drive consumer engagement and purchase intentions (Srivastava et al., 2020, pp. 850–851; Rietveld et al., 2020, pp. 22–23). Social media and brand communication have become strongly used in marketing strategies because social media usage amongst consumers has increased significantly over the past few years, being used not only for entertainment and networking, but also for news information and trends. Therefore, social media has become a fast, easy and effective way for brands to communicate and build relationships with large and diverse audiences (Santos et al., 2021, p. 768).

Hazzam (2021, p. 199) emphasises how over the last few years, Instagram has been the most popular choice in terms of social media platforms, for both consumers and brands because of the rather engaging and interactive nature of the application. Instagram has a user friendly interface and features that have successfully managed to capture the attention of millions of users aged between 20-35 years old (Statista, 2024). The various forms of visual content – pictures, videos, reels, stories – resonate well with this particular demographic that constantly seeks and enjoys aesthetically pleasing and immersive online experiences (Atay & Ashlock, 2022, pp. 61–63). With technology and social media quickly taking over, the lifestyles of individuals are highly influenced by social media. In this day and age, there are trends and new features appearing constantly on social media which

keep consumers highly engaged with the platforms (Santos et al., 2022, p. 3). In the case of Instagram, reels have tremendous effect on consumers. This short type of videos with a voiceover or song in the background resonates well with the current low attention span of individuals and allows brands to interact and communicate with consumers in an engaging manner (Moriuchi, 2021, pp. 98–99). Many brands have a tendency to actively engage with certain trends on social media to market their products in an attempt to remain relevant in the eyes of consumers and capture their attention (Tuten & Solomon, 2014, p. 101). There is a significant opportunity for brands to engage and interact with consumers on Instagram, promoting their products through showcasing a level of brand communication that highlights certain lifestyles, influential endorsements or market trends which can lead to overall humanising the brand, to the point of increasing brand credibility and driving consumer purchase intentions (Robson & Banerjee, 2022, p. 488).

Voorveld (2019, pp. 14–15) emphasises that brand communication involves various strategies and tactics which are used to engage with consumers, shape their perceptions, and drive consumer purchase intentions and decisions. In the context of Instagram, there are many opportunities for brands to connect with a target audience in an engaging manner. Some of the most utilised elements that brands use in their communication on social media are celebrity endorsements, factual claims and emotional appeals because each one plays a key role in influencing consumer behaviour and overall brand perception (Leaver et al., 2020, p. 21–23). These marketing elements can be leveraged into brand communication campaigns on social media, taking into consideration that Instagram represents a platform with a visual-centric interface and constantly changing features, which can be used to enhance brand credibility, capture the target audience's attention and drive consumer purchase intentions (Visentin et al., 2019, p. 102).

In the context of brand communication on Instagram, emotional appeals are used to evoke certain feelings within consumers to make a long-term impression, leading to an emotional connection to the brand (Sriram et al., 2021, pp. 2–3). Additionally, celebrity endorsements involve leveraging the credibility and influence of well-known individuals with a significant online presence to promote or endorse products for brands. The main purpose is to build trust and establish credibility in the minds of consumers (Rocha et al., 2019, pp. 2234; Aw & Labrecque, 2020, pp. 897–898). On the other hand, factual claims generally provide consumers with detailed and very specific information about the product

benefits, services, features or even endorsements, focused on driving consumer purchase likelihood, consideration and intention (Li et al., 2020, pp. 52–53; Barrón-Cedeño et al., 2020, pp. 217–218). Moreover, in the current era of technology innovation and digital connection, consumer behaviour still remains an exceptionally complex matter. In a study conducted by Cooley and Parks-Yancy (2019, pp. 254–255), it is emphasised how brand communication relies on consumer behaviour insights, which involves constant research because of the rapid and consistent changes within social media.

This paper focuses on answering the following research question: *To what extent do celebrity endorsements, factual claims and emotional appeals influence consumers in establishing brand credibility and driving their purchase intentions?* While other studies have focused on a similar topic (Halder et al., 2021, p. 397; Mills & Robson, 2019, p. 160; Buzeta et al., 2023, p. 637), this research paper aims to provide insights into the effects of celebrity endorsements, factual claims and emotional appeals on brand credibility and purchase intentions in the context of brand communication on social media. The focus here is to cover a knowledge gap by concentrating on one particular social media platform – Instagram, and by including the three different social media marketing elements. More explicitly, there have been studies conducted on this particular topic; however, none have focused on all three elements through the lens of brand communication to uncover effects on both brand credibility and consumer purchase intentions.

In addition to addressing the practical implications for businesses, this study also contributes academically by expanding upon existing theories and presenting possible new insights resulted from this research (Chin et al., 2019, p. 907). This research extends on the credibility theory by examining how brand communication messages used on Instagram can be used to enhance consumer trust and engagement, overall increasing brand credibility through expertise and trustworthiness (Halder et al., 2021, p. 399). Moreover, the study builds also on the dual coding framework, investigating how the combination of verbal and non-verbal elements in brand communication posts on Instagram can further drive consumer purchase intentions and help with brand credibility. Furthermore, examining these marketing elements on Instagram provides a nuanced understanding of consumer behaviour and brand credibility in the context of brand communication, offering researchers and professionals valuable insights that can be used for further exploration, analysis and strategy planning (Santos et al., 2022, p. 2; Chin et al., 2019, p. 907).

To elaborate, this study can contribute to the overall understanding of both brand communication and consumer behaviour in the current digital age. Given the constant developments and transformations in both technology and social media, this requires continuous research as many aspects within social media change rapidly, demand and trends dictating its direction (Fuchs, 2021, p. 180). Valuable insights can be gained in relation to the dynamic interplay between brand-consumer interactions and the effectiveness of persuasive marketing techniques on social media, particularly on Instagram. Previous research (Singh & Banerjee, 2021, p. 128; Kim et al., 2020, pp. 14–15; Raza et al., 2019, p. 454) has mainly focused on isolated aspects that are along the line of influencer marketing and endorsements, mainly user-generated content. The main difference is that this study is concerned with brand generated content in which three marketing elements are used and how that can impact consumer perceptions and behaviours. This angle provides an opportunity to understand how brand communication can be strategically used on Instagram to increase brand credibility and drive consumer purchase intentions.

In terms of social relevance, the findings can have implications for businesses, marketing professionals, as well as consumers. Brands can use the insights of this research and apply them to their brand communication strategies on Instagram, which can improve the effectiveness of engaging with consumers, potentially increasing brand credibility and driving consumer purchase intentions. Similarly, marketers can use the results to plan and adjust brand communication campaigns that are more informed, tailored and according to recent data, maximising the impact of the overall communication efforts and offering consumers a rather superior and more engaging brand experience on Instagram.

The methodology chosen for this research is quantitative, based on a questionnaire with an experimental design which involves a total of eight groups – a control group and seven other groups in which Instagram brand posts stimuli were used. Surveys generally allow for a collection of large-scale data from a significantly diverse sample of Instagram users which can provide insights into consumer perceptions and behaviours online in relation to brand communication (Callegaro & Yang, 2017, p. 440). The experimental design was chosen because it allows for a controlled examination of the impact of marketing elements on brand credibility and consumer purchase intentions in the presence of a manipulation check (Callegaro & Yang, 2017, p. 574). The controlled examination is meant

to ensure control over variables to ensure that any observed effects on the dependent variable are solely due to the manipulation of the independent variable.

Lastly, the credibility theory and the dual coding theory represent the theoretical framework deemed as necessary and appropriate to help guide this study. The credibility theory provides valuable insights into how consumers generally perceive and evaluate the overall credibility of a brand, based on their communication via certain channels, which can influence their attitude and behaviour towards the brand (Keshavarz, 2020, p. 274). The dual coding theory is rooted in understanding how information is processed and encoded by individuals from both verbal and non-verbal cues presented in the content of a brand (Dolan et al., 2019, pp. 2214–2215). Both theories are discussed in more detail in the following chapter of this paper.

2. Theoretical Framework

2.1 Credibility Theory

Credibility theory, as emphasised in a study conducted by Chen et al. (2022, p. 1909), provides a comprehensive framework for understanding consumer behaviour along with communication dynamics. In the context of social media platforms, particularly Instagram, the credibility theory argues that a consumer's impressions of a source's credibility can influence their acceptance of the delivered information (Cao et al., 2021, p. 838). In other words, the theory represents a fundamental basis for consumer behaviour and communication, examining the various ways in which people perceive and evaluate information in general, as well as sources of information (Irelli & Chaerudin, 2020, p. 887). Furthermore, this theory is crucial for both academia and marketers, being a key tool for persuasion and decision-making processes, frequently utilised in brand communication that includes social media marketing elements such as celebrity endorsements, factual claims and emotional appeals to assert credibility in the minds of consumers and positively influence purchase intentions (Onofrei et al., 2022, p. 12).

In the context of brand communication on Instagram, credibility takes the form of perceived brand credibility. Essentially, the theory suggests that individuals rely on various signals or cues in order to determine the overall credibility of a message or the source behind it (Iacobucci & De Cicco, 2020, p. 72). In this case, consumers on Instagram use factors such as trustworthiness, expertise, competency, truthfulness, delivering on promises, etc. in order to determine whether a brand's product claims are believable, which influences significantly the overall perceived brand credibility (Castillo-Abdul et al., 2022, p. 186). Moreover, Steenkamp (2020, p. 20) mentions that in today's digital age, social media platforms have become fully integrated into a brand's business, communication and marketing strategy, the credibility theory being particularly relevant to brands, offering a crucial understanding of consumer behaviour online.

