



The Role of Persuasion Knowledge and Self-Esteem in Consumer Responses to Influencer Marketing: An Experimental Study

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Abstract

Influencer marketing has emerged as a dominant form of digital advertising, yet the psychological mechanisms underlying consumer resistance to it remain poorly understood. This study examined whether the activation of persuasion knowledge reduces purchase intention and product attitudes in an influencer marketing context, and whether self-esteem moderates this relationship.

A 3 (Knowledge Condition: Control, Knowledge Activated, No Knowledge Activated) $\times$ 2 (Self-Esteem: High, Low) between-subjects experimental design was conducted with 275 participants. Persuasion knowledge was manipulated through an explicit informative message about influencer marketing practices; self-esteem was manipulated using an autobiographical recall task and verified with the Brief Rosenberg Self-Esteem Scale.

None of the four hypotheses were supported. The activation of persuasion knowledge did not significantly affect purchase intention or attitude toward the product, and self-esteem did not moderate either relationship. Notably, participants in the control condition, who evaluated the product without influencer mediation, reported descriptively higher purchase intention and more positive product attitudes than those exposed to influencer content, regardless of persuasion knowledge condition. Exploratory regression analyses identified influencer trust, influencer purchase behaviour, and product familiarity as the strongest predictors of consumer outcomes, with influencer opinion accounting for the largest share of variance in the influencer-exposed subsample. These findings suggest that, in transparent persuasion contexts, source credibility may outweigh cognitive awareness as a determinant of consumer responses. Theoretical and managerial implications are discussed, along with limitations and directions for future research.

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Keywords: influencer marketing, persuasion knowledge, self-esteem, purchase intention, product attitude, source credibility

Resumo

O marketing de influência emergiu como uma forma dominante de publicidade digital, mas os mecanismos psicológicos subjacentes à resistência dos consumidores permanecem pouco compreendidos. Este estudo examinou se a ativação do conhecimento persuasivo reduz a intenção de compra e as atitudes em relação ao produto num contexto de marketing de influência, e se a autoestima modera esta relação.

Foi conduzido um design experimental inter-sujeitos 3 (Condição de Conhecimento: Controlo, Conhecimento Ativado, Sem Conhecimento Ativado) $\times$ 2 (Autoestima: Alta, Baixa) com 275 participantes. O conhecimento persuasivo foi manipulado através de uma mensagem informativa explícita sobre as práticas do marketing de influência; a autoestima foi manipulada por meio de uma tarefa de recordação autobiográfica e verificada com a Escala Breve de Autoestima de Rosenberg.

Nenhuma das quatro hipóteses foi suportada. A ativação do conhecimento persuasivo não afetou significativamente a intenção de compra nem a atitude em relação ao produto, e a autoestima não moderou nenhuma das relações. Os participantes na condição de controlo, que avaliaram o produto sem mediação por parte de um influencer, apresentaram intenção de compra superior e atitudes mais favoráveis do que aqueles expostos ao conteúdo do influencer. Análises exploratórias identificaram a confiança no influencer e a familiaridade com o produto como os preditores mais fortes dos resultados dos consumidores.

Estes resultados sugerem que, em contextos de persuasão transparente, a credibilidade da fonte pode superar o conhecimento cognitivo como determinante das respostas dos consumidores. São discutidas implicações teóricas e práticas, bem como limitações e direções para investigação futura.

Título: O Papel do Conhecimento Persuasivo e da Autoestima nas Respostas dos Consumidores ao Marketing de Influência: Um Estudo Experimental

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Palavras-chave: marketing de influência, conhecimento persuasivo, autoestima, intenção de compra, atitude em relação ao produto, credibilidade da fonte

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1. Introduction

Nowadays, influencer marketing has become a popular strategy in digital advertising. It involves collaborations between brands and individuals who possess large social followings and perceived credibility (Ilieva et al., 2024). Its rapid growth is reflected in its global market value, which reached approximately \$21.1 billion in 2023 (Statista, 2024). Influencers are able to act as modern opinion leaders which is what makes this type of communication particularly effective. Additionally, their perceived authenticity enables the formation of parasocial relationships with their audiences, which in turn shapes consumers' attitudes and purchase decisions (Lou & Yuan, 2019). As a result, influencer marketing represents a powerful and growing form of persuasive communication.

At the same time, consumers are not passive recipients of marketing messages. With increasing exposure to digital content, individuals become more aware of persuasive tactics. Persuasion Knowledge Model (Friestad & Wright, 1994) states that consumers are able to recognize and evaluate marketers' intentions, activating what is referred to as persuasion knowledge. However, the problem is that the awareness does not automatically translate into resistance and prior research show that recognizing persuasive intent is not sufficient to reduce its effectiveness (e.g. Eisend, 2021; Kong & Lou, 2026). These findings may initially appear counterintuitive, but only under the assumptions that consumers function as fully rational agents, that is, that possessing knowledge about a persuasive attempt should logically lead to resisting it. This assumption deeply rooted in neo-classical economic models of human decision-making, has been extensively challenged by research on bounded rationality. Simon (1955) demonstrated that individuals operate under cognitive limitation that prevent fully rational decision-making, while Kahneman and Tversky (1979) showed that human judgment is systematically shaped by cognitive biases and heuristic processing, even when relevant information is available (see also Kahneman, 2011). From this perspective, the observation that consumers recognise persuasive intent yet remain influenced is not a contradiction but rather a predicable consequence of the boundaries of human rationality.

This raises an important question: if cognitive awareness alone is insufficient to defend consumers from persuasive messages, what additional factors determine whether persuasion knowledge translates into effective resistance? Previous studies have addressed this issue by arguing that activation depends on cognitive accessibility and capacity (e.g. Campbell & Kirmani, 2000). However, cognitive awareness alone may not be sufficient; on the contrary,

emotional and motivational factors may significantly influence consumers' responses to persuasive efforts.

Building on this reasoning, the present study examines self-esteem as a possible moderating variable. Based on the idea that individuals are motivated to maintain a positive and coherent self-image (Dunning, 2007), resisting persuasion can be interpreted as a way to protect one's perceived autonomy and competence. However, this motivation is likely different for each individual, and, in part, dependent on their level of self-esteem (Dunning, 2007). Specifically, people with higher self-esteem are generally more likely to protect their positive image, while those with lower self-esteem are more likely to accept information consistent with their current self-view (Swann, 1983). Therefore, from a persuasion perspective, individuals with high self-esteem may be better able to resist persuasion attempts to safeguard their self-image, particularly when they are made explicitly aware of the persuasive intent behind the message. Conversely, those with low self-esteem may be less motivated to resist them. It should be noted that an alternative perspective, rooted in self-affirmation theory (Sherman & Cohen, 2002) suggests that higher self-esteem may instead reduce defensiveness and increase openness to potentially threatening information. This theoretical tension and the rationale for the present study's predictions are discussed in detail in Section 2.3.

The aim of this research is to investigate the impact of persuasion knowledge on consumers' attitude toward the product and purchase intention in the context of influencer marketing, and to determine if this relationship exists as a function of self-esteem. This study uses an experimental design to manipulate both persuasion knowledge (Activated vs. Not Activated, plus a Control Condition) and self-esteem (High vs Low), in order to provide a more nuanced understanding of the interaction between cognitive awareness and individual psychological traits in influencing responses to digital persuasion.

2. Literature Review and theoretical background

2.1 Influencer Marketing as a Strategic Persuasive Communication

The digital landscape has seen a profound transformation in advertising, moving away from traditional media and toward more personalized and social strategies. In this context, influencer marketing has become the most powerful force. Influencer marketing is a type of online advertising in which brands leverage the social capital of influential people, capable of influencing the decisions of a specific audience based on their perceived authority, expertise,

and proximity to their followers (Campbell & Farrell 2020; Ilieva et al., 2024; Schouten et al., 2019). Influencer marketing is based on the concept of electronic word-of-mouth (eWOM), in which recommendations are perceived as more natural and less commercial, despite being planned (Lou & Yuan, 2019).

2.1.1 Theoretical Framework: The Elaboration Likelihood Model (ELM)

From a theoretical perspective, we can use the Elaboration Likelihood Model (ELM) (Petty & Cacioppo, 1986) to examine influencer marketing as a persuasive communication strategy. The model posits that individuals interact with persuasive messages through two distinct pathways, the use of which depends on their motivation and information processing capacity. The central route involves careful, effortful evaluation of the true merits of the information presented, for example a consumer carefully assessing a products' ingredients or efficacy claims. The peripheral route, in contrast, occurs when individuals are influenced by simple cues in the persuasion context such as the attractiveness of the source, without engaging in a detailed scrutiny of the arguments for the message (Petty & Cacioppo, 1986).

Social media has become fast-paced and entertainment-oriented. In this context, people often process information superficially, which leads influencer marketing to operate through the peripheral pathway. In this pathway, persuasion does not occur by meticulous evaluation at product attributes (central cues), but by peripheral cues, such as the influencer's aesthetic appeal, number of followers, or perceived "enjoyment" of the content (Zak & Hasprova, 2020), that induce attitude change without requiring scrutiny of the message's arguments (Petty & Cacioppo, 1986). This suggests that the efficacy of a marketing strategy frequently relies on the psychological heuristics elicited by the influencer's characteristics, such as appearance, content style and overall reputation, rather than the intrinsic quality of the message's arguments (Campbell & Farrell, 2020; Ilieva et al., 2024).

