Deepfake Advertising: Testing The Credibility Of Sources And Messages

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Abstract.

The use of deepfake technology has recently become more widespread, including in the use of herbal medicine advertisements. This research aims to assess the Credibility of the source and message of deepfake advertising from the perspective of viewers. This study is a survey of 185 respondents. The survey was conducted using a Google Form from May to July 2025. The data analysis method employed is a structural equation model (SEM), which utilises SMART-PLS to process the data. The results showed that the physical artefact aspect of deepfake advertising did not have a significant effect on the Credibility of the source or message. The subjective perception aspect of deepfake advertising is also stated not to affect the Credibility of the source and message. Meanwhile, the sociocultural aspect of deepfake advertising has a significant effect on the Credibility of sources and messages. Finally, the Credibility of deepfake advertising sources has a significant effect on the Credibility of the message.

Keywords: *Deepfake advertising; herbal medicine; source credibility and message credibility.*

I. INTRODUCTION

The emergence of deepfake technology has prompted widespread concern regarding its effects on source and message credibility in advertising contexts. Deepfakes, which utilise artificial intelligence to create hyper-realistic yet fabricated media, have significant implications for trust and authenticity in advertising (Caci et al., 2024; Vaccari & Chadwick, 2020). The immersive and deceptive nature of deepfakes can distort perceptions of Credibility among audiences, engendering scepticism towards all media formats, including those utilised for advertising (Diakopoulos & Johnson, 2021). As deepfake technology becomes more accessible and sophisticated, advertisers may leverage its potential to enhance engagement; however, the associated risks of misinformation and lost trust necessitate a thorough examination of its impacts on consumers (Sivathanu & Pillai, 2023).Research indicates that deepfake technology contributes to a broader crisis of trust within media, compounded by the proliferation of disinformation through various platforms (Diakopoulos & Johnson, 2021). This decline in trust can undermine the Credibility of not just individual advertisements but also entire brands and the advertising industry as a whole (Godulla et al., 2021). The concerns surrounding deepfake technology are not solely rooted in its potential for deception but also in the societal ramifications that follow as public perception shifts towards increased scepticism regarding all media (Timmerman et al., 2023). Thus, understanding how deepfake technology can alter consumer perceptions of ad content is critical for constructing effective marketing strategies that navigate these complex credibility landscapes.

Despite the growing body of literature addressing the implications of deepfake technology, significant research gaps remain. Most existing studies focus primarily on the detection of deepfakes rather than examining their effects on audience perceptions and behaviours in commercial settings (Dobber et al., 2021). Furthermore, although there is an acknowledgement of the ethical implications of deepfakes, limited empirical research has investigated their concrete effects on source credibility and message credibility within advertising contexts (Hirsch, 2023). Therefore, this research aims to bridge these gaps by examining how deepfake advertisements influence consumers' trust and perceived Credibility in the source of advertisements, as well as in the messages conveyed. The objectives of this research are threefold: first, to assess the impact of deepfake technology on audience perceptions of source credibility, specifically how awareness of deepfake technology influences trust in advertisers; second, to evaluate message credibility concerning consumer responses to deepfake video advertisements, focusing on how the realism of deepfake content affects viewers' beliefs and attitudes toward the advertised product; and third, to explore the potential

mediating effects of emotional responses elicited by deepfake advertisements on source and message credibility outcomes. By establishing these dimensions, this study will contribute to a nuanced understanding of the interaction between emergent technologies, advertising strategies, and consumer behaviour (De Ruiter, 2021; Momeni, 2025). Ultimately, the research seeks to inform marketers and advertisers about the implications of their choices in utilising deepfake technology, ensuring that advertising remains a reliable channel of communication in increasingly complex media environments.

1. Theoretical Framework and Hypothesis Development

1.1. Deepfake Advertising

A combination of "deep learning" and "fake", deepfakes are hyper-realistic videos that are digitally manipulated to depict people saying and doing things that never actually happened. Deepfakes rely on neural networks that analyse large data sample sets to learn to mimic a person's facial expressions, behaviour, voice, and intonation (Westerlund, 2019). Deepfakes are AI products and deep learning techniques that train deep neural networks. This network can be thought of as a brain containing many interconnected neurons, with these artificial neurons referred to as "units"(Whittaker et al., 2021). Deepfakes came to the public in 2017 when a Reddit user uploaded a video showing celebrities in dangerous sexual situations (Gosse & Burkell, 2020). Deepfakes are challenging to detect because they often utilise real footage, feature authentic-sounding audio, and are optimised for rapid dissemination on social media (Sheikh et al., 2023).Deepfake technology raises the concept of truth, which refers to how information appears or feels to the recipient (Kietzmann et al., 2021). In today's society, users of social media platforms prioritise the authenticity of content over its accuracy, being more interested in content that appears genuine than in the actual truth (Kietzmann et al., 2021). This shift has particular implications in the field of marketing and consumer behaviour (Weniger et al., 2024). (Kietzmann et al., 2021) flagged these concerns from a marketing perspective and questioned how these deepfake ads would affect consumer perception. They further argue that as long as people are exposed to fake news or misinformation, they will be sceptical and question the information honestly.