The theory can be applied to brand communication on Instagram to understand how consumers perceive and respond to brand claims and offerings (Halder et al., 2021, p. 398). Brand credibility can be established through expertise and trustworthiness (Cao et al., 2021, p. 836). To elaborate, expertise represents the extent to which a given source is considered knowledgeable and experienced on a certain topic. At the same time, trustworthiness refers to the extent to which the source and the information presented are

considered honest and reliable (Voorveld, 2019, pp. 17–18). In the case of Instagram, marketers generally use celebrity endorsements to increase credibility by associating the brand with a celebrity whom individuals perceive as trustworthy, experienced, and overall relevant (Tian et al., 2021, pp. 1017–1018). This strategy is used to leverage the positive attributes and social influence of the celebrity in order to appeal to consumers and promote their products. For example, an endorsement from a well-respected dermatologist could increase the credibility of a beauty and care products brand because of the universally recognisable expertise as a doctor (Evan et al., 2021, p. 47). To further explain, dermatologists possess knowledge and experience in medical aspects related to skin, hair and nail health, being seen as specialised professionals that can endorse products based on their expertise, as well as show and explain the scientifical benefits for using certain products (Zamil et al., 2022, p. 38). In this case, consumers are more likely to trust the product and the brand, having in mind that it comes recommended by a specialist (Amon et al., 2024, p. 179).

Similarly, factual claims can increase credibility as long as factual evidence supports the claims being made (Barrón-Cedeño et al., 2020, p. 217). In the case of social media, factual claims can take various forms. For example, marketers might use scientific studies, industry certifications, or industry awards to support their claims, establishing trust and reliability. Furthermore, clarity about the sourcing and accuracy of information boosts credibility, instilling a sense of authenticity and dependability in the audience (Akram et al., 2023, pp. 3–4). Brands may establish credibility by including a combination of factual claims and evidence-based material in their marketing strategy, ultimately boosting consumer engagement and loyalty (Virdi, 2020, pp. 250–251).

Emotional appeals are an effective method for altering consumer views and increasing credibility in brand communication. More often, brands have used storytelling as a way to appeal to consumers' emotions, using storylines aimed at evoking certain feelings. Either through relatability or a sense of connection, the storyline is meant to boost the overall perceived brand credibility (Ahmadi et al., 2023, p. 119). For example, brands can use a storyline that highlights a public figure's personal experiences, achievements or problems, which in the end can appeal to viewers by instilling feelings of sincerity and authenticity, establishing a connection between the business and the target audience. Nonetheless, brand communication can be designed to resonate with people, appealing to logic,

emotion or morals, which can help increase credibility by connecting with consumers' emotional needs and desires (Casais & Pereira, 2021, pp. 283–284).

Drawing upon the existing literature on the credibility theory and applying it to the case of Instagram brand communication, this research focuses on testing the following hypotheses:

H1: There is a significant difference in perceived brand credibility between the group exposed to an Instagram post with a celebrity endorsement and the control group.

H2: There is a significant difference in perceived brand credibility between the group exposed to an Instagram post with a factual claim and the control group.

H3: There is a significant in perceived brand credibility between the group exposed to an Instagram post with an emotional appeal and the control group.

2.2 Purchase Intentions

Social media is a fast-paced and constantly changing environment with an intense and complex interplay between consumer perceptions and brand communication (McClure & Seock, 2020, p. 3). In a recent research, Harrigan et al. (2021, pp. 1300–1301) mention how consumer purchase intentions ultimately indicate brand performance and consumer engagement, emphasising how celebrity endorsements, factual claims, and emotional appeals are used by brands in an overall attempt to influence consumer attitudes and purchase decisions. Many brands often opt to strategically include these elements in their brand communication in an attempt to shape consumer attitudes and behaviour as well as influence purchase intentions and decisions (Irelli & Chaerudin, 2020, p. 887). Moreover, social media is constantly changing, adding new features which generate new trends and preferences, offering the opportunity for a more engaging form of content (Appel et al., 2019b, p. 82). Keeping that in mind, brands need to continuously adapt their marketing strategies, in order to stay relevant and resonate with consumers. In order to effectively leverage social media tactics to drive consumer purchase intentions, it is important to understand the complex dynamics between consumer behaviour online and certain marketing elements (Onofrei et al., 2022, p. 107).

Celebrity endorsements have a significant influence on customer purchase intentions, having the capacity to impose legitimacy and desirability on diverse products (Gupta & Nair, 2021, p. 3). Within social media, trends are extremely popular and constantly

changing. One trend that has become a normal practice is celebrity endorsements of products (Singh et al., 2021, p. 145). Brands have included this element in their marketing communication practices, ensuring that the endorser resonates with their brand identity and values. Zhu et al. (2022, pp. 1402–1403) mention how celebrity-endorsed products tend to appeal to consumers through the ideas of aspirational value, quality, and prestige. Additionally, a celebrity endorsement has the distinct characteristic of establishing a connection with consumers, taking advantage of certain aspects such as trust and familiarity associated with the celebrity's persona which tends to be transferred towards the brand in the minds of consumers (Aji et al., 2020, p. 92). More specifically, brands associate themselves with certain celebrities in an attempt to link their product and overall brand with those individuals' qualities and appeal to their community, which increases the consideration and likelihood of product purchase (Um & Jang, 2020, p. 3).

Another element that can influence purchase intentions is factual claims. According to Rietveld et al. (2020, p. 24), using factual statements in brand communication significantly and positively impacts brand trust and transparency. By supporting product claims with scientific proof, consumers are inspired to have more confidence and trust in both the brand and product, influencing their purchase decisions (Akram et al., 2023, p. 5). There are many ways of including factual claims in a brand's marketing communication strategy. The most utilised forms are scientific studies, customer testimonials, or data-driven insights, offering consumers concrete evidence and confirmation of product quality and contributing to brand transparency (Rietveld et al., 2020, p. 26). Overall, the main idea is that factual claims as a marketing element is mainly used in brand communication to gain trust and show transparency, which ultimately can influence the consumers' purchase intentions (Lăzăroiu et al., 2020, p. 3).

Consecutively, emotional appeals can also impact purchase intentions, representing a very effective tool for generating consumer involvement and influencing consumer buying intentions (Sriram et al., 2021, p. 2). To be more explicit, brands can appeal to consumers' emotions and evoke certain feelings which research shows that it can lead to building stronger connections between consumers and brands. This ultimately generates consumer loyalty and advocacy (Ibrahim & Aljarah, 2021, p. 15). Therefore, emotional appeals, either through fascinating and relatable storytelling or storylines, or through purpose-driven

activities, have a tremendously powerful impact on consumers' views, positively motivating them to make a purchase decision (Casaló et al., 2021, pp. 418–419).

This research draws on the presented literature and aims to test the following hypotheses related to consumer purchase intentions and brand communication on Instagram:

H4: There is a significant difference in consumer purchase intentions between the group exposed to an Instagram post with a celebrity endorsement and the control group.

H5: There is a significant difference in consumer purchase intentions between the group exposed to an Instagram post with a factual claim and the control group.

H6: There is a significant difference in consumer purchase intentions between the group exposed to an Instagram post with an emotional appeal and the control group.

2.3 Dual-Coding Theory

The dual coding theory refers to the way individuals encode and interpret information using verbal systems (linguistic processing) and visual cognitive systems (non-verbal, mental images), which can be used to drive consumer purchase intentions (Pinem et al., 2019, p. 2). The theory is fundamental to understanding what elements within brand communication on social media influence consumer purchase intentions and credibility.

The framework represents a fundamental tool for understanding the decision-making process of consumers and how information is received and understood (Dolan et al., 2019, p. 2232).

According to Paivio (1971, pp. 256–257), the theory has been widely used within many fields because it allows for an in-depth analysis of the differential effects of both visual and verbal stimuli. The two systems presented in the dual coding theory are different and separate, but highly interconnected (De Neys & Pennycook, 2019, p. 503). To further elaborate, the dual coding theory argues that visuals can enhance memory for verbal or written information because individuals tend to generally process information using two independent cognitive systems – one which is entirely used for verbal information and another that is used for imaged-based information (Dolan et al., 2019, pp. 2214–2215). Paivio emphasises that different stimuli can activate different encoding systems in the memories of individuals. The dual coding theory implies that visual stimulus material can activate the imaginal coding engrained in people's memory, meaning that any visual

information is encoded in an image-based form. Moreover, the verbal type of stimulus material such as text generally activates verbal coding, meaning that the information is encoded in a verbal form (Sowden et al., 2018, p. 40–41).

Applied to social media, the dual coding theory can help enhance the effect of marketing strategies (Dolan et al., 2019, p. 2219). Social media provides a dynamic sphere which facilitates the integration of visual and textual elements, which represents an ideal environment for dual coding principles. Given the focus of the research, celebrity endorsements can have an impact on brand credibility and consumer purchase intentions if the celebrity's image (visual) is paired with a convincing and relatable narrative about a product (text) (Jang et al., 2020, p. 2416). Therefore, on Instagram celebrity endorsements can effectively impact how credibility is established because of the way the messages are encoded – including verbal and visual codes (Razali et., 2023, p. 76). When individuals see a celebrity endorsing a branded product, consumers not only hear their words (verbal codes) but also see their image (visual code). Thus, this dual encoding enhances the endorsement, adding touches of memorability and persuasiveness (Ambroise & Albert, 2019, p. 101).