2.1.2 Source Credibility and Persuasion Dynamics

The source credibility model (Hovland & Weiss, 1951) posits that the persuasiveness of a message is largely determined by the audience's perception of the source's credibility. Ohanian (1990) formalised this in a three-dimensional construct of expertise, trustworthiness and attractiveness. Expertise refers to the influencer's perceived knowledge and authority in each field, such as beauty, technology, or fitness. Trustworthiness concerns the perceived honesty and impartiality of the source. Attractiveness is based on physical appeal, social value and the perceived similarity of the influencer to their followers. Recent research has refined this model

for the social media context. Lou and Yuan (2019) adopted a four-dimensional conceptualisation of influencer credibility, adding perceived similarity in terms of demography or ideology (Munnukka et al., 2016), which is the extent to which followers see the influencer as similar to themselves. A survey of 538 social media users by the authors found that trustworthiness, attractiveness, and similarity had a positive impact on followers' trust in influencer-branded content, which then influenced brand awareness and purchase intentions. Trustworthiness has been found to be a particularly strong predictor of these dimensions (Schouten et al., 2019) in two experiments, comparing celebrity and influencer endorsers for beauty, fitness, food, and fashion products ($N = 131$ and $N = 446$) in which trustworthiness significantly mediated the relationship between endorser type and advertisement attitudes ($N = 131$) and purchase intention ($N = 446$), with expertise not differing between influencer and celebrity endorsers and not mediating any of the tested relationships (Schouten et al., 2019). Theoretically, these dimensions of credibility are also connected to the Elaboration Likelihood Model discussed in the previous section. Source credibility can act as a peripheral cue when elaboration likelihood is low (Chaiken & Maheswaran, 1994; Petty & Cacioppo, 1986), indicating that in the fast-paced social media environment, consumers may rely on their perception of the influencer's credibility rather than critically evaluating the arguments of the message. Among these dimensions, attractiveness is especially relevant for influencer marketing, as it can facilitate an identification process (Kelman, 1961). Identification occurs when people adopt the attitudes and behaviours of a source, they perceive as similar or attractive, not because they are persuaded by the arguments, but because they want to create or maintain a meaningful relationship with that source. Interestingly, Schouten et al. (2019) observed that perceived similarity, a dimension closely related to social attractiveness, was significantly higher for influencer endorsers than for celebrity endorsers and served as a mediator in the relationship between endorser type and purchase intention. This implies that followers do not necessarily consider attractive influencers as more persuasive per se. Rather, perceived similarity increases followers' sense of connection with the influencer, which in turn increases the likelihood of their adoption of the influencer's recommendations. This process of identification is closely associated with the development of parasocial interactions, which are one-sided psychological connections in which followers perceive the influencer as a trusted peer (Horton & Wohl, 1956). Previous research has indicated that influencers are more relatable and approachable compared to traditional celebrities, perceived as being close to the consumer in a personal relationship like manner (Djafarova & Rushworth, 2017; Schouten et al., 2019). The perceived closeness, due to the credibility and similarity of the influencer, conceals the

commercial nature of the communication and makes it much harder for consumers to resist the persuasive message when compared to traditional advertising formats (Colliander & Dahlén, 2011; Lou & Yuan, 2019).

2.1.3 Effect on Consumer Attitudes and Purchase Intention

Brand attitude (Ab) and purchase intention (PI) are two of the most important outcome variables in advertising research. Spears and Singh (2004) define attitude as a synthetic, relatively enduring, and unidimensional evaluation of a brand, while purchase intention represents an individual's conscious plan to commit to purchasing it. The two constructs are conceptually distinct yet empirically interconnected: according to the Theory of Reasoned Action (TRA), consumer behaviour is driven by behavioural intention, which in turn is influenced by product attitude (Ajzen & Fishbein, 1980).

These outcomes variables are particularly important in the context of influencer marketing. Influencers consistently expose their audience to their brand and show "native" ads, inducing people to change their minds and creating a positive image that increases the likelihood of purchasing (Schouten et al., 2019). Research indicates that influencer endorsements often result in higher conversion rates than traditional advertising, as they mitigate the perceived risk associated with purchasing (Djafarova & Rushworth, 2017).

However, as we discussed before and will speak about more in the next sections, people do not always respond the same way to these kinds of messages, and it may depend on how they are cognitively processed. When people realize that a message is attempting to persuade them, their persuasion knowledge is activated, perceiving the message as a deliberate attempt to influence their minds (Friestad & Wright, 1994; Campbell & Kirmani, 2000).

This study uses product attitude and purchase intention as the principal dependent variables to analyse consumer responses to persuasive messages within the framework of influencer marketing. While previous research has primarily concentrated on brand attitude (e.g. Colliander & Dahlén, 2011), this study specifically examines product attitude as a more direct assessment of the promoted item, rather than the broader brand evaluation.

2.2 The Persuasion Knowledge Model (PKM)

As discussed, consumers are more likely to be influenced by influencer marketing because they tend to process these messages using peripheral heuristics, which often hide the fact that the interaction is commercial. However, this susceptibility is also profoundly related to how people

handle what they know about persuasion and whether they are motivated and able to act on that knowledge. In 1994, Friestad and Wright introduced the Persuasion Knowledge Model (PKM) to explain how people learn about marketers' goal, tactics and attempts to persuade them in order to "cope" with these attempts and achieve their own goals. The PKM does not view consumers as passive recipients of persuasion; instead, it regards them as active agents who develop, over time, a complex framework of beliefs regarding the mechanisms of persuasion, the motivations of influencers, and the strategies they can employ in response. This knowledge includes ideas about why people try to persuade others, whether certain tactics work and are appropriate, and how the mind works when it comes to influence (Friestad & Wright, 1994).

"The PKM predicts that, when a person begins conceiving of an agent's action, heretofore not identified as having any particular meaning, as a persuasion tactic a "change of meaning" will occur. This is a significant event that fundamentally alters many things in the way in which a target will respond to this, and other, persuasion attempts" (Friestad & Wright, 1994, p.13). The consumer stops paying attention to the surface content of the message and instead focuses on the agent's true intentions. This can throw off the persuasion process and make people more critical of both the message and the agent. This change has big effects on how people judge product claims, form brand attitudes, and decide whether or not to buy something (Friestad & Wright, 1994).

However, this change is not automatic, which is very important. The PKM makes it clear that persuasion knowledge "hovers in readiness" instead of working all the time, and that its actual use depends on a number of individual and situational factors (Friestad & Wright, 1994).

Campbell and Kirmani (2000) showed that the effectiveness of persuasive knowledge depends on the cognitive accessibility of the agent's motivations and the consumer's cognitive capacity. When the influencer's motivations are made clear (e.g., through explicit disclosure), it is easy for people to access them. On the other hand, if the consumer is cognitively engaged or distracted by the entertaining content (a typical scenario on social media), they may not have the resources to activate their defence mechanisms, making them more vulnerable to persuasion attempts, even if they are theoretically aware of this. (Campbell & Kirmani, 2000). In terms of the Elaboration Likelihood Model (Petty & Cacioppo, 1986), this corresponds to a shift toward peripheral processing, in which consumers rely on superficial cues rather than critically evaluating the message.

Another boundary condition refers to the specific type of persuasion knowledge that is elicited. Eisend and Tarrahi (2021), in an extensive meta-analysis of 148 papers and 171 distinct data sets, differentiate between situational persuasion knowledge, activated by specific contextual cues and indicative of consumers' evaluations of a particular persuasion attempt and chronic persuasion knowledge, which denotes a more durable, dispositional scepticism towards marketing in general. Their research indicates that situational measures yield significantly more pronounced effects on both coping responses and evaluations compared to chronic measures.

Additionally, Eisend and Tarrahi (2021) find that the influence of persuasion knowledge on evaluations and behavioural intentions constitutes merely 50% of the overall explanatory power of persuasion. This implies that the acknowledgement of a tactic does not automatically lead to effective resistance, particularly when elements like source credibility or perceived product advantages diminish the impact of persuasion knowledge.

The preceding discussion has established that the effectiveness of persuasion knowledge depends on two key conditions: first, that the persuasive intent of the message is cognitively accessible (Friestad & Wright, 1994), and second, that the consumer has sufficient cognitive capacity to act on this knowledge (Campbell & Kirmani, 2000). In situations where limited cognitive resources, as is common in the fast-paced social media environment, individuals are led to adopt peripheral processing and are unable to use their persuasion knowledge to resist influence, even if they are theoretically aware of the persuasive intent. However, the Elaboration Likelihood Model (Petty & Cacioppo, 1986) suggests that information processing depends not only on cognitive capacity but on motivation as well. This distinction is critical: even when consumers possess both persuasion knowledge and the cognitive resources to use it, they may still fail to resist persuasion if they lack the motivation to engage in effortful, defensive processing. Thus, activation of persuasion knowledge itself is insufficient to guarantee resistance, and its effectiveness may be dependent on internal psychological factors that shape individuals' motivation to defend against persuasive attempts. This study focuses on one such factor, self-esteem, investigating whether it may determine whether consumers convert their awareness of persuasion into actual resistance.

2.3 Self-Esteem

Self-esteem is generally defined as an individual's overall evaluation of their self-worth and self-respect (Rosenberg, 1965). Beyond its role in well-being, it is a fundamental psychological

construct that influences how individuals process information, make decisions, and respond to external influences (Monteiro et al., 2021).

Dunning's (2007) theoretical perspective helps explain the role of self-esteem in consumer decision-making, focusing on the concept of self-image sacrosanct beliefs about oneself. According to the author, individuals hold sacrosanct beliefs about themselves, namely, that they are competent, capable, and morally adequate, and these beliefs strongly guide their judgments and behaviours. Dunning (2007) further argues that "consumer decision-making is best described as a process of belief harmonization, through which individuals organize and adjust their beliefs, needs, and preferences to minimize internal tension and maintain coherence within their cognitive system" (Dunning, 2007 p.1). In this sense, decisions, in addition to being based on objective evaluation, are also shaped by the motivation to maintain a consistent and positive self-image.

It is important to emphasize that these deeply held self-beliefs play a pervasive role in consumer behaviour, as individuals are motivated to make decisions that "honor and confirm a flattering self-image" (Dunning, 2007). People tend to make choices intrinsically consistent with their self-image, even if the decision is not explicitly linked to it. Consequently, consumer behaviour is strongly influenced by self-image-related motivations, pushing individuals to maintain internal consistency and avoid cognitive dissonance in their judgments and choices (Dunning, 2007).

However, the extent to which individuals are motivated to protect their self-image may depend on their level of self-esteem and on whether their self-concept is currently perceived as threatened (Dunning, 2007). This reasoning is supported by Stuppy and Smith (2023). Across four studies that used measured and experimentally manipulated self-esteem (total N = 1,792), the authors found that lower self-esteem individuals were significantly less willing to engage in self-protective behaviours, and this was driven by reduced motivation to protect the self. Low self-esteem did not reduce the willingness to protect others, only oneself, which the authors interpreted as consistent with self-verification theory (Swann, 2011): individuals with negative self-views are less motivated to protect themselves because it would be inconsistent with how they see themselves. Although Stuppy and Smith's findings concerned health-protection behaviours, the underlying principle is applicable to the persuasion context: if low self-esteem decreases the motivation to protect oneself from physical threats, it might also decrease the motivation to protect oneself from persuasive influence. In line with this reasoning, low self-

esteem individuals are more likely to accept negative outcomes and show reduced motivation to protect themselves because these behaviours are consistent with their self-concept (Stuppy & Smith, 2023; Swann, 2011).