Then, Kietzmann et al. (2021) discuss the "sleep effect", which means that even if consumers know they are receiving false information, the content can still influence their subsequent perceptions. In the long run, the content provided by AI is inherently more persuasive. As deepfakes raise concerns about trust in the digital environment, they further influence marketing and increase consumer scepticism.Deepfakes will change advertising as we know it because deepfakes are trustworthy, accessible, and new (Kietzmann et al., 2021). First and foremost, deepfakes are very powerful because they are very convincingly "real". As the saying goes, "seeing is believing," so individuals place much trust in what they see with their own eyes (Granot et al., 2018). This is especially true for deepfakes, as individuals have developed a realism heuristic over time, which means they tend to trust audio-visual media more because it resembles the real world (Sundar, 2008). This can be a pretty scary concept for advertisers because it would be very easy for someone to "fake" an ad, getting a brand or character spokesperson to say or do something they do not actually do, compellingly. Second, deepfake techniques are increasingly accessible to non-technical individuals. As with many other creative fields (e.g., graphic design, web design, and photography), videography is a field where improvements in computing technology have speedily and efficiently reduced the need for human skills, training, cost, and other barriers to entry. Deepfakes can further eliminate the need for artistic talent; nowadays, people with little training, skills, or investment can create deepfake content relatively easily (Kietzmann et al., 2021).Third, deepfakes are an interesting artefact, as they are attractive, captivating, and memorable for most people due to their novelty (Vosoughi et al., 2018). These kinds of artefacts are straightforward to redistribute through digital networks and channels, including social media and instant messaging, which requires additional consideration of the brand-related spillover effects associated with social influence.

1.2. The Influence of Physical Artefacts of deepfake advertising on the Credibility of the source

Artefacts can be defined as objects that have been designed and manufactured to serve a specific purpose in a plan of use. In this approach, designers not only create blueprints for the construction of objects, but also design the means by which intentional agents can realise goals by using these objects. This usage

plan may involve manipulating some objects that do not currently exist (Houkes, 2006). In relation to deepfake advertising, physical artefacts take the form of attraction, art, sound, and visual elements (Kietzmann et al., 2021). Research on source credibility and attractiveness is less convincing. The Perception of the physical appeal of the source increases when social media influencers clearly disclose their support for paid products on photo-sharing platforms, signalling the popularity of influencers (Weismueller et al., 2020). In contrast, a study in Germany found that the disclosure of digital retouching reduced attitudes towards advertising and brands due to decreased trust and appeal (Schirmer et al., 2018). In general, communication research has shown that physically attractive sources are preferred, and consumers tend to behave in accordance with their positive attitudes towards physically attractive communicators (Powers et al., 2023). The results showed that, from a visual aspect, deepfakes with more followers and higher popularity were positively related to the Credibility of the source. The more popular deepfake videos are, the more the public will trust them (Jin et al., 2023).

This can be due to the extremely high visual saturation, making viewers less aware of deepfake manipulation, including deepfake ads. Other research indicates that deepfake advertising attributes, including voice, video, and face, have an indirect impact on brand credibility. Deepfake advertising attributes impact brand credibility when consumers have both hedonic and utilitarian motives (Arachchi et al., 2025).Although recent research shows that deepfakes are no more deceptive than false information in textual form (Hameleers et al., 2022), the remaining concern is that deepfakes mean that people no longer trust, that is, they may lose faith in all visual material while processing information (Barnes & Barraclough, 2020). This can happen for two reasons: first, if people encounter an isolated fake visual incident that they eventually believe to be true, they can transfer this experience to their overall belief in visual perception. In other words, they may believe audio-visual media artefacts do not fully tell the truth. Second, because deepfakes are considered the most sophisticated and real form of visual disinformation, they can even deceive those who are generally confident in recognising falsehoods (Arachchi et al., 2025).To date, the evolving interaction between deepfake artefacts and source credibility presents significant implications for consumers and media producers. The erosion of trust and growing scepticism of media caused by deepfake technology requires a reevaluation of how digital content is created, shared, and organised. When viewers realise that deepfake ads are manipulations of voices, bodies, movements, and messages, they will judge the message conveyed as untrustworthy and will therefore lower the Credibility of the source, in this case, deepfake ads for herbal medicine.

H1: Deepfake ad physical artifacts affect source credibility

1.3. The Influence of Subjective Perception of Deepfake Advertising on the Credibility of Sources

The growing field of research around the effects of deepfake technology on Perception and Credibility requires systematic exploration, especially regarding herbal medicine advertising and its implications for the Credibility of sources. The subjective Perception of deepfake ads is increasingly recognised because of their potential to influence consumer behaviour and the trust associated with the source of the ad.Deepfake technology leverages artificial intelligence to create hyper-realistic video content that can impersonate individuals, posing a very deceptive challenge in the advertising realm. Sivathanu and Pillai (2022) emphasise that the manipulations seen in deepfake ads can confuse consumers, ultimately influencing their intention to purchase or engage with the advertised product (Sivathanu & Pillai, 2023). This confusion arises from the high level of realism that exists in deepfakes, which can lead to a misleading perception of Credibility regarding the information being conveyed. The quality of these deceptions is compounded by the individual's inability to distinguish between reality and fabrication, as revealed in the findings (Arachchi et al., 2025), which suggests that viewers can still be influenced by deepfake content even when aware of its artificial nature (Arachchi et al., 2025).Source credibility is a well-established concept that encompasses the perceived expertise, trustworthiness, and attractiveness of the information source (Eiserbeck et al., 2023). Deepfake ads challenge traditional notions of source credibility. Given that deepfakes blur the line between reality and fabrication, they raise questions about the Credibility of their content (Odeh, 2024).

Existing literature indicates that consumers often exhibit high scepticism towards content served through deepfake technology, which reduces overall trust in the message being conveyed, primarily when the ethical implications of the technology are not addressed (Al-khazraji et al., 2023). Additionally, the perceived authenticity of the source may be reduced as audiences grapple with the implications of deception in visual media (Al-khazraji et al., 2023; Groh et al., 2022).Viewers' Perception of deepfake ads involves both cognitive and emotional dimensions. Exposure to deepfake ads affects cognitive functions such as decision-making and emotional responses (Whittaker et al., 2025). This argument is supported by growing concerns regarding the ethical implications of using such technologies, particularly when targeting vulnerable consumer demographics, which may include those seeking alternative or herbal treatments (M. Li & Wan, 2023).In addition, the findings of Shin and Lee (2022) suggest that deepfaked content is not only effective in changing attitudes but also significantly influences behavioural intent, equating the persuasive power of deepfake media with that of authentic content (Shin & Lee, 2022). When deepfake advertisements for herbal medicines target consumers, the perceived legitimacy of the source may be diminished or tainted by a false narrative, which can reduce the Credibility of the source.In addition, the perceived pleasure phenomenon associated with deepfake content can paradoxically increase its acceptance among viewers, and present a troubling scenario in which consumers may ignore ethical issues in favour of entertainment value, further complicating the landscape of source credibility in herbal medicine advertising, where trust is paramount (M. Li & Wan, 2023).