Research shows that factual claims encoded in verbal and visual code can be essential in driving purchase intentions (Dolan et al., p. 2221). More explicitly, consumers are more likely to believe a factual claim about a product as long as it is presented clearly and concisely, meaning that the consumer needs to see the facts behind the product claim along with hearing it from the endorser. This way the factual information is easier to process (McClure & Seock, 2020, p. 3). Moreover, emotional appeals, encoded in both visual and verbal cues, can also effectively drive purchase intentions. There is evidence that when emotional appeals are used in brand communication, consumers are more likely to feel the emotions that are being conveyed and relate to them, which can ultimately lead to a positive association with the product and a higher desire to purchase it (Kim et al., 2020, p. 33).

2.3.1 Paired Effects on Credibility

Marketers tend to combine marketing elements in their brand communication, generally to have a greater impact on consumers and increase brand credibility. Research showed that a well-known celebrity that endorses a product on social media, their fame and credibility is generally associated with the brand, meaning that consumers are more likely to perceive a brand as credible if it is recommended by someone they either trust, respect or shows expertise (Schimmelpfennig & Hunt, 2019, pp. 500–501). However, consumers have become more susceptible to celebrity endorsements, and brands tend to opt for a combination of celebrity endorsements and factual claims to support the viridity of the product claim in brand communication (Ambroise & Albert, 2019, pp. 100–101). For example, a celebrity endorses a supplement and promotes it through a detailed explanation on the benefits, the science behind it, how it works, and shows the research behind it. The elements combined can significantly boost the brand's overall credibility, promoting brand trust amongst consumers.

Similarly, celebrity endorsements are oftentimes combined with emotional appeals in an attempt to have a greater impact on consumers, appealing to their emotions (Zhang & Hung, 2020, pp. 2–3). One relevant example can be a celebrity that promotes a product through sharing an extremely personal experience about how a skincare product successfully managed to boost their level of self-confidence and self-esteem, certain captivating visuals being used and specific keywords being used in the description of the post (Eng & Jarvis, 2020, pp. 833–834). In this case, the celebrity endorsements' main purpose is to establish a strong connection with consumers by appealing to their emotions through sharing a story that viewers can relate to. This can be done through storytelling, inspirational stories or aspirational lives presented by a well-known personality on social media, that can use emotional resonance to increase the perceived credibility of a brand, helping build stronger connections between the consumers and the brand, fostering trust (Gupta et al. 2020, pp. 7675–7676).

Nonetheless, there is evidence that the combination of factual claims and emotional appeals in brand communication on social media can lead to an increased brand credibility as well (Rajaobelina et al., 2019, p. 188). In the eyes of consumers, brands that are able to provide factual information and evidence to support their product claims, alongside emotional appeals can overall impact their impression and purchase intentions (Rietveld et

al., 2020, p. 20). This combination of marketing elements can boost brand credibility through emotional and cognitive connections with consumers. To make it more concrete, think of the way Patagonia is communicating with consumers on social media. The brand constantly provides research that supports their sustainable business strategy and appeals to consumers' emotions through evoking feelings of responsibility, togetherness, consciousness and compassion towards the people crafting the garments and the environment (Balderjahn & Hoffmann, 2023, p. 262).

In terms of brand credibility, Hussain et al. (2020, p. 550) mention that celebrity endorsements combined with factual claims and emotional appeals used in social media brand communication can play a key role in shaping the overall perceived brand credibility. Through the lens of the dual coding theory, research shows that the marketing elements combined have specific roles, and together the effect on brand credibility can be greater, as each element is used to activate a certain code (Gass & Seiter, 2022, p. 392). Explicitly, celebrity endorsements tend to activate non-verbal, visual-based representations that enhance brand credibility through symbolic meanings and associations, also known as a halo effect. Factual claims are used for both verbal and non-verbal codes which contain verifiable information that reinforces credibility by emphasising the veracity of the product claims and promises made (Flanagin et al., 2018, pp. 1039). On the other hand, emotional appeals can evoke affective responses and activate non-verbal, image-based representations that are meant to resonate with consumers' emotions, values and mentality, which overall helps boost brand credibility (Dolan et al., 2019, p. 2230). Overall, research suggests that a combined effect is much stronger than when elements are presented individually.

Based on the revised literature, the research focuses on testing following hypotheses:

H7: The combined effects of celebrity endorsements and factual claims for increasing the perceived brand credibility is significantly stronger than the effects of each element when presented individually.

H8: The combined effects of celebrity endorsements and emotional appeals for increasing the perceived brand credibility is significantly stronger than the effects of each element when presented individually.

H9: The combined effects of factual claims and emotional appeals for increasing the perceived brand credibility is significantly stronger than the effects of each element when presented individually.

H10: The combined effects of all three marketing elements used for increasing the perceived brand credibility is significantly stronger than the effects of each element when presented individually.

2.3.2 Paired Effects on Purchase Intentions

Recent research emphasises the combined use of marketing elements to maximise the positive impact on consumer purchase intentions (Schimmelpfennig & Hunt, 2019, p. 489). The combination of celebrity endorsements and factual claims is often used by brands in their communication on social media in a general attempt to link their products with aspirational values and symbolic meanings, associated with a certain celebrity (McClure & Seock, 2020, p. 4). To be more explicit, factual claims are used in celebrity brand endorsement posts with the main purpose of increasing the perceived reliability and accuracy of the product claims, offering consumers a form of concrete information that can impact their purchasing decisions (Ambroise & Albert, 2019, p. 99). For instance, a well-known actress collaborates with a hair care brand to endorse a new line of products created for improving and eliminating frizzy hair. The celebrity chosen already has a community or a fan base that follows her closely. The collaboration then taps into the aspirational image that the actress has and emphasises the factual benefits of the brand's products. In the minds of consumers, the likelihood of purchasing the product is higher since products present verifiable benefits explained by someone they genuinely like and have aspirational feelings towards (Aw & Labrecque, 2020, pp. 897–898).

As mentioned previously, celebrity endorsements are generally used for the aspirational qualities and associations attached to well-known and admired individuals, as well as for facilitating desirability and positive perceptions transferred onto the endorsed brand and products (Yue et al., 2022, p. 350). At the same time, emotional appeals are used to evoke an emotional response from consumers, forming deep connections with consumers and shaping purchase decisions. In this case, emotional appeals and celebrity endorsements can be used in a brand's communication strategy on social media through a partnership or collaboration between a renowned public figure and a brand (Jha et al.,

2020, p. 15). For example, a cosmetics brand could have a partnership with an African-American public figure and promote the new line of products that include various amounts of foundation shades, tailored to all skin colours. The cosmetics industry has been highly criticized for not being diverse enough, and the brand could use this celebrity endorsement to appeal to consumers' sense of belonging and inclusion to drive purchase intentions. In this context, the brand attempts to form a connection with consumers through appealing to strong emotion and using a representative member of their community (Hussain, 2020, p. 5).

Nonetheless, factual claims and emotional appeals can be used in brand communication with the same purpose of driving and boosting consumer purchase decisions. Factual claims are used to provide consumers with concrete and verifiable information about the benefits, characteristics, and overall performance of products, which enhances the perceived value and credibility (Mills & Robson, 2019, p. 162). Consequently, emotional appeals help evoke powerful feelings, build and maintain connections with consumers on a more personal level. The ultimate combination between factual claims and emotional appeals has a positive effect on consumer purchase intentions as it gives the brand the opportunity to create a rather compelling story or narrative that can resonate with consumers' decision-making processes, influencing purchase intentions (Moran et al., 2019, p. 534).

In terms of the dual coding theory applied to this research, by combining the three tools – celebrity endorsements, factual claims and emotional appeals – the message created could be both persuasive and credible, appealing to consumers through different coding modes, leading to an increased desirability to purchase the products (Moran et al., 2019, p. 541). Celebrity endorsements in brand communication are used through non-verbal, image-based representations which are associated with the chosen celebrity's persona, ultimately activating emotions and desires in the consumers' minds (Osei-Frimpong et al., 2019, p. 104). Additionally, factual claims support brand communication in boosting consumer purchase intentions through explicit information either verbal or non-verbal about product benefits, features, performance, and the overall research supporting the claims being made. This approach is an attempt to appeal to the rational processing channel of consumers and influencing perceptions of quality and value involved (Kahraman & Kazançoğlu, 2019, p. 1220). Lastly, emotional appeals are used to evoke affective

responses in consumers and activate non-verbal, image or text-based representations that can resonate with their emotions to help drive consumer purchase (Wang et al., 2021, p. 469). Together, research shows that the elements have a greater impact on consumer purchase intentions, marketeers using them strategically: each element is being used for its particular role of activating a certain verbal or non-verbal cue (Chin et al., 2019, p. 910).

The literature reviewed on the dual coding theory applied to brand communication on social media with the three mentioned marketing elements suggests the possibility of testing the following hypotheses:

H11: The combined effects of celebrity endorsements and factual claims for driving consumer purchase intentions is significantly stronger than the effects of each element when presented individually.

H12: The combined effects of celebrity endorsements and emotional appeals for driving consumer purchase intentions is significantly stronger than the effects of each element when presented individually.

H13: The combined effects of factual claims and emotional appeals for driving consumer purchase intentions is significantly stronger than the effects of each element when presented individually.

H14: The combined effects of all three marketing elements used for driving consumer purchase intentions is significantly stronger than the effects of each element when presented individually.