It is important to mention that an alternative theoretical perspective generates contrasting prediction regarding the role of self-esteem in persuasion contexts. According to self-affirmation theory (Sherman & Cohen, 2002), people are less defensive and more receptive to potentially threatening information (e.g., persuasive messages) when their sense of self-worth is enhanced. Therefore, individuals with high self-esteem would be less likely to perceive a persuasive attempt as a threat to their autonomy and thus less motivated to resist it. Kernis et al. (2008) support this reasoning by looking at the relationship between different kinds of high self-esteem and defensiveness. The authors conducted a series of studies involving structured interviews designed to elicit self-threatening responses, founding that individuals with secure high self-esteem (i.e., stable, non-contingent, and congruent with high implicit self-esteem) showed particularly low levels of verbal defensiveness. In contrast, the fragile high self-esteem group showed defensiveness comparable to the low self-esteem group. Similarly, Feldman Barrett et al. (2002) showed that defensive processing is not a static individual trait, but an interaction between person-level factors and situational context. However, the present study follows the self-verification perspective (Swann, 2011) for two reasons. First, self-verification theory directly addresses the motivation to maintain consistency with one's existing self-view, which provides a more specific link to the persuasion context studied here. Second, the present study manipulates self-esteem using a temporary autobiographical recall task rather than measuring stable trait self-esteem. Under such conditions, temporarily elevated self-esteem may function more as an active motivational resource for self-protection than as the secure, deeply rooted sense of self-worth that, according to Kernis et al. (2008), reduces defensiveness.

Building on this reasoning, and applying the theory to a persuasion context, being influenced by a persuasive message could potentially challenge one's self-image as an autonomous and competent decision maker (Dunning, 2007). However, the extent to which people perceive persuasion in this way may vary and was not directly measured in the present study (see General Discussion). If such perception exists, the motivation to resist persuasive influence should be related to individuals' level of self-esteem, according to the self-verification logic described previously (Swann, 2011).

2.4 Research Question and Hypothesis formulation

The theoretical frameworks examined in the preceding sections converge on a central tension: consumers possess the cognitive tools to recognize persuasive intent, yet this recognition does not automatically translate into resistance. As Eisend and Tarrahi (2021) notes, the mere activation of persuasion knowledge is insufficient to guarantee a defensive response. What, then, determines whether consumers actually resist?

A compelling answer emerges from self-image theory. Dunning (2007) argues that individuals are motivated to preserve a positive and coherent self-perception, including the belief that they make autonomous, competent decisions. Being visibly influenced by a persuasive message can threaten this self-view, making resistance a form of self-protection rather than a purely cognitive response. Critically, this motivation is not uniform across individuals: those with higher self-esteem have more to protect and are therefore more likely to engage in defensive processing, whereas those with lower self-esteem are less invested in maintaining such a self-image and more open to external influence (Swann, 2011; Stuppy & Smith, 2023).

This reasoning leads to the central question guiding the present study: *How does persuasion knowledge in influencer marketing affect consumers' purchase intention and attitude toward the product, and does this relationship vary depending on individuals' level of self-esteem?*

The present study addresses this question by experimentally manipulating persuasion knowledge through an explicit informative message about influencer marketing practices. Participants in the persuasion knowledge condition received a brief message explaining that influencers are often paid to promote products, while those in the no persuasion knowledge condition did not receive this information. A control group was not exposed to any influencer content.

When persuasion knowledge is not activated, consumers are expected to process the influencer's message without critical scrutiny, resulting in more favourable evaluative and behavioural responses:

Hypothesis 1a (H1a): Individuals exposed to a persuasive message without persuasion knowledge activation report higher purchase intention than those exposed to a persuasive message with persuasion knowledge activation.

Hypothesis 1b (H1b): Individuals exposed to a persuasive message without persuasion knowledge activation report more positive attitudes toward the product than those exposed to a persuasive message with persuasion knowledge activation.

When persuasion knowledge is activated, the degree of resistance should depend on how motivated individuals are to protect their self-image. Higher self-esteem amplifies this motivation, intensifying the defensive response:

Hypothesis 2a (H2a): When persuasion knowledge is activated, individuals with higher self-esteem report lower purchase intention than individuals with lower self-esteem. This difference is weaker when persuasion knowledge is not activated.

Hypothesis 2b (H2b): When persuasion knowledge is activated, individuals with higher self-esteem report fewer positive attitudes toward the product than individuals with lower self-esteem. This difference is weaker when persuasion knowledge is not activated.

3. Methodology

3.1 Research Design

The experiment had a 3 (message condition: product description only vs. persuasive message without persuasion knowledge activation vs. persuasive message with activated persuasion knowledge) x 2 (self-esteem: high vs. low) between-subjects design. Participants were randomly assigned to one message condition and one self-esteem condition, ensuring that each participant was exposed to only one version of the questionnaire.

3.2 Participants

A total of 439 people participated in the study. Of these, 164 were excluded due to incomplete responses, resulting in a final sample of 275 participants.

Data was collected through multiple channels: 170 participants were recruited through Prolific (www.prolific.com), an online research platform that allows data collection from diverse contexts, while the remaining participants were recruited through personal contacts via WhatsApp and Instagram stories.

The final sample consisted of 157 women (57.1%), 117 men (42.5%) and 1 non-binary person (0.4%), with an age between 18 and 90 years ($M = 34.21$, $SD = 13.25$) (see [Appendix A](#)).

Regarding nationality, participants selected their country of origin from a predefined list of options (Italian, Portuguese, Spanish, French, German, or Other). The predefined nationalities were kept as separate categories, while those who selected "Other" were asked to specify their nationality, and their responses were subsequently grouped into broader geographical categories for the purposes of data presentation.

Specifically, the Egyptian group included participants who identified as Egyptian; the North European group included British, Polish, Dutch, Swedish, Finnish, and Romanian participants; the South/East European group included Greek, Austrian, Croatian, and Hungarian participants; the African group included Kenyan, South African, and Moroccan participants; the Asian group included Indian, Turkish, Indonesian, Japanese, Chinese and Sri Lankan participants; and the American group included participants from the USA, Colombia, Mexico, Chile, and Canada.

The analysis shows that the largest group was Italian ($n = 77$, 28.0%), followed by Egyptian ($n = 43$, 15.6%), Northern European ($n = 39$, 14.2%), African ($n = 19$, 6.9%), and Asian ($n = 19$, 6.9%), among others (see [Appendix B](#) for the complete nationality distribution).

3.3 Materials and Procedures

Independent variables

The independent variable in this study was the type of persuasion exposure, which was measured by three different experimental conditions.

In the baseline/control condition, participants were shown the product, a facial cleanser, in a neutral way, with no mention of an influencer or social media. The product was described focusing on its functional advantages. Before the exposure, participants were informed that they would assess the product.

In the persuasive message without persuasion knowledge activation, participants viewed a simulated social media profile of an Italian beauty influencer, Valentina Cabassi (576,000 Instagram followers at the time of data collection). They initially saw two lifestyle posts depicting everyday moments, specifically a post featuring the influencer with her daughter and another showing her having a coffee (see [Appendix C](#) for the exact stimuli used), followed by a sponsored post in which the influencer promoted the facial cleanser using the same product information provided in the baseline condition.

In the persuasive message with activated persuasion knowledge, participants viewed the same influencer social media profile. However, before seeing the sponsored post, they received an

informative message explaining how influencer marketing works, namely, that brands often collaborate with and pay influencers to promote their products with the aim of influencing people's opinions and encouraging them to purchase. After receiving this information, participants rated the perceived usefulness of the message on a 7-point Likert scale (1 = *Not at all*; 7 = *Very much*; “How useful do you find this information?”), serving as a check for engagement with the persuasion knowledge disclosure.

The facial cleanser was selected as the stimulus product due to its frequent promotion through influencer marketing and the documented impact of influencers in the cosmetics category (Zak & Hasprova, 2020). To avoid potential confounds related to prior brand attitudes or brand familiarity, the product was fictitious and not associated with any real brand. The same product and product description were used across all conditions to ensure consistency.

Moderator: Self-Esteem

Self-esteem was manipulated using an autobiographical recall task, which has also been used in previous research to temporarily alter self-perception (e.g., Abdulla & Woods, 2025; Kelley, Kay, & Dawtry (2014)). Participants were randomly assigned to a high- or low-self-esteem condition.

In the high-self-esteem condition, participants were asked to recall and describe three personal experiences in which they felt fulfilled, proud, or satisfied with their achievements. In the low-self-esteem condition, participants were asked to recall and describe three experiences characterized by feelings of failure, disappointment, or inadequacy. To maximize engagement and the effectiveness of the manipulation, participants were allowed to write their responses in their preferred language.

After the writing task, self-esteem was assessed using the five-item Brief Rosenberg Self-Esteem Scale (B-RSES; Monteiro et al., 2021), a shortened version of the original Rosenberg Self-Esteem Scale (Rosenberg, 1965). This shortened version retains the unidimensional structure and robust psychometric properties of the full scale while reducing participant fatigue (Monteiro et al., 2021). Participants indicated their level of agreement with each item on a 7-point Likert scale (1 = *Not at all*; 7 = *Very much*). Sample items include “I take a positive attitude toward myself” and “At times I think I am no good at all” (reverse-scored). The complete scale is available in [Appendix C](#).

The Brief Rosenberg Self-Esteem Scale showed good internal consistency (Cronbach's $\alpha = 0.86$).

Manipulation check

To verify the manipulation of the persuasive message, participants rated how much they perceived an influencer as having promoted the product on a 7-point Likert scale (1 = *Not at all*; 7 = *Completely*). In the baseline condition, the wording was slightly adapted (replacing "the influencer" with "an influencer") to maintain coherence with the absence of a specific influencer in that condition.

To assess the activation of persuasion knowledge, participants were asked to rate three aspects: the extent to which they perceived the post as part of a marketing strategy, the extent to which they believed the influencer was trying to persuade consumers, and the extent to which they thought the product was being promoted on behalf of a company. All items were measured on a 7-point Likert scale (1 = *Not at all*; 7 = *Very much*).