In addition, studies focusing on the social implications of deepfake technology articulate the urgent need to understand how these communications affect public trust. For example, the work (Ruiter, 2021) highlights the broader erosion of trust triggered by deepfakes, exacerbating people's vulnerabilities, especially in sectors where Credibility is key, such as healthcare and herbal medicine (De Ruiter, 2021).In the realm of herbal medicine, consumer behaviour is influenced by the complex interplay between perceived risks and benefits. Trust plays a crucial role, as it directly influences an individual's willingness to seek out or recommend herbal remedies after encountering deepfake ads. The literature indicates that when deepfakes are incorporated into marketing strategies, perceived risks can outweigh perceived benefits, particularly among individuals who are already sceptical about alternative health treatments (W. Li & Zhao, 2024; Sivathanu & Pillai, 2023). The intersection of deepfake technology and herbal medicine advertising requires an in-depth exploration of subjective perception and source credibility. The findings suggest that although deepfake ads have a unique ability to engage viewers emotionally, deepfake ads simultaneously challenge the Credibility of the information provided. Consumers who already realise that deepfake advertising for herbal medicine is not something real will then decrease the Credibility of the source.

H2: The subjective perception of Deepfake ads for herbal medicines has a significant effect on the credibility of the source.

1.4. The Sociocultural Influence of Deepfake Ads on the Credibility of Sources

Deepfake technology has become a significant focus in contemporary discourse, mainly due to its application in advertising. The literature shows that aligning deepfake ads with sociocultural values substantially increases the perceived Credibility of the source. This literature review aims to consolidate existing research that emphasises the relationship between deepfake advertising, sociocultural alignment, and Credibility, highlighting its implications for advertising effectiveness.Deepfake technology has become a growing topic of discussion lately, primarily due to its application in advertising. For this reason, it is crucial to comprehend the fundamental nature of deepfakes and their potential influence on consumer behaviour. Deepfake technology, a digital content creation tool that uses machine learning, can generate realistic images and videos that can mislead viewers about reality. Articles, such as those written by Whittaker et al., detail the growth of deepfakes in marketing and identify gaps in the current understanding, including the marketing implications of deepfake technology, which are critical to shaping consumer perceptions and behaviours (Whittaker et al., 2021). Similarly, Kiliç and Kahraman categorised various applications of deepfake technology, noting their widespread use in advertising as well as their potential to influence consumer confidence (Sword & Hero, 2023).

Sivathanu et al. provide empirical evidence that deepfake ads have a significant influence on online shopping intentions, particularly when they resonate with the sociocultural values and expectations of the audience (Sivathanu et al., 2023).The effectiveness of ads, especially those that use deepfakes, depends heavily on perceived Credibility. Kim and Choi emphasised that Credibility in advertising is essential to influence consumer attitudes and behaviours, primarily as consumers increasingly rely on digital media (Kim & Choi, 2012). When an ad is culturally congruent, it is inherently considered more credible, thus increasing its impact on purchase intent (Munnukka et al., 2016). In addition, Abbasi et al. highlight that Credibility mediates the relationship between perceived advertising value and consumer behaviour, reinforcing the importance of alignment with sociocultural expectations (Abbasi et al., 2022).Another important aspect of deepfake advertising is the role of the perceived ethos of the source. The Credibility of advertisers and how closely they align with the cultural values of the target audience plays a crucial role in the effectiveness of advertising. Munnukka et al. highlight that similarities between sources and audiences in terms of values and cultural background increase the Perception of Credibility, significantly influencing brand attitudes (Munnukka et al., 2016). In addition, research by Drossos et al. provides insights into how advertising credibility relates to broader effects such as brand and company Credibility, suggesting that cultural considerations are critical for advertisers looking to improve their brand image through deepfake technology (Drossos et al., 2013).

In the realm of sociocultural values, advertisers are challenged to ensure their content resonates with a diverse and sometimes sensitive community. Advertisers must demonstrate cultural sensitivity in their advertising, particularly regarding cultural dimensions such as power distance, individualism versus collectivism, masculinity versus femininity, uncertainty avoidance, long-term versus short-term orientation, and indulgence versus restraint (Krkić, 2025). This becomes especially relevant in the context of deepfake advertising, where cultural misalignment can result in backlash and reduced Credibility (Kietzmann et al., 2021).In consumer psychology, the perceived trust regarding deepfake content itself is influenced by the depth of cultural engagement. A study examining mobile advertising in Asia reveals that culturally rooted advertising strategies have a significant influence on consumer attitudes, reinforcing the principle that sociocultural alignment is crucial for eliciting favourable responses from audiences (Wang & Genç, 2019). Additionally, deepfake semiotic analysis sheds light on how this technology can disrupt traditional perceptions of authenticity and Credibility. Poulsen argues that deepfakes challenge viewers' ability to discern the truth, thereby complicating the landscape of advertising credibility (Kietzmann et al., 2021). Thus, the implications of utilising deepfake technology go beyond the immediate visual impact to incorporate cultural narratives, which ultimately affect their trust in advertising. The more aligned deepfake ads are with sociocultural values, the higher the viewer's rating.