3. Method

The following chapter focuses on explaining the choices made and structure of the research. The first section starts with a detailed description of the ideal sample necessary, followed by a sampling method section and another that describes the resulted sample. The following parts include research method, questionnaire design and procedure, an explanation of the stimuli preparation, the operationalisation and measurements for the concepts and variables used, the tools used for data collection and analysis, concluding with a section that describes and explains the validity and reliability of this research.

3.1 Sample

After using the G*Power v3.1.9.7 calculator tool to determine the appropriate sample size for this research, 269 respondents were proposed, considering an expected effect in proportion with an 80% chance ($\beta=.80$) of finding significant results. The expected effect is medium ($f=.25$), and the tool shows that in order to reach statistical power and significance, it is necessary to have a sample of at least 269 respondents. According to recent studies, people aged between 20 and 35 years old are more likely to interact with brands on social media, being more susceptible to persuasive communication and marketing efforts (Munsch, 2021, pp. 12–13). With this research in mind, the research units chosen for this study are individuals within that age group who use social media.

3.2 Sampling Method and Distribution

The sampling procedure chosen to reach the number of essential respondents is a mix of both snowball and convenience sampling. The questionnaire was distributed on various social media channels, through the researcher's personal social media profiles and network, which is also called convenience sampling. Individuals were also asked to fill in the survey either in person or through social media, and if possible, to share it with their network of coworkers and friends on their personal social media accounts, which classifies as snowball sampling. The people were contacted through private messages using Instagram, Facebook and WhatsApp, followed by public posts on Instagram, Reddit and Facebook. Moreover, the questionnaire was posted on various Facebook and Reddit groups, as well as on Survey Circle and Survey Swap – platforms which allow users to share their surveys and get respondents. Additionally, the survey was distributed throughout the

Erasmus University Rotterdam campus, the Openbare Bibliotheek Amsterdam (OBA) and a local supermarket (Jumbo City Damrak) in order to gather the required amount of respondents that can be considered a valid sample.

3.3 Descriptive Statistics

There were 351 responses collected and after cleaning the dataset from the responses that were incomplete and inconsistent with the set criteria, the dataset resulted in $N=278$ valid responses. The criteria for cleaning the data included deleting the answers that did not have the progress as 100%, did not use social media and the age was selected as either '19 or younger' and '36 or older'. Based on the valid sample achieved and as shown in Table 1 the age of the respondents ranged from 20 to 35 years old, with 44.6% of the respondents aged between 20-25 years old, 46.4% aged between 26-30 years old and 9% aged between 31-35 years old.

As shown in Table 2, the overall population was 57.9% female and 33.5% male, the remaining 2.9% being non-binary, 2.9% other, 2.9% prefer not to say. Most of the respondents are based in the Netherlands (55.8%), while 6.8% were based in Romania, 2.9% the United States, 2.5%

Germany, 2.2% Austria, 2.2% the United Kingdom, 1.8% Afghanistan, 1.8% Belgium, while other countries chosen accounted for less than 1.2%. The majority of the participants had a Bachelor's degree (56.1%), while 20.9% had a Master's degree, 9% High-School diploma, 9% Vocational degree and 4.0% a PhD, MBA, or other equivalent.

The distribution of participants in groups was done automatically by the Qualtrics randomiser and resulted in 12.6% being in the first group (Instagram brand post that includes a celebrity endorsement), 12.9% in the second group (Instagram brand post that includes factual claims), 12.6% in the third group (Instagram brand post that includes emotional appeals), 13.3% in the fourth group (Instagram brand post that includes celebrity endorsements and factual claims), 12.2% in the fifth group (Instagram brand post that includes celebrity endorsements and emotional appeals), 12.6% in the sixth group (Instagram brand post that includes factual claims and emotional appeals), 11.9% in the seventh group (Instagram brand post that includes celebrity endorsements, factual claims and emotional appeals), 11.9% in the eighth group (the control group that was shown an Instagram brand post with none of the marketing elements).

Table 1

Distribution across groups based on respondents' age

Group assignment	Age			
	20-25	26-30	31-35	Full sample
Group 1	14 (11.35%)	18 (14%)	3 (12%)	35 (12.6%)
Group 2	16 (12.9%)	17 (13.2%)	3 (12%)	36 (12.9%)
Group 3	13 (10.5%)	20 (15.5%)	2 (8%)	35 (12.6%)
Group 4	13 (10.5%)	20 (15.5%)	4 (16%)	37 (13.3%)
Group 5	16 (12.9%)	13 (10.1%)	5 (20%)	34 (12.2%)
Group 6	20 (16.1%)	11 (8.5%)	4 (16%)	35 (12.6%)
Group 7	16 (12.9%)	16 (12.4%)	1 (4%)	33 (11.9%)
Group 8	13 (12.9%)	14 (10.9%)	3 (12%)	33 (11.9%)
Total	124 (44.6%)	129 (46.4%)	25 (9%)	278 (100%)

Table 2

Distribution across groups based on respondents' gender

Group assignment	Gender					Full sample
	Male	Female	Non-binary	Other	Prefer not to say	
Group 1	16 (17.2%)	18 (11.2%)	1 (12.5%)	0 (0%)	0 (0%)	35 (12.6%)
Group 2	6 (6.5%)	29 (18%)	0 (0%)	1 (12.5%)	0 (0%)	36 (12.9%)
Group 3	12 (12.9%)	19 (11.8%)	1 (12.5%)	0 (0%)	3 (37.5%)	35 (12.6%)
Group 4	16 (17.2%)	20 (12.4%)	1 (12.5%)	0 (0%)	0 (0%)	37 (13.3%)
Group 5	12 (12.9%)	15 (9.3%)	1 (12.5%)	4 (50%)	2 (25%)	34 (12.2%)
Group 6	9 (9.7%)	22 (13.7%)	0 (0%)	2 (25%)	2 (25%)	35 (12.6%)
Group 7	12 (12.9%)	17 (10.6%)	2 (25%)	1 (12.5%)	1 (12.5%)	33 (11.9%)
Group 8	10 (10.8%)	21 (13%)	2 (25%)	0 (0%)	0 (0%)	33 (11.9%)

Total	93 (33.5%)	161 (57.9%)	8 (2.9%)	8 (2.9%)	25 (2.9%)	278 (100%)
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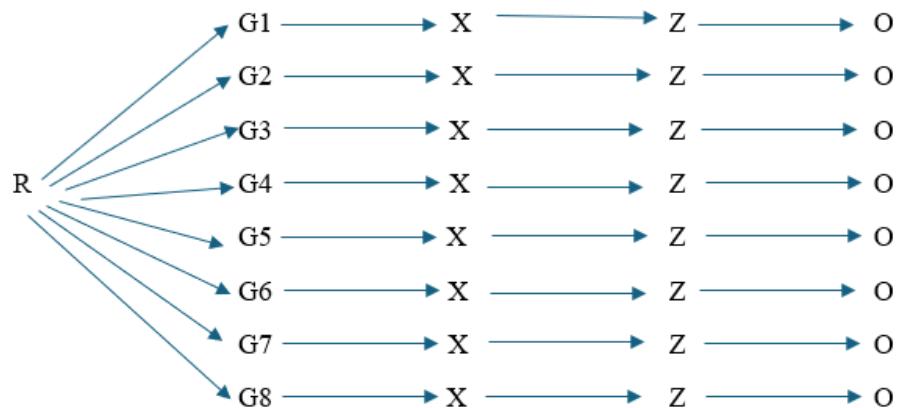
3.4 Research Design

An online experiment was deemed appropriate for this research, considering that this method provides a controlled environment in which variables can be manipulated best to determine the impact on credibility and customer purchase intentions (Luo et al., 2013, pp. 457–458). Experiments allow for a better understanding of consumer behaviour and decision-making processes regarding branded products on social media (Malter et al., 2020, p. 141). The hypotheses drawn from the literature can be tested using quantitative methods, and the results can show whether or not the expected effects occurred (Zhang & Mao, 2016, p. 160; Babbie, 2020, 229–230). Additionally, the literature points out that experiments are considered the most appropriate tool when researching what elements within a social media brand communication influence credibility and drive consumer purchase intentions (Knoll, 2015, p. 267; Neuman, 2014, pp. 281–282). Nonetheless, an experiment can be handled so that the independent variable manipulations can show if they influenced the dependent variables, thus providing greater internal validity (Babbie, 2020, p. 246).

In the case of this research, the experiment takes the form of $2 \times 2 \times 2$, based on the 8 unique combinations or groups formed, presented with a post-test observation only. The factorial design is shown below and it represents the flow from the random assignment in this study to each group and the measurement of the dependent variables for each group, the visualisation helping with providing a better understanding of the entire flow and structure of the desired experimental design. In Figure 1, there are certain symbols: R is a representation of the random assignment for the eight experimental groups, X is the first dependent variable – brand credibility, while Z is the second dependent variable – purchase intentions. Moreover, the symbols G1 to G8 represent the groups based on the independent variables – celebrity endorsements, factual claims and emotional appeals – and the control group.