Because these questions referred to concrete elements of the stimuli, they functioned primarily as tests of attention and comprehension.

Dependent Variables

Purchase intention was measured using a multi-item scale adapted from Spears and Singh (2004). Participants were asked to indicate their likelihood, probability, intention and interest in purchasing the facial cleanser. Responses were recorded on a 7-point Likert scale (1 = *Not at all*; 7 = *Completely*).

The purchase intention scale demonstrated excellent internal consistency (Cronbach's $\alpha = 0.98$).

Spears and Singh (2004) for the likelihood item, originally used a 10-point Likert scale. In the present study, to ensure consistency across all measures used in the questionnaire, was used a 7-point scale.

Attitude toward product was measured using a series of evaluative items, also adapted from Spears and Singh (2004), originally developed to measure brand attitude and here adapted to assess product attitude. Participants were asked to rate the facial cleanser based on evaluative aspects (e.g. good, positive, favourable and attractive) on a 7-point scale (1 = *Very negative evaluation*, 7 = *Very positive evaluation*).

The scale showed excellent internal consistency (Cronbach's $\alpha = 0.95$).

Control variables

In addition to the main variables, the study included several control variables to account for any potential confounding effects to make sure that the relationships between independent and dependent variables were not caused by outside factors.

In the influencer-present conditions, participants rated the influencer based on five attributes: perceived expertise, attractiveness, likeability, relatability, and trustworthiness, using 7-point Likert scale. These attributes are recognized in previous literature as essential elements of source credibility and the effectiveness of influencer marketing. In particular, traits such as expertise, attractiveness, and trustworthiness have been shown to be important components of source credibility, influencing how people react to persuasive messages. Furthermore, similarity between influencers and followers has been shown to enhance marketing effectiveness and foster the creation of parasocial relationships, thereby increasing susceptibility to persuasion.

Regarding product-related individual differences, participants indicated their familiarity with and frequency of use of facial cleansers, both measured on 7-point Likert scales. Product category involvement was additionally assessed using a shortened version of the Personal Involvement Inventory (PII; Zaichkowsky, 1985, 1994). The original scale consists of 20 pairs of bipolar adjectives and can be decomposed into two dimensions: a cognitive component (e.g., important, relevant, valuable) and an affective component (e.g., interesting, stimulating, attractive) (Nelson, Duncan, and Frontczak, 1985; Zaichkowsky 1994). Zaichkowsky (1994) demonstrated that the scale can be reduced to 10 items while maintaining high reliability. In the present study, a further reduced set of four items was used focusing on the cognitive dimensions and based on the functional and utilitarian nature of the product category and the need to minimize questionnaire length.

The scale showed acceptable internal consistency (Cronbach's $\alpha = 0.755$).

Regarding social media and influencer habits, participants reported their frequency of social media use, the extent to which they follow influencers, their interest in influencer content, their trust in influencer recommendations, and the frequency with which they make purchases based on influencer recommendations. All items were measured on 7-point Likert scales. The equivalence of the three experimental groups on these variables is reported in Section 4.2.1. Finally, additional question regarding demographic aspects were included to assess other potential influences on participants responses. Specifically, they were asked to indicate their age, gender, and nationality.

The complete questionnaire is available in [Appendix C](#).

Procedure

The questionnaire was administered online via Qualtrics. Once participants clicked on the link, the study began with an introductory section informing them of the general purpose of the study, providing instructions for completing the questionnaire, and agreeing to participate in the experiment.

Participants first completed a writing task designed to manipulate self-esteem, followed immediately by the five-item Brief Rosenberg self-esteem scale as a manipulation check. Next, they were exposed to the experimental stimuli corresponding to the assigned message condition. Immediately after viewing the stimuli, participants answered the manipulation check questions assessing perceived influencer promotion (one item) and persuasion knowledge activation (three items). They then completed the measures of the dependent variables with purchase intention assessed first, followed by attitude toward the product. In the Knowledge and NO knowledge conditions participants subsequently rated the influencer on five attributes. Finally, participants completed the control variables measure in the following order: product familiarity, product usage frequency, product category involvement, social media usage frequency, influencer following, influencer interest, influencer trust and influencer purchase behaviours. Demographic information was collected at the end of the questionnaire (Age, gender and nationality, respectively).

4. Analysis

4.1 Demographics

The final sample consisted of 275 participants (57.1% female, 42.5% male, 0.4% nonbinary; mean age = 34.21, SD = 13.25). Full demographic details, including nationality distribution and recruitment procedure, are reported in the Participants section of the Methodology.

Gender distribution across experimental conditions was consistent across the three Knowledge Conditions, as evidenced by a chi-square test of independence ($\chi^2(4) = 7.077, p = .132$). Despite the fact that the control condition had a slightly higher mean age ($M = 37.31, SD = 16.35$) than the knowledge ($M = 34.00, SD = 12.88$) and no knowledge ($M = 32.46, SD = 11.06$) conditions, this difference did not reach statistical significance ($F(2, 272) = 2.578, p = 0.078$). The dependent variables were not influenced by gender, as no significant differences were observed between female and male participants in either purchase intention ($t(261.80) = 0.307, p =$

0.759) or product attitude ($t(272) = 0.270, p = 0.787$). Nevertheless, it was determined that age was substantially and negatively correlated with both attitude toward the product ($r = -0.212, p < 0.001$) and purchase intention ($r = -0.216, p < 0.001$).

4.2 Preliminary Analyses

4.2.1 Control Variables

Before testing the hypothesis, preliminary analyses were conducted to provide an overview of the sample characteristics and to verify the equivalence of the experimental groups.

First, descriptive statistics were calculated for all control variables. Participants reported moderate familiarity with facial cleansers ($M = 4.16, SD = 2.001$), the product category ($M = 4.16, SD = 1.343$) and a similar frequency of product use ($M = 4.31, SD = 2.207$). Regarding social media behaviour, participants reported a high frequency of social media use ($M = 5.95, SD = 1.394$), suggesting that the experimental context of an influencer post was ecologically valid and relevant to their daily media consumption. However, interaction with influencer-specific content was more moderate: participants reported a limited number of influencer followers ($M = 3.73, SD = 1.844$), moderate interest in influencer content ($M = 3.49, SD = 1.811$), and relatively low trust in influencer product recommendations ($M = 3.09, SD = 1.565$), followed by a low frequency of purchasing products based on influencer recommendations ($M = 2.77, SD = 1.606$).

Next, a series of one-way ANOVAs were conducted to test whether the three Knowledge Condition groups differ on any of these variables. No significant differences were found across conditions (all $F < 2.0$, all $p > 0.05$), suggesting that these factors are unlikely to have confounded the effects of the independent variables on the dependent variables.

After confirming the equivalence of the experimental groups, the effectiveness of the experimental manipulations was evaluated.

4.2.2 Manipulation Checks

Self-Esteem manipulation

An independent-sample t test was performed to evaluate the efficacy of the self-esteem manipulation, using participants' ratings from the Rosenberg Self-Esteem Scale (5 items, $\alpha = 0.86$) and comparing the two self-esteem conditions (High vs. Low).

Levene's test for equality of variances was significant ($F = 5.731$, $p = 0.017$), indicating that equal variances could not be assumed; therefore, the degrees of freedom were adjusted accordingly.

As predicted, participants in the high-self-esteem condition reported higher self-esteem ($M = 5.21$, $SD = 1.07$, $N = 119$) than participants in the low-self-esteem condition ($M = 4.82$, $SD = 1.30$, $N = 156$), $t(271.51) = 2.718$, $p = .007$, indicating that the self-esteem manipulation was successful.

Knowledge condition Manipulation

To verify that the knowledge condition manipulation (Control, Knowledge, NO Knowledge) was perceived as intended, participants' scores on a knowledge verification measure (3 items, $\alpha = 0.877$; scale range: 1–7) were subjected to a one-way ANOVA with knowledge condition as the between-subjects factor. The analysis revealed a significant effect of condition, $F(2, 272) = 82.776$, $p < 0.001$.

Table 1: Descriptive Statistics for Knowledge Manipulation Check by Condition

Condition	N	M	SD
Control	62	4.32	1.54
Knowledge	117	6.36	0.81
NO Knowledge	96	6.17	0.94

Tukey's post-hoc analyses revealed that individuals in the control group reported lower knowledge scores ($M = 4.32$, $SD = 1.54$) compared to those in the knowledge condition ($M = 6.36$, $SD = 0.81$, $p < 0.001$) and the no-knowledge condition ($M = 6.17$, $SD = 0.94$, $p < 0.001$), confirming that participants in the influencer-exposed conditions recognised the promotional and persuasive nature of the content. However, the knowledge and no-knowledge conditions did not differ significantly from each other ($p = 0.377$), indicating that the items assessed general awareness of the promotional nature of the content rather than the specific activation of persuasion knowledge. This constitutes a methodological limitation discussed further in section 5.

Full post-hoc comparison results are reported in Table D1 of [Appendix D](#).

The results align with the experimental rationale: both the knowledge and no-knowledge treatments presented participants with influencer-related content, but the control condition did

not, leading to reduced perceived familiarity with the message source. The manipulation was deemed effective.

Promotional message Manipulation

Finally, to confirm that participants accurately recognised the promotional aspects of the message, a one-way ANOVA was conducted demonstrating a significant effect of knowing condition, $F(2, 272) = 81.740, p < 0.001$.

Table 2: Descriptive Statistics for Promotional Message Manipulation Check by Condition

Condition	N	M	SD
Control	62	3.42	1.88
Knowledge	117	6.22	1.35
NO Knowledge	96	6.09	1.36

Tukey's post-hoc testing revealed that participants in the control condition rated the influencer's promotion substantially lower ($M = 3.42, SD = 1.88$) compared to those in the knowledge condition ($M = 6.22, SD = 1.35, p < 0.001$) and the no-knowledge condition ($M = 6.09, SD = 1.36, p < 0.001$). No substantial difference was observed between the knowledge and no-knowledge conditions ($p = 0.806$), since both groups had equivalent exposure to the information endorsed by the influencers.

Full post-hoc comparison results are reported in Table D2 of [Appendix D](#).