H3: Deepfake advertising of herbal medicines that are socially aligned will increase the Credibility of the source.

1.5. The Influence of Deepfake Advertising Physical Artefacts on the Credibility of Messages

The increasing use of herbal medicines demands a more extensive promotion of herbal medicines, and this will inevitably lead to a greater adoption of digital technology, particularly in the form of deepfake advertising. The role of deepfake advertising for herbal medicine is vital to investigate because it is related to the trust and Credibility of the message conveyed. One of the variables of deepfake advertising that affects the Credibility of the message is its physical Artefact. Physical artefacts in advertising play an important role in shaping audience perception. Authentic representations of herbal products, backed by scientific data, can increase the Credibility of the message. For example, the presentation of herbal medicines in a context that highlights their efficacy, such as in advertisements featuring endorsements from credible health professionals, fosters greater reliability among consumers (Hilal & Hilal, 2017). In addition, well-documented herbal practices supported by clinical evidence or published studies can influence public Perception, driving acceptance and utilisation (Alsayari et al., 2018). Deepfake technology, if used misleadingly or excessively, can undermine these attributes, potentially leading to Health misinformation (Harzif et al., 2024).The use of artefacts, such as product displays and health claims, is exacerbated by public

attitudes toward herbal medicine. As shown in various studies, a widely held belief exists regarding the natural safety of herbal remedies (Alasmari et al., 2025).

This heuristic can put scepticism aside, especially when advertising presents herbal remedies as scientifically validated options—pointing to their potential benefits in managing a variety of diseases (Yin et al., 2013). When these artefacts are combined with deepfake elements that exaggerate the efficacy of herbal remedies, they can lead viewers to unfounded beliefs about the health benefits, negatively impacting the Credibility of the message being conveyed (Harzif et al., 2024).The synergy between visual representation in herbal medicine advertising and the Credibility of the message is further supported by several studies. For example, users are more likely to trust ads where herbal products are endorsed by recognised health authorities (Arimbawa et al., 2020). It highlights the dual role of physical artefacts and presentations in reinforcing the Credibility of herbal medicines while also posing risks if manipulated deceptively through technologies such as deepfakes (Setia et al., 2024). The psychological impact of imagery can elicit emotional responses that influence decision-making, often leading consumers to engage more positively with attractively displayed herbal products (Hajialiasgari et al., 2025). Thus, it can be concluded that the physical artifact of the deepake advertisement of herbal medicine that is realizedrealized by the consumer as a result of fabrication and deception will result in a poor audience response, in this case the viewer feels that the deepfake advertisement is perceived as an attempt to manipulate the viewer's horizon, and therefore the content of the message conveyed is less credible.

H4: The physical artefact of the deepfake advertisement of herbal medicine that is considered to be phishing will lower the Credibility of the message.

1.6. The Effect of Subjective Perception of Deepfake Ads on the Credibility of the Message

Herbal medicine advertising requires prudent communication strategies, as highlighted by the work of Yeboah-Banin and Asante, who emphasise the importance of cross-channel message consistency to prevent consumer confusion and mistrust (Yeboah-Banin & Asante, 2020). Variance in messaging across different platforms can dilute brand equity and pose significant health risks to consumers who may purchase unverified products. Thus, the subjective perception of deepfake advertisements—potentially viewed as inconsistent or misleading—can further harm message credibility regarding herbal products.Interestingly, the perception of deepfake advertisements is also influenced by factors such as advertising credibility and behavioural intentions. Sivathanu and Pillai found that deepfake video advertisements significantly affected booking intention among consumers in the hospitality industry, suggesting that the effectiveness of such technology is contingent on its perceived authenticity (Sivathanu & Pillai, 2023). This parallels concerns in herbal medicine advertising, where the trustworthiness of the message is critical for consumer acceptance and willingness to purchase.Moreover, it is vital to consider how consumers' attitudes and biases affect their perceptions of deepfake advertisements. In a study by Li and Wang, the dynamics of brand disclosure revealed that audience familiarity with advertisements influences their recognition and perceived credibility (Y. Li & Wang, 2019). This notion is mirrored in herbal medicine campaigns; consumers familiar with herbal products may be more sceptical of ads featuring advanced technologies like deepfakes, possibly perceiving them as gimmicky or deceptive. As advertising techniques evolve, maintaining authenticity in messaging becomes even more critical.

H5: There is an effect of the subjective perception of deepfake ads on the credibility of the message

1.7. The Influence of Deepfake Advertising on Social Culture on Message Credibility

Message credibility refers to the perceived Credibility and trust of a particular message. It examines how individuals assess the usefulness and accuracy of information disseminated in various contexts, particularly in digital communication environments. Several studies have explored the various dimensions of message credibility, emphasising its significance in persuasive communication and consumer behaviour. One of the important aspects of the Credibility of a message is its interaction with the Credibility of the source. Research indicates that the trustworthiness of a source has a significant impact on how a message is perceived by the audience. For example, Flanagin and Metzger highlight that factors such as the Credibility of the sponsor or site, along with the nature of the message itself, contribute to how audiences perceive

Credibility (Flanagin & Metzger, 2007). Similarly, Atad and Cohen found that direct engagement from communication sources can increase perceived Credibility, showing how engagement strategies can effectively increase message trust (Atad & Cohen, 2024). This synergy between source credibility and message highlights the importance of credible sources in conveying information effectively.In addition, the framing of the message plays a crucial role in shaping its Credibility. Cordero-Gutiérrez et al. found that positively framed messages were perceived as more credible than negatively framed ones, a finding that was mediated by the emotional responses they evoked in the audience (Cordero-Gutiérrez et al., 2024). These findings are important because they show that not only the content of a message, but also its presentation, can significantly affect the Perception of Credibility.