Figure 1

Experimental Design



R = random assignment for the 8 experimental groups

G1 = celebrity endorsements (IV1)

G2 = factual claims (IV2)

G3 = celebrity endorsements (IV3)

G4 = celebrity endorsements and factual claims (IV1 + IV2)

G5 = celebrity endorsements and emotional appeals (IV2 + IV3)

G6 = factual claims and emotional appeals (IV2 + IV3)

G7 = celebrity endorsements + factual claims + emotional appeals (IV1 + IV2 + IV3)

G8 = control group

X = brand credibility (DV1)

Z = consumer purchase intentions (DV2)

O = post-test observation

3.5 Questionnaire Design and Procedure

The survey was designed in Qualtrics and it started with a short introduction message in which the research topic was mentioned, along with a part that was asking participants for consent to use their data as well as explaining that participation is voluntary, quitting the survey at any time is allowed, protecting their anonymity, assuring that the questionnaire will be used for research purposes only, followed by the approximate survey completion time and the researcher's contact details. Filter questions were used following the disclaimer, regarding the participants' age and whether they use social media or not. These two questions helped obtain the desired sample and valid responses since the research is specifically focused on a certain target audience. If the participants did not use social media or meet the age criteria, they were respectfully sent to the end of the survey, thanking them for their time and explained that they do not meet the target group criteria.

The first section included questions related to demographics – the participants' gender, level of education, country of residence and nationality. The second part was a short section that included three questions about Instagram usage frequency, interaction with brands on Instagram and frequency of online purchases based on brand communication on Instagram (a brand post with a visual and description presented, alongside a comment section). The next part focused on stimulus material. The participants were asked to carefully take a look at an Instagram post. For the purpose of this research, the stimulus material depicted eight completely fictitious Instagram posts about a made-up hair care brand, randomly and evenly assigned to the participants through the randomiser feature in Qualtrics. The stimulus material is explained in more details in the next section of the paper.

The last part of the survey included questions based on the Instagram post showed about brand credibility and consumer purchase intentions. This section focused on measuring participants' perceived brand credibility, likelihood, consideration and intention of purchasing the products that have been shown in the Instagram post. The survey ended with a 'Thank you for participating' message for the participants in which an email address was provided in case of further inquiries about the research.

3.6 Stimuli Preparation

As mentioned in the previous section, there were eight stimulus material used for this study which are shown in Appendix B. Since the focus here is on one particular social media platform, the stimuli used were Instagram posts. Out of the eight Instagram posts, only one did not include any marketing elements – celebrity endorsements, factual claims or emotional appeals, which was meant for the control group. Furthermore, there was one post for each one of those marketing elements, one post for each duo combination between the three of them (celebrity endorsements and factual claims, celebrity endorsements and emotional appeals, factual claims and emotional appeals), and last but not least, one post that included all three marketing elements. For the celebrity endorsement element, the actress Jennifer Aniston was used since the post needed to include someone that can be immediately recognised by participants, regardless of their gender, as well as someone that can be linked to hair care products and would appear as a logical association in terms of brand communication.

All Instagram posts were created and designed specifically for this research, depicting a completely fictitious brand and products. The language was English, chosen mainly for its universality, since the sampling technique was a combination between convenience and snowball, which was achieved through the researcher's social network. Furthermore, there were eight different versions of the same Instagram post. Through the use of Adobe Photoshop and Canva Pro, the visuals were created to mimic an actual Instagram brand post. Each stimuli depicted an Instagram post that includes a visual in which the product is presented, some text on the visual and some icons, along with a description and comments, all completely fabricated.

The brand was focused on hair care products and the main reason for choosing this type of products is because along the years, many individuals have started their own line of products, using their community and social media reach to promote their products. Within the beauty and personal care industry, hair care products have been at the top items heavily sold and promoted on social media, people being more prone to trying out the products themselves (Vişelar, 2019, p. 258). Moreover, the products can be used by both females and males, as opposed to other personal care products which could be used by both genders but could potentially be more controversial and overall people tend to be biased towards. Nonetheless, the ultimate choice to include a completely fictitious brand

and products is based on the idea that the more familiar people are with a certain brand, the higher chance for bias. Therefore, to avoid biased opinions, the brand was invented, and the posts created and designed integrally by the researcher.

3.7 Measurements

This research focused on determining the extent to which celebrity endorsements, factual claims and emotional appeals influence and impact the perceived brand credibility and purchase intentions of consumers, by looking at main and interaction effects. Literature suggests that Instagram posts that include at least one of these social media marketing elements used in brand communication can have a significant effect on perceived credibility and consumer purchase intentions (Rahman et al., 2022, pp. 3–4).

Celebrity endorsements is one of the three independent variables manipulation for this experiment and it is defined as any type of post that features a well-known public figure who is perceived to have influential power over potential consumers and is promoting or endorsing a brand's products or services (Mookda et al., 2020, p. 1016). The second independent variable and manipulation is factual claims, which is referred to as verifiable and objective statements made by a brand or brand endorser about the product's overall performance and attributes within a brand's communication on social media (Ordenes et al., 2018, p. 989). Lastly, the third independent variable is emotional appeals, defined by Rietveld et al. (2020, p. 31) as specific elements designed to appeal to consumers' emotions, aiming for evoking certain feelings.

There are two dependent variables in this research – perceived brand credibility and consumer purchase intentions. According to research (Ohanian 1990, p. 41), perceived brand credibility is defined and conceptualised as the extent to which the source of a message is perceived as trustworthy, knowledgeable and attractive. However, this study focuses more on the first two dimensions, which can also be found in Munnucca et al. (2016, p. 190), excluding the last item about attractiveness. Moreover, the main focus of the study is to determine a brand's perceived credibility in the eyes of consumers, based on brand communication on social media. The scale used to measure the perceived brand credibility is a 5-point Likert scale with 1 – Strongly disagree and 5 – Strongly agree. Furthermore, the scale has eight items which focus on certain aspects within credibility. The first item is 'This brand reminds me of someone who is competent and knows what

he/she is doing.', the second item is 'This brand delivers what it promises.', the third item is 'This brand's product claims are believable.', the fourth item is 'I expect this brand to keep its promises.', the fifth item is 'The brand has a name you can trust.', the sixth item is 'This brand doesn't pretend to be something it isn't.', the seventh item is 'I know what I'm going to get from this brand.', and the last item is 'I know I can count on this brand being there in the future.' All the items are focused on the brand and its consumers, and this particular scale has been used in a study conducted by Erdem and Swait (2004, p. 195), as well as in one study by Sweeney and Swait (2008).

The second dependent variable is purchase intentions, which has been previously defined as a consumer's intention to buy a product or service from a brand in the future Hsu and Tsou (2011, p. 512). This variable is measured through Pavlou and Gefen's scale (2004, p. 41). Thus, purchase intention is measured here using three items, consideration, likelihood and intention, measured through a 5-point Likert scale. The first item – consideration – is presented in the survey as 'Given the chance, I would probably consider buying the product that was promoted in the future.'. The second item – likelihood – is shown as 'It is likely that I will actually buy the product that was promoted in the future.', and the last item – intention – is presented as 'Given the opportunity, I intend to buy the product that was promoted in the brand's post.'

Nonetheless, the data was analysed in a programme software called SPSS and before running any tests, it was necessary to compute new variables from the existing once. Since the study involved distributing the participants in random groups, the new variables entitled "Celebrity", "Factual" and "Emotional" were created by gathering the stimuli which fit best in each of the categories. Moreover, two new variables were created for brand credibility and consumer purchase intentions through adding all the groups together and dividing it by the number of groups (which was eight in this case).

3.8 Validity and Reliability

In terms of validity, the scales used in this paper have been previously used in other researches, which helps ensure a certain type of viability. This study focuses on measuring perceived brand credibility and consumer purchase intentions within the scope of brand communication on social media. Moreover, the reliability analysis conducted for both brand credibility and consumer purchase intentions revealed that the scales included in this research have scored high values for Cronbach's Alpha, above .7, which according to researchers, are considered reliable values (Nunnally & Bernstein, 1978, p. 300). Additionally, all scales included for brand credibility and consumer purchase intentions were a 5-point Likert scale, which is considered to be reliable, participants being able to choose from a various range of options instead of forcing a response or leaving room for writing an answer which most participants find irritating during the completion of surveys (Neuman, 2014, p. 282; Story & Tait, 2019, pp. 192–193).

As mentioned before, the scales used were adopted from other research papers, covering the aspect of reliability through previous use and testing. The reliability test showed that the scales used for both consumer purchase intentions and brand credibility scored way above the minimal limit, with Cronbach's α of .95 for purchase intentions and .85 for perceived brand credibility. Furthermore, all steps taken in order to create the survey and the stimulus material are explained in great detail and an end result is presented in Appendix A and Appendix B. Similarly, the concepts used have been defined and described thoroughly in the appropriate section of the paper.

In terms of internal validity, a randomiser was used to eliminate the likelihood of selection bias as much as possible. The questionnaire was developed in Qualtrics and analysed in SPSS, both software tools being chosen in attempt to minimise any risks of potential expectancy bias. Additionally, the stimulus material was also intentionally designed using a fictional brand to minimise potential bias that can usually result from an experiment conducted on a real brand. The main idea was to ensure internal validity through randomisation, the presence of a control group, including double-blinding (both researcher and participants being unaware of the group assignments) and having standardised instructions for participants (everyone received the same information).