Overall, these results indicate that the manipulation of the knowledge condition and the promotional message successfully distinguished the control group from the two experimental groups.

4.3 Hypothesis Testing

To test the proposed hypotheses, a two-way between-subjects Analysis of Variance (ANOVA) was conducted for each dependent variable, with Knowledge Condition (Control, Knowledge, NO Knowledge) and Self-Esteem Condition (High Self-Esteem, Low Self-Esteem) as independent factors. Levene's test for equality of error variances was non-significant for both Purchase Intention ($F(5, 269) = 2.065, p = .070$) and Attitude toward Product ($F(5, 269) = 0.630, p = .677$), confirming that the assumption of homogeneity of variance was met across all conditions.

Tables 3 and 4 present the two-way ANOVA results for purchase intention and attitude toward product, respectively.

Table 3: Two-Way ANOVA Results for Purchase Intention

Source	df	F	p	η^2p
Knowledge Condition	2	1.488	0.228	0.011
Self-Esteem condition	1	0.133	0.715	0.000
Knowledge X Self-Esteem	2	0.456	0.634	0.003

Note. η^2p = partial eta squared.

Table 4: Two-Way ANOVA Results for Attitude Toward Product

Source	df	F	p	η^2p
Knowledge Condition	2	2.605	0.076	0.019
Self-Esteem condition	1	1.159	0.283	0.004
Knowledge X Self-Esteem	2	0.497	0.609	0.004

Note. η^2p = partial eta squared.

Hypothesis 1a (H1a) posited that participants in the No Knowledge persuasive activation condition would have a greater purchase intention than those in the Knowledge condition. The ANOVA test shows that the primary effect of knowledge condition on purchase intention was not statistically significant $F(2, 269) = 1.488, p = 0.228$. Descriptive data indicated that the Control condition produced the highest mean purchase intention ($M = 3.43, SD = 1.87$), succeeded by the Knowledge condition ($M = 3.02, SD = 1.65$) and the NO Knowledge condition ($M = 2.97, SD = 1.80$). The means were not in line with the prediction of H1a as the NO Knowledge condition did not lead to a higher purchase intention compared to the Knowledge condition. Interestingly, the difference between conditions seems to be mainly driven by the Control condition, with the two influencer-exposed conditions performing similarly lower. H1a was not supported.

Hypothesis 1b (H1b) stated that participants in the No knowledge condition would express more favourable attitudes toward the product compared to those in the Knowledge condition. The main effects of the Knowledge condition on attitude toward product approached but did not achieve conventional statistical significance $F(2, 269) = 2.605, p = 0.076$. Descriptive statistics showed that the Control condition generated the highest mean attitude toward the product ($M = 4.57, SD = 1.37$), whereas the Knowledge and No Knowledge conditions yielded identical means ($M = 4.16, SD = 1.23$ and $M = 4.16, SD = 1.29$, respectively). The lack of differences between the Knowledge and No Knowledge conditions, combined with the failure to reach statistical significance, provides no support for H1b. The pattern suggests that the effect is primarily driven by the Control condition, in which participants in both influencer-exposed conditions shifted their product evaluations downward, even when activated persuasion knowledge. Further discussion is found in Section 5.

Hypothesis 2a (H2a) predicted that self-esteem moderates purchase intention, when persuasion knowledge is activated, individuals with elevated self-esteem would report lower purchase intention compared to those with lower self-esteem, with this difference decreasing in the absence of persuasion knowledge activation. The interaction between knowledge condition and self-esteem did not have a statistically significant effect on purchase intention, $F(2, 269) = 0.456, p = .634$. The effect of self-esteem was also not significant, $F(1, 269) = 0.133, p = .715$. The analysis of the cell means showed no identifiable pattern aligned with the anticipated crossover interaction. In the "Knowledge" condition, those with high self-esteem had a lower purchase intention ($M = 2.89, SD = 1.46$) compared to those with low self-esteem ($M = 3.09, SD = 1.77$); while in the "No Knowledge" condition, means were approximately equal across self-esteem levels (high self-esteem: $M = 3.05, SD = 1.88$; low self-esteem: $M = 2.91, SD = 1.75$). The hypothesis H2a was not validated.

Hypothesis 2b (H2b) predicted a similar moderation model but for product attitude. The interaction between knowledge condition and self-esteem was not statistically significant, $F(2, 269) = 0.497, p = .609$, and the main impact of self-esteem was also not significant, $F(1, 269) = 1.159, p = .283$. The cell means did not show a theoretically consistent pattern: within the knowledge condition, participants with high self-esteem reported a lower attitude toward the product ($M = 4.04, SD = 1.17$) compared to those with low self-esteem ($M = 4.24, SD = 1.26$), while in the NO knowledge condition, the means were nearly identical across self-esteem levels (high self-esteem: $M = 4.18, SD = 1.37$; low self-esteem: $M = 4.14, SD = 1.24$). The hypothesis H2b was not supported.

The estimated marginal means for purchase intention and attitude toward product are displayed in Figures 1 and 2, respectively.

Figure 1. Estimated marginal means of Purchase Intention by Knowledge Condition and Self-Esteem Condition.

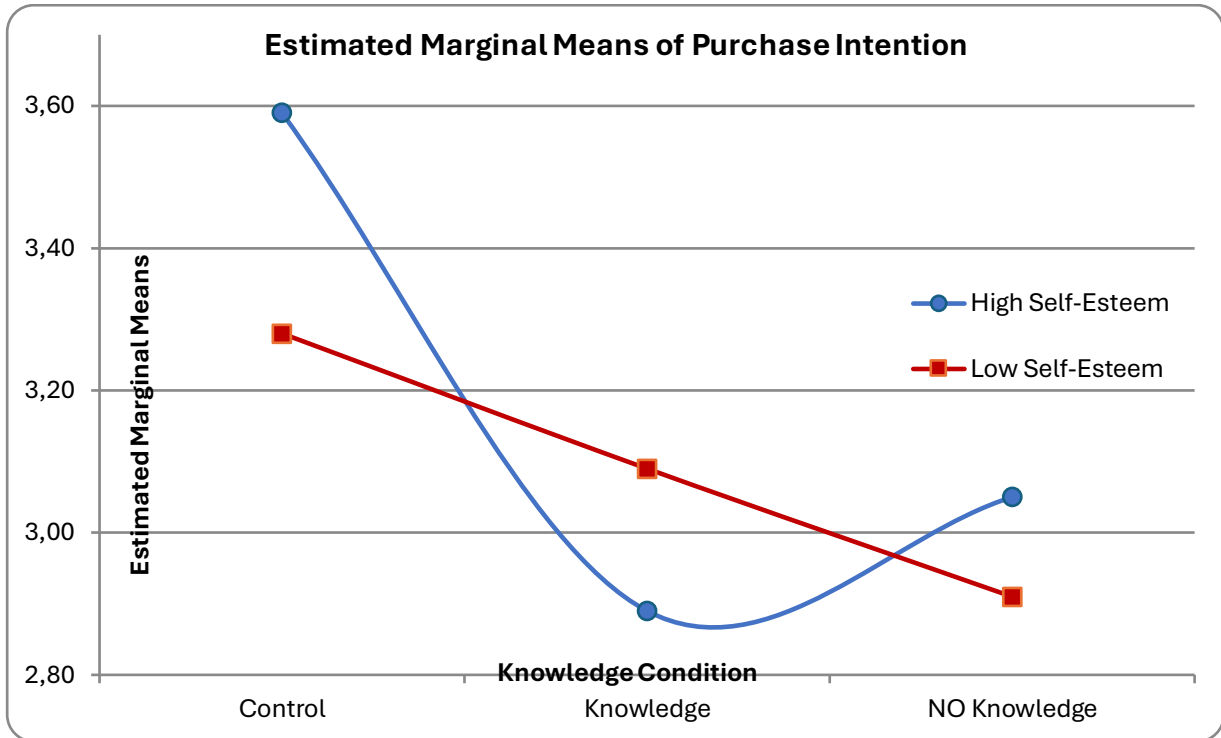
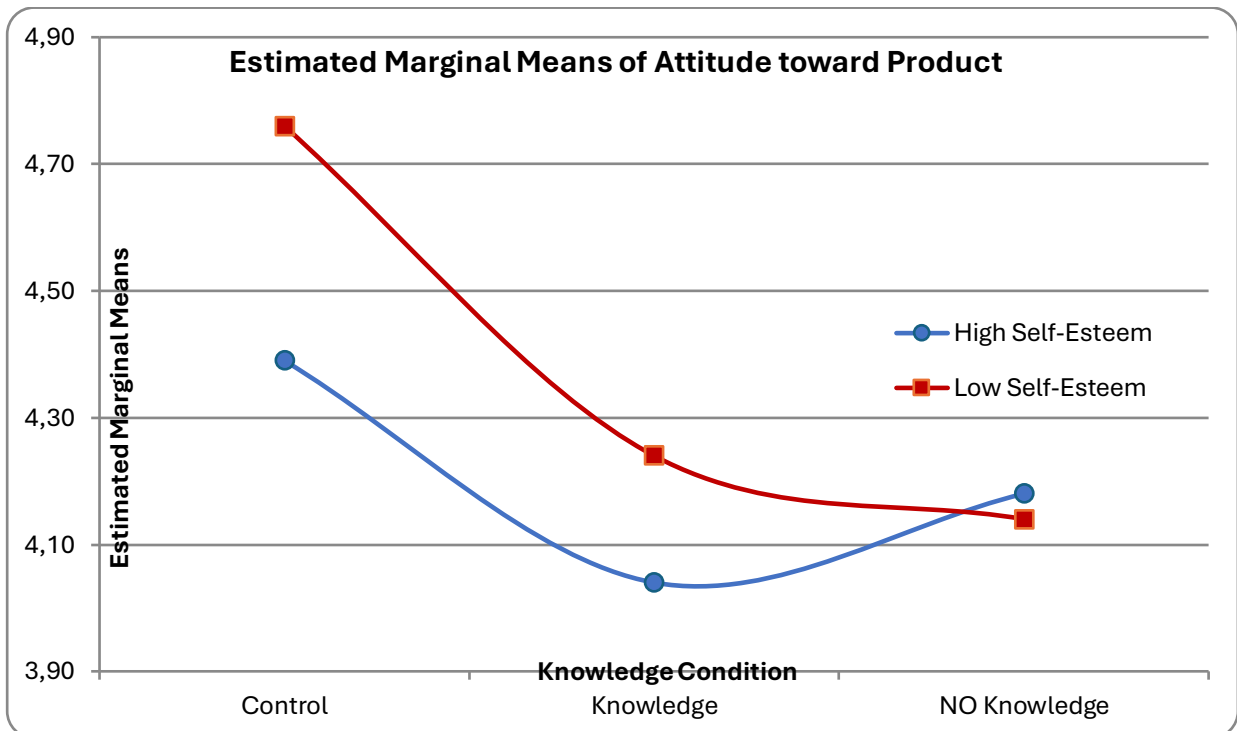


Figure 2. Estimated marginal means of Attitude toward Product by Knowledge Condition and Self-Esteem Condition.