The relationship between message framing and credibility perception aligns with previous research that emphasizedemphasizedemphasises the importance of message delivery and context in audience engagement and acceptance. However, further research is needed in this area (Arora et al., 2006).In the context of digital communication, the accuracy of messages significantly affects perceived Credibility. Jung et al. highlighted that individuals exposed to accurate information rated the Credibility of messages higher than those exposed to inaccuracies, suggesting that message accuracy remains a fundamental element of Credibility (Jung et al., 2016). Gaiser and Utz further note that while accuracy is critical, modes of delivery (e.g., voice versus text output) can affect how sensitive an individual is to inaccuracies, demonstrating a nuanced understanding of how different modalities affect perceptions of Credibility (Gaiser & Utz, 2023).The Credibility of deepfake ad messages is influenced by their ability to align with the cultural expectations and values of the target audience. Research by Sivathanu et al. shows how deepfake ads can increase consumers' online shopping intent (Sivathanu et al., 2023). This suggests that when deepfake technology is effectively aligned with the cultural context of the target demographic, it can create a powerful, persuasive tool that enhances perceived advertising credibility. The use of deepfake advertising for herbal medicine has also been widely practised and associated with sociocultural views. In many societies, herbal medicines have historical significance and are considered a safe and effective alternative to pharmaceutical options (Alasmari et al., 2025). Ads that leverage these cultural beliefs by incorporating authentic artefacts, such as traditional usage contexts or testimonials from satisfied users, can significantly enhance consumer trust and message credibility.

However, the potential of deepfake technology to fabricate this narrative raises significant ethical issues. Users may inadvertently align their health choices with incorrect information disseminated through manipulated representations (Harzif et al., 2024).The technological capabilities underlying deepfakes are increasingly influencing consumer confidence, as suggested by Poulsen's semiotic framework, which addresses the paradigm shift of visual authenticity in an image-saturated culture (Poulsen, 2021). The complexity inherent in deepfake technology fosters a landscape in which individuals may cynically question the Credibility of any media, especially when contrasting cultural values and communal beliefs shape their understanding of authenticity.

H6: Deepfake ads that are socially aligned can increase the Credibility of messages

1.8. The Effect of Deepfake Ad Credibility on Message Credibility

It is crucial to distinguish between the Credibility of the source—where the reliability of the originator of the information is assessed—and the Credibility of the message, which has to do with the Credibility of the content itself. Source credibility has long been established as an important factor influencing consumer responses to advertising, encompassing perceived expertise and trust (Dominic et al., 2023). Rollins et al. have noted that the type of source in Direct-to-consumer advertising can significantly influence consumer attitudes and behaviours, thus affecting the overall effectiveness of the marketing strategies used (Rollins et al., 2021). This is echoed by the findings of Ekaputra and Sundjaja, who argue that perceived legitimacy and compelling ad design are crucial in instilling trust and encouraging consumer engagement (Ekaputra & Sundjaja, 2023).In addition, the emotional response evoked by advertising is primarily influenced by perceived Credibility of the source, supported by research conducted by Hadinejad et al. They argue that engagement driven by credible sources has a significant influence on subsequent attitudes towards the message (Hadinejad et al., 2022). In the same vein, the more profound insights provided by

Sharma et al. suggest that Credibility emerges as a dominant factor in the context of mobile advertising, influencing the perceived advertising value of consumers and their intention to engage (Sharma et al., 2022). The psychological framework within which consumers evaluate deepfake advertisements can significantly influence their perceptions. Factors such as persuasive knowledge, which determine how consumers interpret the intent behind an ad, play a crucial role (Hernandez et al., 2023). When consumers detect manipulative advertising tactics, they may show increased scepticism, which ultimately undermines the Credibility of the source and message.

H7: Credible deepfake ads have a positive effect on the Credibility of the message.

II. METHODS

The research method used to investigate the influence of physical artefacts, subjective perceptions, and sociocultural appropriateness of deepfake advertising on the Credibility of the source and its implications on brand attitudes involves a structured quantitative approach. Specifically, this study employed Partial Least Squares Structural Equation Modelling (PLS-SEM) for statistical analysis, due to its robustness in examining the complex relationships between latent variables, which is particularly relevant given the exploratory nature of deepfake ads in the context of branding (Shareef et al., 2019).Data collection is conducted through online surveys, managed via Google Forms, which enables efficient data collection and retrieval. The questionnaire is designed to gather responses to deepfake advertisements for herbal medicines that are disseminated through various social media platforms, such as TikTok, Instagram, and Facebook. The target population of the survey consisted of individuals living in Banten Province, with a final total of 187 valid responses collected.The questionnaire was designed to measure several constructs, including perceptions of source credibility influenced by deepfake technology, subjective attitudes toward advertising, and the role of sociocultural factors.

This methodological design aligns with previous research that has emphasised the importance of source credibility and consumer perception in the context of social media advertising (Nadira et al., 2023).PLS-SEM was chosen as an analytical technique because of its ability to model confirmatory factor analysis and structural equation modelling simultaneously. This method facilitates the investigation of the relationship between constructions within the intended theoretical framework, echoes methodologies applied in similar studies, and documents the mediating effects of source credibility on consumer attitudes and behaviours (Dauhan & Langi, 2024). The statistical procedures involved include estimating the path coefficient and assessing the significance of the relationship between latent constructions, which allows for a thorough understanding of how physical artefacts and sociocultural influences affect brand perception in the context of deepfake advertising (Muda & Hamzah, 2021).In addition, the survey instrument incorporates validated measures related to consumer attitudes and perceptions of advertising, drawn from previous work describing the significant interaction between source credibility and advertising effectiveness in digital contexts (Kamdjoug, 2023). Subjective perception considerations are crucial, as previous literature suggests that consumer engagement with advertising can be heavily influenced by individual bias and cultural conformity, which ultimately influences brand attitudes (Kortam et al., 2024).