4. Results

To answer the research question, a total of fourteen hypotheses have been developed. As mentioned in the beginning of the paper, this research includes three independent variables – celebrity endorsements, factual claims and emotional appeals, as well as two dependent variables – perceived brand credibility and purchase intentions. In order to test each hypothesis, certain analyses have been conducted in SPSS. For H1, H2, H3, H4, H5 and H6, t-tests were deemed as appropriate tools for comparing means between two groups and assess the significance of differences in the data. A two-way ANOVA was used to test H7, H8, H9, H11, H12 and H13, since the main purpose was to examine the main and interaction effects of two independent variables on one dependent variable. Nonetheless, for the remaining two hypotheses – H10 and H14 – a three-way ANOVA was introduced to better test the main and interaction effect between three independent variables on each of the dependent variables. The results are presented below in the next section, with a detailed explanation and description of the results for each hypothesis.

4.1 Hypothesis testing

H1: There is a significant difference in perceived brand credibility between the group exposed to an Instagram post with a celebrity endorsement and the control group.

To test this hypothesis, a t-test was conducted. The results showed that there was no significant difference in brand credibility between the group exposed to an Instagram post with celebrity endorsements ($M = 3.42, SD = .85$) and the control group ($M = 3.45, SD = .73$) with $t(66.480) = -.15$ and $p = .40$. In this case, the p value is greater than .05, which means H1 is rejected. H0 is accepted in this case – there is no significant difference in perceived credibility between the group exposed to an Instagram post with a celebrity endorsement and the control group.

H2: There is a significant difference in perceived brand credibility between the group exposed to an Instagram post with a factual claim and the control group.

For this hypothesis, a t-test was conducted as well. The results revealed that there is no significant difference in brand credibility between the group exposed to an Instagram post with factual claims ($M = 3.60, SD = .71$) and the control group ($M = 3.45, SD = .73$) with $t(66.150) = .86$ and $p = .93$. The p value is greater than .05, meaning that H2 is rejected. In

in this case, H0 is accepted which states that there is no significant difference in perceived credibility between the group exposed to an Instagram post with factual claims and the control group.

H3: There is a significant difference in perceived brand credibility between the group exposed to an Instagram post with an emotional appeal and the control group.

This hypothesis was tested using a t-test. After conducting the test, the results showed that there is no significant difference in brand credibility between the group exposed to an Instagram post with emotional appeals ($M = 3.53, SD = .78$) and the control group ($M = 3.45, SD = .73$), $t(66.998) = .46$, with $p = .89$. The p value is greater than 0.05 which means that H3 is rejected. With these results, H0 is accepted – there is no significant difference in perceived credibility between the group exposed to an Instagram post with emotional appeals and the control group.

H4: There is a significant difference in consumer purchase intentions between the group exposed to an Instagram post with a celebrity endorsement and the control group.

Once again, a t-test was conducted to compare the means of the two groups. The t-test results showed that there is no significant difference in consumer purchase intentions between the group exposed to an Instagram post with celebrity endorsements ($M = 3.50, SD = 1.44$) and the control group ($M = 3.55, SD = 1.39$), $t(65.968) = -.15$, with $p = .47$. The p value here is greater than .05 which means that H4 is rejected. In this case, H0 is accepted meaning that there is no significant difference in consumer purchase intentions between the group exposed to an Instagram post with a celebrity endorsement and the control group.

H5: There is a significant difference in consumer purchase intentions between the group exposed to an Instagram post with a factual claim and the control group.

The t-test conducted revealed that there is no significant difference in consumer purchase intentions between the group exposed to an Instagram post with factual claims ($M = 3.62, SD = 1.20$) and the control group ($M = 3.55, SD = 1.39$), $t(63.483) = .21$, with $p = .39$. Here, the p value is greater than .05 which means that H5 is rejected – there is no

significant difference in consumer purchase intentions between the group exposed to an Instagram post with factual claims and the control group.

H6: There is a significant difference in consumer purchase intentions between the group exposed to an Instagram post with an emotional appeal and the control group.

The last t-test conducted showed that there is no significant difference in consumer purchase intentions between the group exposed to an Instagram post with emotional appeals ($M = 3.58, SD = 1.33$) and the control group ($M = 3.55, SD = 1.39$), $t(65.279) = .077$, with $p = .81$. The p value here is greater than .05 which means that H5 is rejected. There is no significant difference in consumer purchase intentions between the group exposed to an Instagram post with emotional appeals and the control group.

H7: The combined effects of celebrity endorsements and factual claims for increasing the perceived brand credibility is significantly stronger than the effects of each element when presented individually.

For this hypothesis, a two-way ANOVA was conducted with celebrity endorsements and factual claims as independent variables and brand credibility as the dependent variable. ANOVA revealed a non-significant effect for celebrity endorsements on brand credibility, with $F(1, 274) = .04, p = .83$, partial $\eta^2 = .00$. For factual claims, the ANOVA also revealed a non-significant effect $F(1, 274) = .48, p = .49$, partial $\eta^2 = .002$. Moreover, the test showed that the interaction effect between celebrity endorsements and factual claims is also not significant $F(1, 274) = .51, p = .47$, partial $\eta^2 = .002$. Since p has a value greater than .05, H7 is not accepted, meaning that the combined effects of celebrity endorsements and factual claims for increasing the perceived brand credibility is not significantly stronger than the effects of each element when presented individually.

H8: The combined effects of celebrity endorsements and emotional appeals for increasing the perceived brand credibility is significantly stronger than the effects of each element when presented individually.

To test this hypothesis, a two-way ANOVA was conducted with celebrity endorsements and emotional appeals as independent variables and brand credibility as the dependent variable. The ANOVA uncovered a non-significant effect for celebrity endorsements on

brand credibility $F(1, 274) = .04, p = .85$, partial $\eta^2 = .00$. For emotional appeals, the ANOVA also showed a non-significant effect $F(1, 274) = .10, p = .75$, partial $\eta^2 = .00$. Moreover, the test revealed that the interaction effect between celebrity endorsements and emotional appeals is not significant $F(1, 274) = 1.005, p = .32$, partial $\eta^2 = .004$. Since the interaction effect is not significant, p value being greater than .05, H8 is rejected. These results reinforce the H0 statement – the combined effects of celebrity endorsements and emotional appeals for increasing the perceived brand credibility is not significantly stronger than the effects of each element when presented individually.

H9: The combined effects of factual claims and emotional appeals for increasing the perceived brand credibility is significantly stronger than the effects of each element when presented individually.

A two-way ANOVA was conducted for this hypothesis, with factual claims and emotional appeals being independent variables and brand credibility as the dependent variable. This ANOVA resulted in a non-significant effect for emotional appeals on brand credibility $F(1, 274) = .106, p = .74$, partial $\eta^2 = .00$. For factual claims, ANOVA also revealed a non-significant effect $F(1, 274) = .50, p = .48$, partial $\eta^2 = .002$. Nonetheless, the test uncovered that the interaction effect between factual claims and emotional appeals is not significant $F(1, 274) = 1.94, p = .16$, partial $\eta^2 = .007$. Since the interaction effect is not significant, p value being greater than .05, H9 is rejected, meaning that the combined effects of factual claims and emotional appeals for increasing the perceived brand credibility is not significantly stronger than the effects of each element when presented individually.

H10: The combined effects of all three marketing elements used for increasing the perceived credibility is significantly stronger than the effects of each element when presented individually.

In the case of this hypothesis, a three-way ANOVA was conducted with celebrity endorsements, factual claims and emotional appeals as the independent variables, and perceived brand credibility as the dependent variable. The results showed a non-significant effect for celebrity endorsements on perceived brand credibility $F(1, 270) = .03, p = .85$, partial $\eta^2 = .00$. For factual claims, ANOVA revealed a non-significant effect $F(1, 270) = .49$,

$p = .48$, partial $\eta^2 = .002$. For emotional appeals, the results indicated a non-significant effect $F(1, 270) = .103, p = .75$, partial $\eta^2 = .00$.

For celebrity endorsements and factual claims, ANOVA demonstrated a non-significant effect $F(1, 270) = .52, p = .47$, partial $\eta^2 = .002$. For celebrity endorsements and emotional appeals it showed a non-significant effect $F(1, 270) = .94, p = .33$, partial $\eta^2 = .003$ and for factual claims and emotional appeals it showed a non-significant $F(1, 270) = 1.94, p = .16$, partial $\eta^2 = .007$. Lastly, for the combination of the three elements, the ANOVA uncovered a non-significant effect as well with $F(1, 270) = .02, p = .89$, partial $\eta^2 = .00$. These results show a p value greater than .05 which means H10 is rejected. H0 is accepted and that means the combined effects of all three marketing elements used for increasing the perceived credibility is not significantly stronger than the effects of each element when presented individually.

H11: The combined effects of celebrity endorsements and factual claims for driving consumer purchase intentions is significantly stronger than the effects of each element when presented individually.

To test this, a two-way ANOVA was used with celebrity endorsements and factual claims as independent variables and consumer purchase intentions as the dependent variable. ANOVA revealed a non-significant effect for celebrity endorsements on purchase intentions $F(1, 274) = .60, p = .44$, partial $\eta^2 = .002$. For factual claims, ANOVA did not reveal a significant effect $F(1, 274) = .007, p = .93$, partial $\eta^2 = .00$. Moreover, the test did demonstrate that the interaction effect between celebrity endorsements and emotional appeals is also not significant $F(1, 274) = .11, p = .73$, partial $\eta^2 = .00$. The p value for the interaction effect is greater than .05 which means that H11 is not accepted. This leads to the acceptance of H0 which mentions that the combined effects of celebrity endorsements and factual claims for driving consumer purchase intentions is not stronger than the effects of each element when presented individually.