4.4 Planned Comparison

A series of independent-samples t-tests were done to investigate the estimated moderating effect of self-esteem across each knowledge condition, comparing participants with high and low self-esteem for both dependent variables separately for each condition.

Within the Control condition, no significant changes were identified between self-esteem groups on either dependent measure. The analysis of purchase intention revealed $t(60) = 0.636$, $p = 0.527$, while the evaluation of attitude toward the product showed $t(60) = -1.060$, $p = 0.293$, suggesting that self-esteem did not affect consumer reactions without any influencer-related information.

In the Knowledge condition, Levene's test revealed unequal variances among self-esteem groups for purchase intention ($F = 5.683$, $p = .019$); thus, the Welch-corrected t-test was used, providing a non-significant result, $t(106.337) = -0.650$, $p = .517$. The analysis of attitudes toward the product revealed a non-significant comparison, $t(115) = -0.836$, $p = .405$, indicating that self-esteem did not yield significant differences in consumer outcomes when persuasion knowledge was activated.

In the NO Knowledge condition, neither dependent variable demonstrated a significant difference between groups. The purchase intention gave $t(94) = 0.365$, $p = .716$, whereas the attitude toward the product resulted in $t(94) = 0.148$, $p = .882$.

No statistically significant influence of self-esteem was seen across all six intended comparisons within any knowledge condition, thus failing to support the anticipated moderation on either outcome. Although all pairwise comparisons were non-significant, the pattern of interaction observed in the absence of the Control condition is further examined in Section 4.5.3.

4.5 Exploratory Analyses

4.5.1 Multiple Regression analyses

To identify the strongest predictors of purchase intention and attitude toward the product, multiple regression analyses were conducted using the enter method on the full sample ($N = 275$) and on the subsample exposed to influencer content ($N=213$), the latter including influencer opinion as an additional predictor. Predictors included knowledge condition, self-esteem condition, product involvement (PII), product familiarity, product usage frequency, social media usage, influencer following, influencer trust, influencer interest, and influencer

purchase behaviour. Variance inflation factors (VIF) remained below the threshold of 10 (Hair et al., 2010), indicating no serious multicollinearity.

For purchase intention, the overall model was significant, $F(10, 264) = 28.43, p < .001$, and explained about 52% of the variance ($R^2 = .519$, adjusted $R^2 = .500$). The strongest predictors were influencer purchase behaviour ($\beta = .375, p < .001$), influencer trust ($\beta = .216, p = .009$), product familiarity ($\beta = .155, p = .006$), and product involvement ($\beta = .126, p = .017$). For attitude toward the product, the model was also significant $F(10, 264) = 18.94, p < .001, R^2 = .418$, adjusted $R^2 = .396$, with influencer trust ($\beta = .297, p = .001$), product familiarity ($\beta = .281, p < .001$), product usage frequency ($\beta = -.252, p < .001$), influencer purchase behaviour ($\beta = .242, p = .007$) and product involvement ($\beta = .205, p < .001$) as significant predictors. The negative coefficient of product usage frequency indicates that the frequent users had less favourable attitudes towards the promoted product, the direction of this coefficient is discussed further in section 5. The knowledge condition and the self-esteem condition were not significant in either model, consistent with the null findings of the main analyses.

Table 5. Multiple Regression Results for Purchase Intention and Attitude toward Product (N = 275)

Predictor	PI β	PI p	Att β	Att p
Knowledge Condition	-.062	0.156	-.084	0.079
Self-esteem condition	-.013	0.770	0.034	0.469
Product Involvement	0.126	0.017	0.205	<0.001
Product Familiarity	0.155	0.006	0.281	<0.001
Product usage frequency	0.014	0.814	-0.252	<0.001
Social media usage	-0.011	0.823	0.083	0.139
Influencer following	0.146	0.117	0.052	0.613
Influencer trust	0.216	0.009	0.297	0.001
Influencer purchase behaviour	0.375	<0.001	0.242	0.007
Influencer interest	-0.101	0.312	-0.099	0.368
R^2	0.519		0.418	
Adjusted R^2	0.500		0.396	
F	28.43***		18.94***	

Note. Standardized coefficients (β) are reported. PI = Purchase Intention. Att = Attitude toward Product.

** $p < .05$. ** $p < .01$. *** $p < .001$.*

In the models including influencer opinion item, corresponding to the influencer exposed subsample ($N = 213$), this variable emerged as the strongest predictor of both purchase intention ($\beta = .337, p < .001; R^2 = .588$) and attitude toward the product ($\beta = .487, p < .001; R^2 = .530$). Interestingly, influencer trust was non-significant in both models, which suggests that the role of influencer trust in the full-sample analyses was largely due to the shared variance with influencer opinion. Knowledge condition and self-esteem condition were not significant.

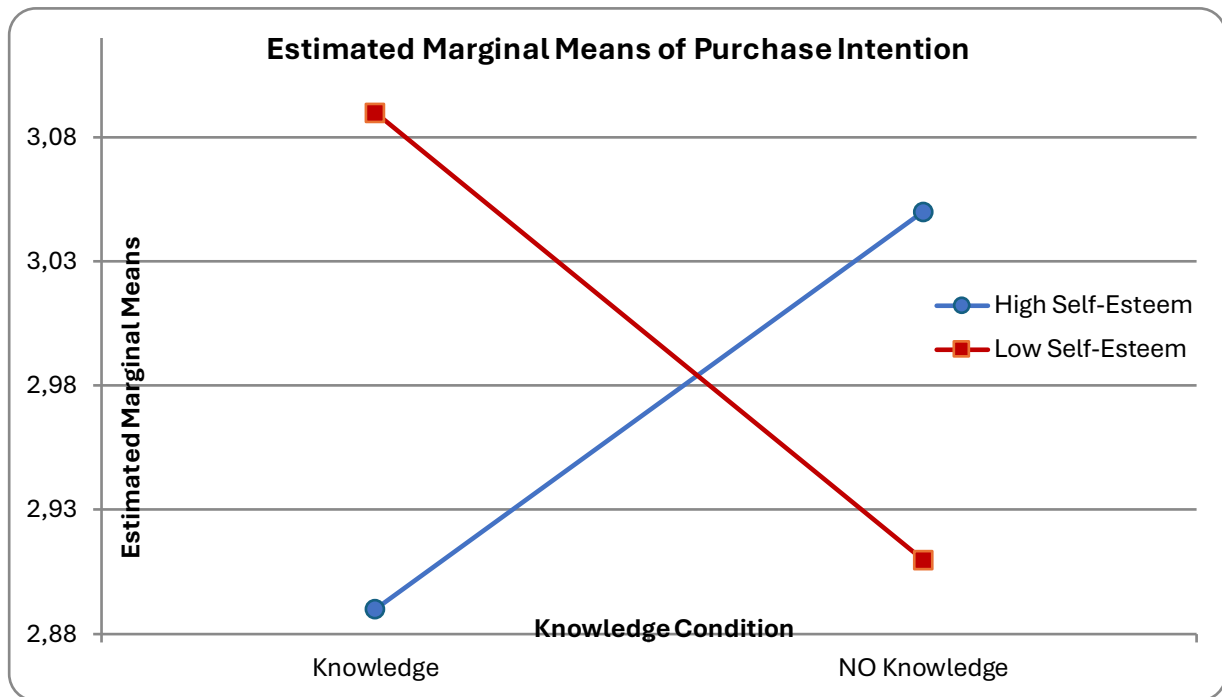
4.5.2 Influencer opinion

An additional measure of influencer opinion was assessed among participants exposed to influencer marketing content (Knowledge and NO Knowledge conditions, $N = 213$). Mean influencer opinion was $M = 4.09$ ($SD = 1.31$) in the Knowledge condition and $M = 3.94$ ($SD = 1.27$) in the NO Knowledge condition, with an overall combined mean of $M = 4.02$ ($SD = 1.29$). These values indicate a moderate, rather than strongly positive, perception of the influencer, suggesting that the experimental stimulus produced a neutral-to-positive impression of the influencer. As reported in Section 4.5.1, when entered in the multiple regression models, influencer opinion emerged as the strongest predictor of both purchase intention ($\beta = .337, p < .001$) and attitude toward the product ($\beta = .487, p < .001$), consistent with the source credibility model (Hovland & Weiss, 1951; Ohanian, 1990).