III. RESULT AND DICUSSION

1.9. Responsive features.

Table 1 below illustrates the characteristics of the respondents in this study. Female respondents dominated, accounting for 57.3%, while the rest were men. Judging from age, the majority of respondents were aged 26-35 years (73.5%). The majority of respondents (73.5%) had an undergraduate education. The majority of respondents' income is below ten million rupiah (83.8%). Based on the frequency of viewing deepfake ads, the majority of respondents stated that they sometimes (64.3%), and those who watched herbal medicine ads using deepfakes mostly did so sometimes (53.5%).

Table 1. Characteristics of Respondents

Characteristics of Respondents	Category	Frequency	Percentage
Gender	Man	79	42,7
	Woman	106	57,3
Age	15-25 years old	15	8,1
	26-35 years old	136	73,5
	36-45 years old	34	18,4
Education	< SMA	15	8,1
	Bachelor	136	73,5
	Postgraduate	34	18,4
Income	<5 million rupiah	93	50,3
	5-10 million rupiah	62	33,5
	11-15 million rupiah	16	8,6
	>15 million rupiah	14	7,6
Frequency of exposure to deepfake ads	Often	38	18,9
	Sometimes	119	53,5
	Never	28	27,6
Frequency of exposure to deepfake herbal ads	Often	35	18,9
	Sometimes	99	53,5
	Never	51	27,6

1.10. Validity and Reliability Tests

Before verifying the hypothesis in a structural equation model, the precision of the measurement instrument, which involves validity and reliability tests, is assessed. Statement items intended to assess variables are constructed using a reflective model, which is a measurement framework that represents an item or indicator as a manifestation of a latent component. The reflection measurement approach requires the following steps for testing (Hair et al., 2020): When evaluating the loading factor as a measure of individual reliability, the loading factor score should exceed 0.708 and be statistically significant at a level of 0.05. The results of the loading factor assessment are referred to as the reliability indicator. (3) calculate the reliability of Cronbach's alpha and composite (CR) with CR thresholds exceeding 0.7, (4) calculate the extracted mean variance (AVE) to assess convergent validity. The AVE score must be 0.5 or higher.

Table 2. Validity and reliability test

	Factor loading	Alpha Cronbach	CR	AVE
Physical Artifacts (AF)		0,835	0,890	0,672
Advertising videos using AI are very interesting	0,847			
Ad videos using AI are very artful	0,884			
The person's voice was the same as the original.	0,703			
Display video ads using AI are great	0,835			
Subjective Perception (PS)		0,861	0,905	0,706
Advertising videos using AI stimulate the senses of sight and hearing	0,820			
You always pay attention to advertising videos using AI	0,871			
You rate ad videos using good AI	0,875			
Advertising videos using AI are capable of persuading	0,794			
Socio-cultural conformity (KS)	0,866	0,762	0,863	0,679
You accept video ads using AI as natural	0,850			
You judge AI ad diversity in accordance with social norms	0,753			
AI ad videos affect social change				
Source credibility (KSU)	0,798	0,826	0,882	0,654
Body movements, voice and message content in AI videos show honesty				
You are sure the figure in the AI video ad is a real person.	0,882			
Figures in AI video ads convey information genuinely	0,752			
You trust the content of the AI ad message delivered by the figure endorser	0,798			
Brand Attitude (SM)		0,892	0,933	0,822
After watching an advertisement for herbal medicines that use AI, you like the herbal brand.	0,898			
You have a positive attitude towards the herbal brand	0,914			
You feel that the brand of the product is excellent	0,909			

To test the validity of the discriminant, a heterotrait-monotrait correlation ratio (HTMT) was used (Henseler et al., 2015). The score ranges from 0.85 to 0.90. Table 2 illustrates the constructs and statement items, along with the loading factor, Cronbach's alpha, composite reliability (CR), and extracted mean variance (AVE). According to Table 2, all indicators are considered reliable (exceeding 0.708), and all constructions are reliable due to Alpha Cronbach and CR scores above 0.7.

1.11. Model Fit Test

First, in the context of PLS-SEM, standard root mean square error (SRMR) is often highlighted as a key index for assessing model suitability (Chowdhury, 2023). SRMR values below 0.08 generally indicate a good match, reinforcing the validity of the model under consideration (Chowdhury, 2023). The second match test is d_ULS and d_UG. Statistics d_ULS and d_UG help identify whether the model adequately represents the data by measuring the distance between the observed covariance structure and the model's implicit covariance structure (Henseler et al., 2016). Specifically, dULS serves as a measure of conformity where lower values indicate better model alignment with the data (Olive et al., 2023). The empirical correlation matrix must be insignificant (P>0.05) to state that the model fits in its entirety (Hair et al., 2014). Third, use the normed fit index (NFI) value. An NFI value of more than 0.9 indicates a fit model (Hair et al., 2014). The closer it is to 1, the more the model will fit. Table 3 presents information about the Fit model. Of the five measurement models, three were deemed fit, and two, based on the Chi-square and NFI, were deemed unfit. However, based on these three measurements, the SEM PLS model was declared fit to explain the relationship between the variables studied.