H12: The combined effects of celebrity endorsements and emotional appeals for driving consumer purchase intentions is significantly stronger than the effects of each element when presented individually.

A two-way ANOVA was employed in order to test this hypothesis in which celebrity endorsements and emotional appeals are the independent variables and consumer purchase intentions is the dependent variable. ANOVA revealed a non-significant effect for celebrity endorsements on purchase intentions $F(1, 274) = .58, p = .45$, partial $\eta^2 = .002$. For emotional appeals, ANOVA indicated a non-significant effect $F(1, 274) = .28, p = .59$, partial $\eta^2 = .001$. Moreover, the test showed that the interaction effect between celebrity endorsements and emotional appeals is not significant $F(1, 274) = .28, p = .60$, partial $\eta^2 = .001$. Considering that the interaction effect is not significant, with a p value greater than .05, H12 is rejected. The combined effects of celebrity endorsements and emotional appeals for driving consumer purchase intentions is not significantly stronger than the effects of each element when presented individually.

H13: The combined effects of factual claims and emotional appeals for driving consumer purchase intentions is significantly stronger than the effects of each element when presented individually.

Another two-way ANOVA was conducted with emotional appeals and factual claims being the independent variables and consumer purchase intentions as the dependent variable. ANOVA revealed a non-significant effect for factual claims on purchase intentions $F(1, 274) = .004, p = .95$, partial $\eta^2 = .00$. For emotional appeals, ANOVA demonstrated also a non-significant effect $F(1, 274) = .29, p = .59$, partial $\eta^2 = .001$. Moreover, the test resulted in a non-significant interaction effect between celebrity endorsements and emotional appeals, with $F(1, 274) = .25, p = .62$, partial $\eta^2 = .001$. Given that the interaction effect is not significant, p value being greater than .05, H13 is rejected. This shows that the combined effects of factual claims and emotional appeals for driving consumer purchase intentions is not significantly stronger than the effects of each element when presented individually.

H14: The combined effects of all three marketing elements used for driving consumer purchase intentions is significantly stronger than the effects of each element when presented individually.

A three-way ANOVA was used for this hypothesis in order to test the interaction effect between the three elements. Here, celebrity endorsements, factual claims and emotional

appeals were the independent variables and consumer purchase intentions was the dependent variable. The results showed a non-significant effect for celebrity endorsements on perceived brand credibility $F(1, 270) = .54, p = .46$, partial $\eta^2 = .002$. For factual claims, ANOVA revealed a non-significant effect $F(1, 270) = .003, p = .96$, partial $\eta^2 = .00$. For emotional appeals, the results indicated a non-significant effect $F(1, 270) = .28, p = .60$, partial $\eta^2 = .001$.

For celebrity endorsements and factual claims, ANOVA demonstrated a non-significant effect $F(1, 270) = .09, p = .76$, partial $\eta^2 = .00$. For celebrity endorsements and emotional appeals it showed a non-significant effect $F(1, 270) = .26, p = .61$, partial $\eta^2 = .001$ and for factual claims and emotional appeals it also showed a non-significant effect with $F(1, 270) = .24, p = .62$, partial $\eta^2 = .001$. Lastly, for the combination of all three elements, ANOVA uncovered a non-significant effect $F(1, 270) = .40, p = .53$, partial $\eta^2 = .001$. With these results, H14 is rejected based on the p value being greater than .05, revealing that the combined effects of all three marketing elements used for driving consumer purchase intentions is not significantly stronger than the effects of each element when presented individually.

5. Discussion

This particular section focuses on elaborating on the results of the conducted analyses and tests that determined either the acceptance or rejection of the 14 hypotheses proposed for answering the following research question: *To what extent do celebrity endorsements, factual claims, and emotional appeals influence consumers in establishing brand credibility and driving their purchase intentions within the context of brand communication on Instagram.* As mentioned in the previous section, for the first six hypotheses, a number of six t-tests were conducted in order to best compare the means between two groups (Walters, 2021, p. 5). Contrary to the literature consulted for both brand credibility and consumer purchase intentions, the analysis showed that for this research, there are no significant differences between the group exposed to Instagram posts with a celebrity endorsement, factual claim or an emotional appeal. This could be because past research has focused on a slightly different target audience, either younger or older, a different platform and type of content.

The two-way ANOVA was used to test H7, H8, H9, H11, H12 and H13 in an attempt to determine the potential influence of two independent variables on a dependent variable, as well as the interaction effect that can exist between the variables (Vijayaragunathan & Srinivasan, 2021, p. 541). The results for all hypotheses indicated that the combined effect of the independent variables is not significantly stronger than the effects of each element when presented individually. This means that the combination of elements does not impact brand credibility and drive consumer purchase intentions more than when the elements are presented individually. These findings are in contradiction with the research consulted for paired effects in terms of brand credibility and driving consumer purchase intentions. While most of the research consulted on the topic are recent (not older than 2018), the studies are based on older research papers and theoretical frameworks. With the constant innovation and development in technology, it is possible that for this research the hypotheses are not supported, given the newer types of brand communication on social media.

A three-way ANOVA was conducted for H10 and H14 with the same purpose of the two-way ANOVA, however, here the focus was on the influence and interaction effect of all three elements in relation to consumer purchase intentions and brand credibility (Celik, 2023, p.1). Similar to the results of the two-way ANOVA, this analysis revealed that the

combined effects of all three marketing elements is not significantly stronger than the effects of each element when presented individually. In other words, the results showed that celebrity endorsements, factual claims and emotional appeals combined do not impact or influence brand credibility or consumer purchase intentions more than when the elements are presented individually. The results of this analysis contradict the literature reviewed along with the theories used. Once again, there is research that supports the idea of combined effects that lead to an increased brand credibility and consumer purchase intentions. However, this study does not seem to have found that based on the data collected. One reason for this to happen can be that the theory and the literature have focused on a different type of content, communication and platform.

The main purpose of this research was to cover a knowledge gap by focusing on brand communication on one particular social media platform – Instagram. While the results of the research are in contrast with past studies, it does not completely rule out the possibility of the same hypotheses to be tested and accepted in other conditions, considering other research criteria. More explicitly, while the results showed that celebrity endorsements, factual claims and emotional appeals influence brand credibility and drive consumer purchase intentions to no extent, the findings are only valid in the context of this research and the way it was conducted. There are many changes and improvements that can be done to this study – the research method, sampling technique, sample size and criteria, theoretical framework, as well as experimental design and stimulus material, which can potentially lead to a different end result.

6. Limitations and Recommendations for Further Research

It is worth mentioning that the research was conducted through snowball and convenience sampling which can overall impact the quality of the data. Given that the respondents are mainly from the researcher's community and network, the data resulted can be slightly biased, and dominated by responses from a certain country. In this case, the majority of the respondents (55.8%) are based in The Netherlands, which limits the research as it can be generalised to all countries. Moreover, in terms of the sample, the data showed that more than 50% of the respondents were female (57.9%), which made the overall research have an uneven distribution across the experimental groups.

The stimulus material used could have also impacted the overall results of the research, while many necessary aspects were considered to ensure that it will not happen. While the product and brand were fictitious, consumers could have just not perceived the brand communication as credible because the brand was known to them. Consumers can be rather sceptical when it comes to new brands, especially without someone famous or familiar promoting it. The persona chosen as the celebrity endorsement can also be a factor of influence. Jennifer Aniston is an actress that is well-known worldwide, however, some people could genuinely not like her and that could have impacted the research, as individuals that generally dislike the actress are significantly more likely to not purchase the product endorsed.

There are certain aspects that could be improved for the next research on a similar topic. Different scales can be used to measure brand credibility and consumer purchase intentions, perhaps newer ones or maybe just additional scales to the ones that are mentioned in this research. Two scales for each variable could also predict different results and be more aligned with literature. On that note, the literature consulted can also be adjusted. New studies are constantly being published and there could also be other literature out there that is more suitable and represents a better guidance for the research. Moreover, the theories used could also be improved or changed, using either newer ones or some that could work better for this type of experimental research.

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Appendix A

Survey

Start of Block: Intro

Consent

Dear participant, Thank you very much for participating in this research. This research is conducted as part of my graduation from the master's programme Media & Business at Erasmus University Rotterdam. It consists of a survey with questions on your experiences with brand communication on social media. Please be aware that your participation is completely voluntarily, meaning that you can quit at any time during your participation. Furthermore, your personal information will be kept strictly confidential, and the findings of this survey will be used solely for class purposes. Hence, your anonymity is guaranteed. Completing the survey takes approximately 9 minutes. If you have any questions during or after your participation, do not hesitate to contact 665070cc@eur.nl

I understand the above and agree on participating in this research. (4)

End of Block: Intro

Start of Block: Selection Criteria

Age What is your age?

- 19 or younger (1)
- 20-25 (2)
- 26-30 (3)
- 31-35 (5)
- 36 or older (6)

Social media usage Do you use social media?

- Yes (1)
- No (2)

End of Block: Selection Criteria

Start of Block: Custom message

Q28 Thank you for your interest in this study. Regrettably, you do not fit the target group.

End of Block: Custom message

Start of Block: Demographics

Q4 - Gender What gender do you identify with?

- Male (1)
- Female (2)
- Non-binary / third gender (3)
- Other (4)
- Prefer not to say (5)

Q5 - Education What is the highest educational level that you have completed?

- Primary school (1)
- Secondary school / high school (2)
- Vocational degree after high school (3)
- Bachelor's degree (4)
- Master's degree (5)
- PhD, MBA, or other equivalent (6)
- Other, namely (7) _____
- Prefer not to say (8)

Q2 - Location In which country do you currently live?