4.5.3 Knowledge vs NO Knowledge conditions

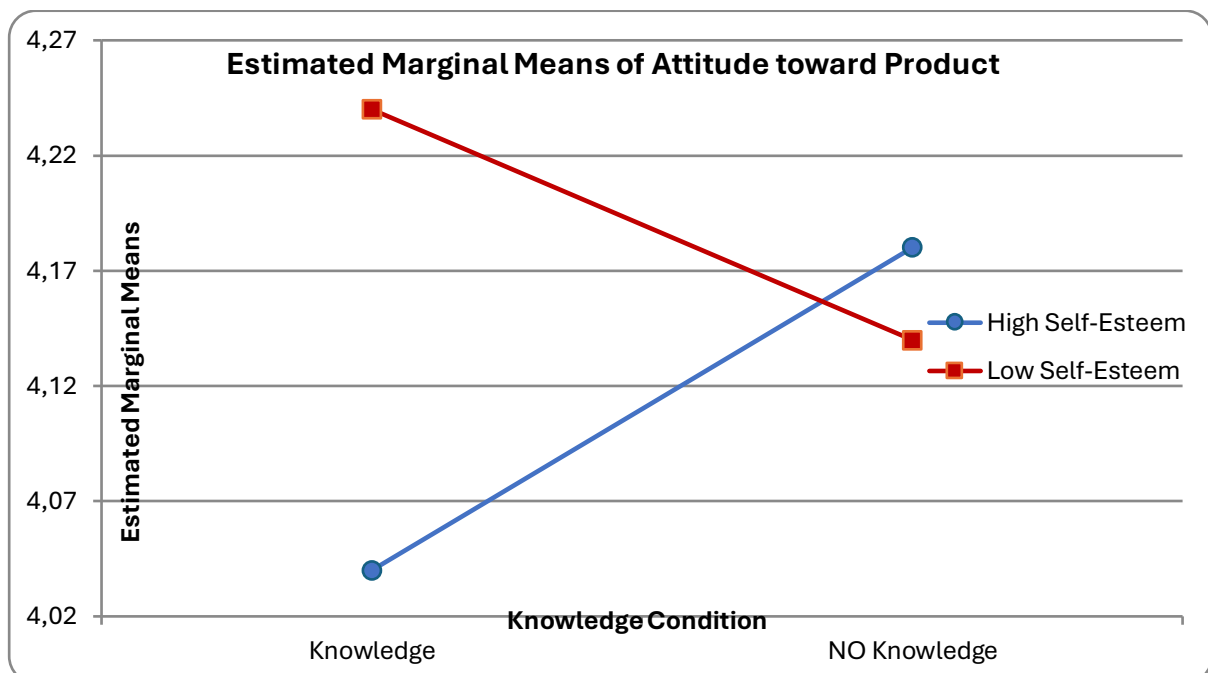
The interaction plots in Figures 1 and 2 suggested a visual crossover pattern between the Knowledge and NO Knowledge conditions that appeared to be obscured by the inclusion of the Control condition. To investigate this pattern further, an additional two-way ANOVA was conducted without the Control condition ($N = 213$). No significant effects were found for purchase intention (Knowledge Condition: $F(1, 209) = 0.003, p = .959$; Self-Esteem: $F(1, 209) = 0.016, p = .901$; interaction: $F(1, 209) = 0.470, p = .494$). However, Figure 3 shows a visual crossover that is consistent with H2a; High Self-Esteem participants reported lower purchase intention in the Knowledge condition ($M = 2.89$) but higher in the NO Knowledge condition ($M = 3.05$) compared to Low Self-Esteem participants.

Figure 3. Estimated Marginal Means of Purchase Intention by Knowledge Condition and Self-Esteem Condition (Knowledge and NO Knowledge conditions only).



A similar pattern emerged for attitude toward the product (interaction: $F(1, 209) = 0.442, p = .507$), with Figure 4 showing a similar crossover consistent with H2b. Neither interaction reached statistical significance, but the consistency of direction with the predicted moderation suggests the hypothesised effect may exist but was not sufficiently powered to detect.

Figure 4. Estimated Marginal Means of Attitude Toward Product by Knowledge Condition and Self-Esteem Condition (Knowledge and NO Knowledge conditions only).



5. Discussion

5.1 Summary of Results

This study investigated if the activation of persuasion knowledge would decrease purchase intention and attitudes toward the product in an influencer marketing context, and whether self-esteem would moderate these effects. A 3×2 between-subjects experimental design was used, manipulating knowledge condition (Control, Knowledge, NO Knowledge) and self-esteem (High, Low) among a sample of 275 participants exposed to a face cleanser promoted by an Italian beauty influencer. The data did not support any of the four hypotheses.

The two-way ANOVA indicated no significant main effect of knowledge condition on purchase intention or on attitude toward the product, although the latter neared conventional significance thresholds. There was no significant main effect of self-esteem on any dependent measure, and no interaction between knowledge condition and self-esteem achieved statistical significance. Planned comparisons validated the nonexistence of self-esteem disparities within each individual knowledge condition across both outcomes. Even though there were no statistically significant effects, the descriptive pattern of means showed a theoretically interesting result: participants in the Control condition, who evaluated the product without any influencer-mediated presentation, consistently reported higher purchase intention ($M = 3.43$) and more positive attitudes toward the product ($M = 4.57$) than participants in either the Knowledge (PI: $M = 3.02$; ATP: $M = 4.16$) or NO Knowledge (PI: $M = 2.97$; ATP: $M = 4.16$) conditions. Exploratory multiple regression analyses identified influencer purchase and influencer trust as the strongest predictors of purchase intention, with knowledge and self-esteem not significant in both models. When influencer opinion was included, the subsample exposed to influencer content, it emerged as the strongest predictor of both outcomes explaining approximately 53/59% of the variance. Further analysis, excluding the Control condition, revealed a visual crossover pattern in the direction of H2a and H2b for both dependent variables, but not statistically significant.

5.2 Theoretical contributions

This study contributes to the existing literature on persuasion knowledge and influencer marketing by offering an empirical examination of theoretically based hypothesis that, ultimately, were not confirmed. Null outcomes have scientific values as they help identify boundary conditions of existing theoretical frameworks.

The findings relate to the Persuasion Knowledge Model (Friestad & Wright, 1994). Participants in the promotional message and influencer condition were clearly recognized the commercial intent (around $M = 6.15$). However, this recognition did not reduce purchase intention or product attitude. This is in line with evidence that persuasion knowledge effects on behavioural outcomes are modest and do not necessarily translate into consumer resistance (Eisend & Tarrahi, 2021). Notably, the control condition has a descriptive advantage over both influencer exposure conditions. This suggests that participants may have already been sufficiently aware of influencer marketing as a persuasive strategy and spontaneously corrected for it upon exposure without the need for explicit knowledge activation. In this sense, the manipulation could have been unnecessary in a context where the persuasive intent was so clear. Campbell and Kirmani (2000) also note that the use of persuasion knowledge depends on cognitive accessibility of the persuasive motivations of the source, i.e. the perception that the message or its source is acting with a persuasive intent, and on available processing resources, both of which may have already been satisfied in all conditions given the transparency of the context. It also suggests that the influence of knowledge activation may be dependent on the pre-existing trust in the influencer: an overt reminder may be an effective corrective cue for audiences who trust the influencer, whereas for sceptical audiences it adds little beyond what they already know.

The Elaboration Likelihood Model (Petty & Cacioppo, 1986) provides an additional theoretical framework. If participants processed the influencer stimulus via the peripheral route, using source cues rather than message content, the activation of persuasion knowledge would have had little opportunity to trigger the critical evaluation necessary to generate resistance (Petty & Cacioppo, 1986; Ilieva et al., 2024). Although the existing data do not provide direct confirmation for this interpretation, it represents a theoretically plausible explanation and aligns with the overall trend of the findings.

The exploratory analyses provided the strongest theoretical insights, supporting the Source Credibility Model (Hovland & Weiss, 1951; Ohanian, 1990). Across both regression models, source-related variables, specifically influencer trust and influencer purchase behaviour – were the strongest predictors of consumer outcomes. It should be noted, however, that the cross-sectional nature of the data does not allow us to establish the direction of causality: is equally plausible that more positive product evaluations led to more favourable impressions of the influencer, rather than the reverse. Nevertheless, the consistency of these associations suggests that audience predisposition towards the influencer is particular relevant factor in consumer

responses and provides a more nuanced understanding of the theoretical frameworks most applicable to consumer behaviour in influencer marketing context.

Finally, the descriptive advantage of the control condition over both influencer exposure conditions represents a theoretically significant and unexpected outcome. The observation that participants who evaluated the product without influencer endorsement showed higher purchase intention and more favourable product attitudes than those exposed to influencer content, challenges the assumptions that influencer endorsement consistently improves consumer responses. This raises a novel theoretical question: under what circumstances does influencer presence diminish rather than enhance product evaluations? This pattern aligns with the low baseline influencer trust noted in the sample ($M = 3.09$), suggesting that for sceptical audiences, exposure to influencer content may actively trigger a critical evaluation of the product rather than facilitating persuasion, highlighting an important boundary condition of influencer marketing as a persuasive strategy.

5.3 Managerial contributions

The results of this study have several practical implications for marketers and operating in the influencer marketing sector, especially within the beauty and personal care industry.

First, the absence of significant persuasion knowledge effect suggests that for audiences with low baseline influencers trust, activating persuasion awareness does not reduce campaign effectiveness. Marketers could therefore focus on building authentic source credibility instead of managing concerns about revealing persuasive information.

Second, the strong link between influencer opinion and consumer outcomes underscores the importance of strategic influencer selection. A moderate influencer perception, as observed in this study, indicates that a mediocre perception of the influencer is not likely to generate substantial consumer responses. This shows how important it is to choose influencers wisely and strategically, prioritizing the four aspects of the Source Credibility Model, trustworthiness, expertise, attractiveness, and perceived similarity (Lou & Yuan, 2019; Munnukka et al., 2016). Additionally, since participants' opinions of the influencer varied, influencer effectiveness appears audience-dependent, which highlight the need to understand how target audiences perceive a particular influencer before launching a campaign. Choosing the right influencers is still key, but the present findings regarding the control condition suggest that may not always be sufficient, the product itself may be more central to driving consumer responses than is typically assumed in the influencer marketing literature.

Third, and perhaps the most strategically significant, the descriptive advantage of the control conditions, invites marketers to reconsider the role of the influencer in their communications strategy. The fact that participants exposed to no reported higher purchase intentions and more favourable attitudes toward the product suggests that the product itself may be a stronger persuasive tool than the influencer's endorsement. Brands may therefore benefit from product-focused communication strategies that position the influencer as contextual support rather than the primary persuasive agent, keeping product features and benefits at the centre of the message.

5.4 Limitations and Future Research

This study has several limitations that should be identified and that indicate potential directions for future research.

A first set of limitations regards methodological choices. The study was conducted via an online survey, which provided limited control over the conditions of stimulus exposure. Participants might not have been completely focused throughout the processing of the experimental stimuli, therefore reducing the necessary processing depth to generate significant adaptive responses based on knowledge of persuasion. Future research should consider laboratory-based or more controlled experimental paradigms that allow for greater control over attention and processing depth. Additionally, the sample was multinational, comprising participants from a wide range of countries and cultural backgrounds. This enhances the external diversity of the sample; however, it simultaneously introduces significant variation in attitudes towards influencer marketing, social comparison norms, and resistance to persuasion, which was not accounted for in the initial analysis and may have diminished the experimental effects. Future research could employ culturally homogeneous samples or explicitly include cultural background as a moderating variable to differentiate persuasive mechanisms between cultures.