Table 3. Model fit test

	Saturated Model	Model Compatibility	Estimated models	Match.
SRMR	0.081	Appropriate	0.081	appropriate
d_ULS	0.993	Appropriate	0.993	Appropriate
d_G	0,562	Appropriate	0,627	Appropriate
Chi-Square	5928.665	Not suitable	598.665	Not suitable
NFI	0.734	Not suitable	0.734	Not suitable

1.12. Model Structural

After the data quality test and model fit test are conducted, the structural equation model can be used to explain the relationship between the variables. Figure 1 is a model of the equation of the structure with the resulting path coefficient:

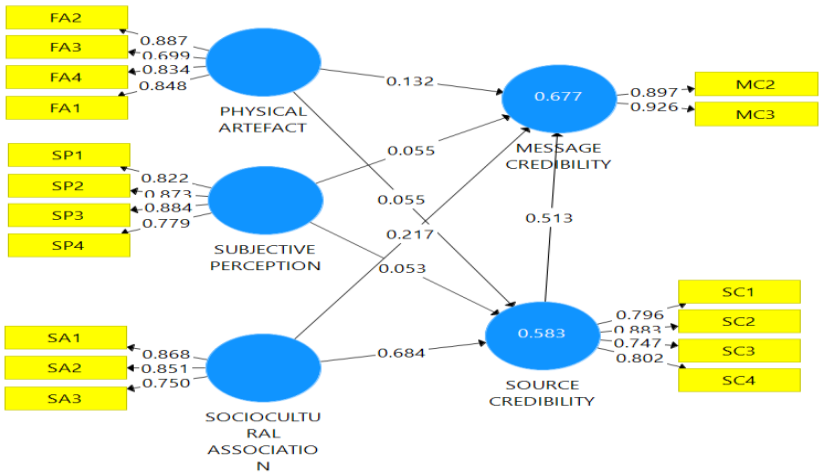

Fig 1. Structural Equation Model.

Figure 1 shows a structural equation model of the relationship between research variables. The effect of physical artefacts from deepfake ads on source credibility was 0.057. The effect of subjective Perception on the Credibility of the source was 0.053. The effect of the suitability of deepfake ads with sociocultural on the Credibility of the source was 0.677. The effect of the physical artefact of deepfake advertising on message credibility was 0.141. The effect of subjective Perception of deepfake ads on message credibility was 0.055. The influence of the sociocultural aspect of deepfake advertising on the Credibility of the message was 0.223. Finally, the effect of source credibility on message credibility is 0.517.

1.13. Hypothesis Testing

Hypothesis testing was conducted by comparing the calculated t-value with the t-table value at a 5% alpha error. The value of table t with a 5% error margin for the two-party test with n = 185 is 1.653. The criterion is to reject H0 if t is greater than the t-table value. Table 4 presents the test results using t-calculated values and t tables:

Table 4. Pengujian Hypothesis

Hipotesis	Path coefficient	P-Value	Conclusion
Physical Artefact -> Message Credibility	0,132	**0,073**	Insignificant
Physical Artefact -> Source Credibility	0,055	**0,489**	Insignificant
Sociocultural Association -> Message Credibility	0,223	**0,029**	signifikan
Sociocultural Association -> Source Credibility	0,684	**0,000**	signifikan
Source Credibility -> Message Credibility	0,513	**0,000**	signifikan
Subjective Perception -> Message Credibility	0,055	**0,618**	Insignificant
Subjective Perception -> Source Credibility	0,053	**0,582**	Insignificant

Table 4 shows that the physical artefacts of deepfake ads have no significant effect on the Credibility of the source and the Credibility of the message because the P-value is greater than the 5% alpha error. The influence of the subjective perception aspect of deepfake advertising on the Credibility of the source and the Credibility of the message was declared insignificant because the P-value was greater than the alpha error of 5%. The sociocultural influence of deepfake advertising on the Credibility of the source and the Credibility of the message has a significant effect, as evidenced by the P-value being smaller than the alpha error of 5%. Finally, the influence of the Credibility of the source on the Credibility of the message is stated to be significant.

2. Discussion

The phenomenon of deepfake advertising, especially in the context of herbal medicine, raises important questions about the Credibility of sources and messages. Current literature suggests that while deepfakes have the potential to mislead audiences, their overall effect on Credibility may not be as significant as anticipated, especially when certain contextual factors are considered.Deepfake technology, characterised by its ability to create hyper-realistic yet deceptive visual content, has attracted considerable attention. However, research shows that people are increasingly developing critical media literacy that allows them to navigate deepfake content more effectively. For example, higher levels of pre-existing knowledge significantly enhance cognitive reflection, reducing the likelihood that individuals will be misled by deepfake ads, especially when they have strong prejudices about the products being advertised (Doss et al., 2023). This cognitive resilience shows mitigating factors that can reduce the negative impact of deepfake ads on Credibility. Additionally, the integration of media literacy initiatives can play an important role in empowering consumers to more accurately assess the legitimacy of the source and the authenticity of the message. Educational programs that aim to foster awareness about deepfake technology and its implications can not only build resilience but also increase the Perception of Credibility in digital advertising (Azka et al., 2025).

Additionally, the Perception of deepfake ads may depend on the viewer's prior knowledge of the source and their general attitude toward herbal remedies. Evidence suggests that when individuals exhibit scepticism towards advertised products, their susceptibility to deceptive content decreases (Nieweglowska et al., 2023). As a result, while deepfake media is inherently deceptive, the Credibility of the attached message can vary significantly depending on the audience's tendencies and previous experience. This idea is consistent with the understanding that individual motivations and biases critically influence how media is consumed and processed, further complicating the landscape of deepfakes' influence on Credibility (Vaccari & Chadwick, 2020).The discourse surrounding deepfake technology often centres on its ethical implications, misinformation, and the erosion of public trust. However, subjective perceptions of deepfake ads may not have a significant impact on the Credibility of the source or the Credibility of the message in relation to herbal remedies. These observations can be based on a variety of studies examining consumer perceptions, the coherence of messages in advertising, and the implications of Credibility in traditional versus new advertising modalities.