▼ Afghanistan (1) ... Other (250)

Nationality Which nationality do you belong to?

▼ Afghan (187) ... Zimbabwean (380)

End of Block: Demographics

Start of Block: Instagram usage

Instagram frequency How often do you use Instagram?

- Never (1)
- Rarely (2)
- Sometimes (3)
- Often (4)
- Very often (5)

Gen brand purchase How often do you purchase products based on brand communication on Instagram (e.g. reels, posts, videos)?

- Never (1)
- Rarely (2)
- Sometimes (3)
- Often (4)
- Very often (5)

End of Block: Instagram usage

Start of Block: Message

Stimuli message Please take a look at the following Instagram post.

End of Block: Message

Start of Block: Stimuli 1

Celebrity endorsements

End of Block: Stimuli 1

Start of Block: Stimuli 2

Factual claims

End of Block: Stimuli 2

Start of Block: Stimuli 3

Emotional appeals

End of Block: Stimuli 3

Start of Block: Stimuli 4

CE & FC

End of Block: Stimuli 4

Start of Block: Stimuli 5

CE & EA

End of Block: Stimuli 5

Start of Block: Stimuli 6

FC & EA

End of Block: Stimuli 6

Start of Block: Stimuli 7

CE & FC & EA

End of Block: Stimuli 7

Start of Block: Stimuli 8

Control group

End of Block: Stimuli 8

Start of Block: Brand credibility

Based on the Instagram post that you have seen, please answer the extent to which you agree or disagree with the following statements:

Q27 Please rate to what extent you agree (5) or disagree (1) with each of the following descriptions about the content (image, text, and description) posted by the brand on their Instagram page:

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree or disagree (3)	Somewhat agree (4)	Strongly agree (5)
This brand reminds me of someone who is competent and knows what he/she is doing. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This brand delivers what it promises. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This brand's product claims are believable. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I expect this brand to keep its promises. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The brand has a name you can trust. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This brand doesn't pretend to be something it isn't. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know what I'm going to get from this brand. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know I can count on this brand being there in the future. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Brand credibility

Start of Block: Purchase intentions

Consideration Given the chance, I would probably consider buying the product that was promoted in the future.

- Strongly disagree (1)
- Somewhat disagree (2)
- Neither agree nor disagree (3)
- Somewhat agree (4)
- Strongly agree (5)

Likelihood It is likely that I will actually buy the product that was promoted in the future.

- Strongly disagree (1)
- Somewhat disagree (2)
- Neither agree nor disagree (3)
- Somewhat agree (4)
- Strongly agree (5)

Intention Given the opportunity, I intend to buy the product that was promoted in the brand's post.

- Strongly disagree (1)
- Somewhat disagree (2)
- Neither agree nor disagree (3)
- Somewhat agree (4)
- Strongly agree (5)

End of Block: Purchase intentions

Appendix B

Figure B1: The Stimuli for Celebrity Endorsements



Figure B2: The Stimuli for Factual Claims



*Dermatologically tested, approved, and advised

Figure B3: The Stimuli for Emotional Appeals



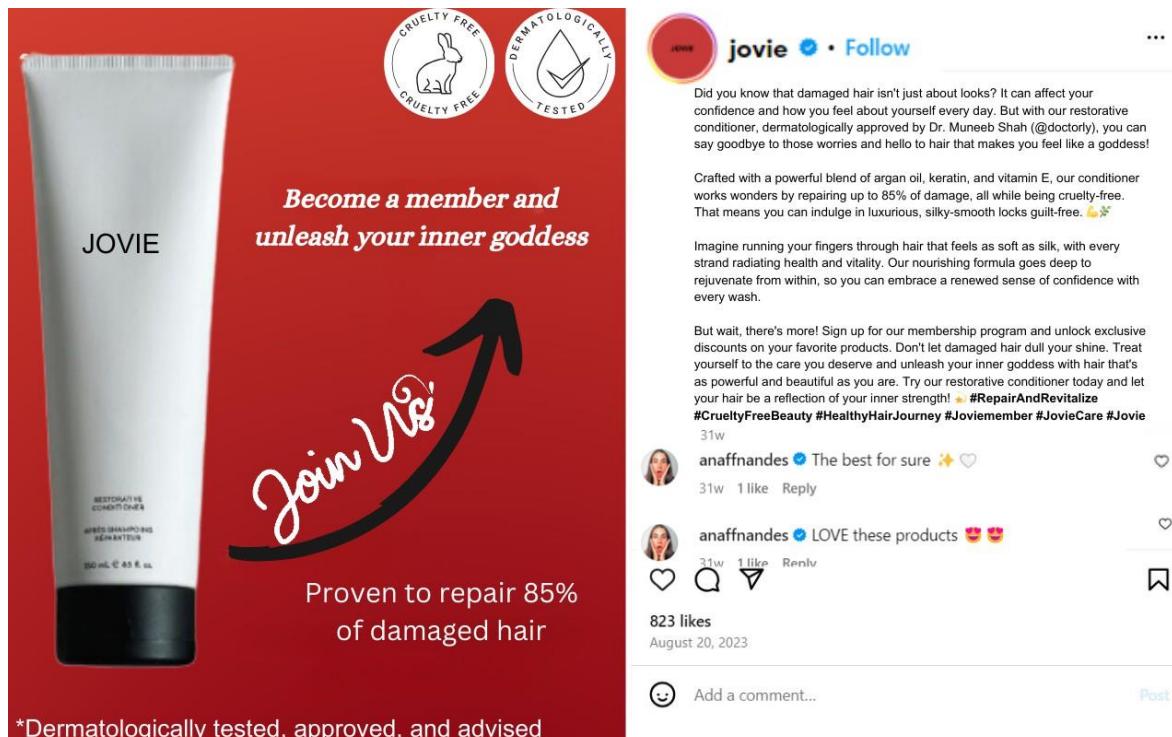
Figure B4: The Stimuli for Celebrity Endorsements and Factual Claims



Figure B5: The Stimuli for Celebrity Endorsements and Emotional Appeals



Figure B6: The Stimuli for Factual Claims and Emotional Appeals



*Dermatologically tested, approved, and advised

Figure B7: The Stimuli for Celebrity Endorsements, Factual Claims and Emotional Appeals

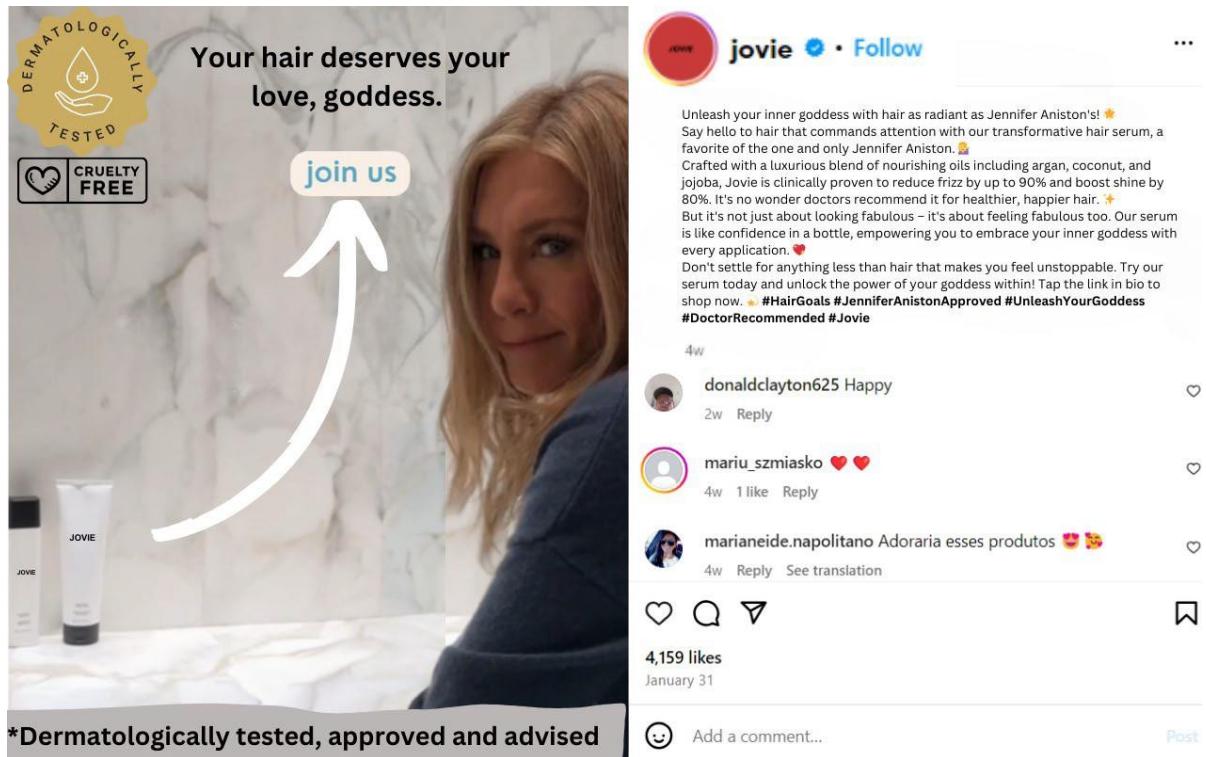


Figure B8: The Stimuli for the Control Group without Marketing Elements