First, it is essential to define the constructs of source credibility and message credibility within the context of advertising. The Credibility of a source is often evaluated based on the perceived expertise, trust, and appeal of the source delivering the message. On the contrary, the Credibility of the message is related to the perceived truth and reliability of the content itself (Aziato & Antwi, 2016). Deepfake technology, despite concerns about its potential misrepresentation, does not fundamentally alter the credibility assessment underlying herbal medicine advertising, primarily due to consumer familiarity and scepticism about the product.Research shows that consumers often hold nuanced and sceptical views about herbal medicine advertising, regardless of the presentation style (Dinh & Mai, 2016). This scepticism shows a specific resistance to manipulative advertising tactics, including those used by deepfake technology. For example, advertisements for herbal medicines that incorporate scientific information can increase consumer trust in the product (Aziato & Antwi, 2016). However, the lack of scientific evidence often makes traditional advertising and deepfakes equally unconvincing to sceptical audiences.Additionally, conventional advertising tactics—such as the call to action highlighted by Zhao et al.—can increase the perceived Credibility of herbal medicine marketing efforts (Zhao et al., 2023). Therefore, unless deepfake ads are accompanied by a strong call to action backed by credible scientific claims, their effectiveness remains limited. For individuals with higher levels of advertising scepticism, the introduction of deepfake elements may not significantly degrade the Credibility of the source or message than conventional advertising that lacks prominent support (Hernandez et al., 2023).

The emergence of deepfakes as a significant tool in advertising, particularly in the context of herbal medicines, presents both opportunities and challenges related to source credibility and message credibility. Deepfake technology, which utilises machine learning algorithms to create hyper-realistic video content, has revolutionised the advertising landscape by enabling marketers to present information in a visually engaging manner. These technologies can significantly impact consumer perception, engagement rates, and ultimately, purchasing decisions regarding products such as herbal remedies. Understanding the sociocultural associations of deepfake advertising in this domain reveals important implications for the trust and integrity of the message.The effectiveness of deepfake ads primarily stems from their perceived realism and Credibility. Research shows that these ads can significantly affect customer intent and decision-making processes due to their striking authenticity (Nassar et al., 2023). This phenomenon can be compelling when consumers tend to believe in the benefits of herbal remedies, which often rely on anecdotal evidence rather than strong clinical data. Because deepfakes embody familiar voices and faces that relate to consumers, they can unconsciously enhance the perceived Credibility of the information communicated. However, this blend of reality and fabrication poses a significant risk, as misinformation can lead consumers to make unwise health decisions based on manipulated content rather than scientific evidence (Jenkins et al., 2025).

Additionally, the sociocultural dimension underlying consumer trust in advertising plays a crucial role in the efficacy of deepfake content. Source credibility is crucial in determining how consumers perceive advertising, especially in sensitive sectors such as healthcare and wellness (Bell et al., 2021).When an advertisement presents a well-known figure conveying a convincing message about an herbal product, a combination of familiarity and authority can lead to an uncritical reception of that message. The credibility dimension of the source—trustworthiness, appeal, and expertise—plays a crucial role in shaping the Credibility of the ad itself and, consequently, the perceived Credibility of the supported product. Understanding these dynamics is crucial because the health implications of herbal medicine are profound, and misinformation can have dire consequences.A fundamental element of source credibility is trust, which consistently shows a positive correlation with consumer attitudes toward advertising. Yoon and Kim emphasise the importance of trust, appeal, and expertise as dimensions of source credibility, highlighting how they influence consumer responses. They reinforce the notion that higher source credibility leads to more favourable advertising attitudes and increased purchase intent (Yoon & Kim, 2016). Similarly, the findings from Gazley and Coombes underscore that the Credibility of a source—especially in a niche market—goes beyond superficial attributes, emphasising that expertise significantly influences consumer responses beyond mere attractiveness (Gazley & Coombes, 2024).

This suggests that in deepfake ads, if the source is considered credible (e.g., a respected herbalist or health practitioner), the message is more likely to be accepted as credible, even when the ad uses advanced digital manipulation.Additionally, Nassar et al. underline that the inherent Credibility of deepfakes can revolutionise advertising by leveraging this perceived realism to influence consumer intent (Nassar et al., 2023). The attractive nature of deepfake ads for herbal medicines is not only dependent on the content of the advertisement but also heavily depends on the Credibility of the source. Additionally, research shows that credible sources can reduce the scepticism that consumers often have toward traditional advertising, especially in domains full of misinformation, such as health and wellness (Dominic et al., 2023). Because misinformation poses a significant risk, particularly in promoting potentially harmful herbal products, ensuring that these ads originate from credible and reputable sources is crucial.

IV. CONCLUSION

Physical artefacts in deepfake ads do not significantly affect the Credibility of the source, and the Credibility of the message suggests that these artefacts often do not significantly impact the viewer's Perception of Credibility as much as the context of the advertisement itself. The Credibility of deepfake ads is primarily attributed to their realism rather than different artefacts, suggesting that audiences may not perceive physical artefacts as detrimental to Credibility if the overall impression remains positive. In addition, subjective perceptions of deepfake ads do not significantly influence the Perception of the source and the Credibility of the message. Viewers' motivations and contextual interpretations, not just their subjective perceptions of deepfake technology, dictate their responses, suggesting that subjective impressions have no significant weight in defining Credibility.

Sociocultural associations substantially impact the Perception of the source and the Credibility of the message. Different cultural contexts shape audience attitudes, significantly influencing responses to ads, including those involving deepfakes. These findings underscore that factors such as individualism and long-term orientation influence how audiences engage with advertising, including their psychological engagement and assessments of credibility.Finally, the relationship between the Credibility of the source and the Credibility of the message is clearly defined as positive; The Credibility of a source affects how the Credibility of a message is perceived. Higher source credibility directly increases Credibility. Audiences give a message higher credibility when it comes from a source considered reliable. This interdependence highlights the importance of establishing trust in sources to enhance the overall effectiveness of messaging, particularly in deepfake advertising, where scepticism may be heightened due to the innovative and often misunderstood technologies involved.

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