A second limitation concerns the self-esteem manipulation. The manipulation was statistically effective, but it only made a modest difference between the two groups (High Self-Esteem: $M = 5.21$ vs. Low Self-Esteem: $M = 4.82$). This difference may not have been sufficient to activate the self-defence motivational processes theorized to moderate resistance to persuasion (Dunning, 2007; Swann, 2011). Furthermore, the interpretation of the null findings on self-esteem is complicated by the existence of conflicting theoretical predictions. Based on the self-verification theory (Swann, 2011), the present study predicted that individuals with higher self-esteem would be more motivated to resist persuasion to protect their positive self-image (Dunning, 2007), but the self-affirmation theory (Sherman & Cohen, 2002) predicts the

opposite: that self-worth enhancement reduces defensiveness and increases open-mindedness to potentially threatening information. Future research could investigate the coexistence of these two opposing theoretical mechanisms. Additionally, Kernis et al. (2008) showed that the relationship between self-esteem and defensiveness depends on whether high self-esteem is fragile or secure, a difference not captured by the current manipulation, which temporarily altered participants' state self-assessments through an autobiographical recall task. Future research could include measures that differentiate between these two types of self-esteem, to better understand the conditions under which each theoretical perspective applies. In addition, a supplementary analysis on the two influencer-exposed conditions showed a visual crossover pattern consistent with the expected moderation, indicating that the effect may be present but underpowered in the present study. Future research with larger samples and stronger self-esteem manipulations may be in a better position to test this prediction. Another limitation is that the present study did not examine whether participants perceived being influenced by a persuasive message as a threat to their self-image. Individual differences in perceiving persuasion as a threat could explain when and why self-esteem moderates consumer responses to persuasive messages. Since this perception may be an important mechanism linking self-esteem to resistance to persuasion, future studies should incorporate measures that directly investigate this construct.

The third limitation concerns the selection of the influencer. The research used a real Italian beauty influencer, Valentina Cabassi, whose name and public image may have been recognised by certain participants, especially Italian participants, who represented the predominant national subgroup in the sample, while remaining unknown to other. For participants familiar with the influencer, their preexisting opinions and attitudes may have affected their responses independently of the experimental manipulation, resulting in uncontrolled systematic variance. On the other hand, people who did not know the influencer may not have had the contextual knowledge necessary to make a meaningful assessment of her credibility. This implies that the selection of the influencer added a level of subjectivity into participants' responses that is difficult to separate from the experimental effects. While the present study assessed general pre-existing attitudes toward influencers (e.g., influencer trust and influencer following) as covariates in the exploratory analyses, it did not include a direct measure of prior familiarity with the specific influencer used as stimulus. For participants already familiar with Valentina Cabassi, pre-existing opinions may have influenced their responses independently of the experimental manipulation. Future research could address this in two ways: by including a

direct screening question assessing prior familiarity with the specific influencer and using it as a covariate, or by using fictitious or unfamiliar influencers to completely remove familiarity effects.

A fourth constraints is related to the choice of stimulus product. Even while people of a range of ages and gender use facial cleanser, certain groups may have considered the product seemed more relevant than others, introducing differences in product engagement that were not controlled for in the primary analyses. Cross-tabulation analyses demonstrated a significant association between gender and both product familiarity, $\chi^2(12) = 34.653, p < 0.001$, and frequency of product use, $\chi^2(12) = 60.051, p < 0.001$. This indicates that male and female participants exhibited very different levels of familiarity and experience with the product. Age may have also influenced participants' perceived relevance on the product, since different age groups tend to have different skincare routines and levels of knowledge with products. These variations in product engagement may have resulted in uncontrolled heterogeneity in responses, independent of the experimental manipulation, which might have contributed to the overall variability in outcomes. The unbalanced gender composition of the sample (157 women, 117 men, and 1 non-binary person) could make this interpretation even harder. Future research should consider using a product that is more uniformly familiar and pertinent across gender and age groups to minimize the impact of varying levels of product engagement on consumer responses.

The fifth limitation relates to the nature of persuasive strategy used in the study. Influencer marketing is a highly visible and explicit form of persuasion. The consumer can easily understand the commercial intent of the message, as confirmed by the high level of recognition of persuasive intent in the influencer conditions (around $M = 6.2$). In this scenario, the persuasive strategy may have been so evident that all participants, regardless of their level of knowledge of persuasion techniques, recognized it equally, which could explain why no significant differences emerged between conditions. In line with this interpretation, the control condition, where participants assessed the product without an influencer, produced higher purchase intention and more favourable attitude toward the product compared to the other conditions. This indicates that a more implicit and product-centric communication approach may be more effective for sceptical audiences. Future research could examine whether the effects anticipated by the Persuasive Knowledge Model (Friestad & Wright, 1994) are more prevalent in contexts where the persuasive strategy is less visible and more implicit, such as product packaging design, where only consumers with active persuasive knowledge would be

able to identify the underlying marketing intent while those without such knowledge would not. This would provide a more sensitive test of the Persuasive Knowledge Model and enable research to investigate if the influence on persuasive knowledge on purchase intention and product attitudes, or any other variable, is amplified when the persuasive strategy requires a greater level of awareness for recognition.

Another methodological limitation relates to the manipulation check of the Knowledge Condition. The employed items measured general awareness of the promotional nature of the content, which was equally salient in both influencer-exposed conditions, resulting in no significant difference between Knowledge and NO Knowledge groups. Therefore, differential activation of persuasion knowledge between these conditions could not be empirically verified. Future studies should develop more focused items assessing perceived manipulative intent or awareness of commercial motives.

Regarding alternate theoretical reasons, the current study did not include a direct assessment of participants' processing of the influencer material, making it impossible to determine the degree of elaboration with which they engaged with the stimulus. Future research should include measures of elaboration depth to better understand the cognitive mechanism underlying consumer responses in influencer marketing contexts. From a theoretical perspective, the findings also suggest that the hypotheses may have been based on an oversimplified assumption, specifically that the activation of persuasive knowledge would automatically lead to a reduction in purchase intention and product attitude. Instead, the results, show that source credibility may be more important than persuasive knowledge in an influencer marketing setting, to the point of cancelling out the effects of persuasive knowledge activation. Future research could examine whether the impacts of persuasive knowledge manifest only when the influencer is perceived as low in credibility and whether these effects disappear when the influencer is viewed as highly credible. Additionally, contrasting these effects with non-influencer persuasion strategies could help clarify whether the null results are specific to the influencer marketing context or indicative of a more general boundary condition of the Persuasion Knowledge Model.

Finally, several questions raised by this study remain unanswered. Specifically, the study was unable to directly explain why the control condition performed better than either influencer exposure condition, as the experimental design did not include measures of psychological reactance or spontaneous activation of persuasion knowledge. Future research could explore

these mechanisms more directly. Moreover, it is still uncertain if the absence of impacts on self-esteem reflects a valid theoretical boundary condition or is only a consequence of the manipulation's inadequacy. One possible boundary condition concerns the low baseline trust in influencers observed in the sample ($M = 3.09$). However, if prior trust in the source is very low, consumers may already be critical about the content, regardless of their level of self-esteem. This implies that the cognitive knowledge structures about influencer credibility may replace the motivational processes associated with self-esteem. Under these conditions self-esteem may simply cease to function as a meaningful moderator. Future studies may consider investigating the interaction between source credibility and self-esteem, and whether self-esteem is a more effective moderator of resistance to persuasion when trust in the source is higher.

These open questions and other future research's suggestions indicate that the current study could be considered as an initial step toward a more complete understanding of the conditions under which persuasion knowledge shapes consumer behaviour in influencer marketing context, and more broadly, of whether similar effects might emerge when different, more implicit tactics are employed.

6. Conclusion

The present study investigated the effect of persuasion knowledge activation on purchase intention and product attitude in the context of influencer marketing and the moderating role of self-esteem in this relationship. A 3×2 between-subjects experimental design was used with 275 participants. None of the four pre-registered hypotheses were supported.

The absence of significant effects of persuasion knowledge on consumer outcomes is in itself theoretically informative. Participants exposed to the influencer content, whether or not they received explicit information about its commercial nature, did not differ from one another on either purchase intention or attitude toward the product. It suggests that consumers may already spontaneously engage in correction processes upon exposure in a highly transparent persuasion context such as influencer marketing, rendering additional knowledge activation redundant. In line with this interpretation, the descriptive advantage of the control condition, where participants evaluated the product without any influencer intervention, suggests that exposure to influencers, rather than persuasion knowledge, may have been the critical factors suppressing consumer responses, particularly for those with low initial trust in influencers.

The moderation hypothesis regarding self-esteem also received no empirical support, although exploratory analyses excluding the control condition revealed a directional crossover pattern

consistent with theoretical predictions. This pattern suggests that hypothesized effect may exist but that the present study lacked sufficient statistical power and manipulation strength to detect it. Future research employing larger samples and stronger self-esteem inductions would be better positioned to test this prediction.

The findings together highlight the complexity of persuasion dynamics in digital advertising. Source credibility, rather than cognitive awareness alone, was found to be the dominant predictor of consumer responses, explaining the greatest proportion of variance in both purchase intention and product attitude. This points to a more fundamental process: in influencer marketing, the pre-existing dispositions of audiences toward the source may be a more potent driver of behaviour than the content or framing of the message itself.

This study represents a first step in understanding when and for whom persuasion knowledge will lead to resistance in influencer marketing contexts. Future research should build on the theoretical tensions identified here to develop a more complete account of consumer resistance to digital persuasion by employing more implicit persuasion strategies, stronger experimental manipulations, and culturally homogeneous samples.

APPENDIX

Appendix A

Table A1: Gender Distribution

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	157	57,1	57,1	57,1
	Male	117	42,5	42,5	99,6
	Non-binary	1	,4	,4	100,0
	Total	275	100,0	100,0	

Table A2: Age Descriptives Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Age_1	275	18	90	34,21	13,245
Valid N (listwise)	275				

Appendix B

Table B: Nationality Distribution

		Nationality			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Italian	77	28,0	28,0	28,0
	Portuguese	12	4,4	4,4	32,4
	Spanish	12	4,4	4,4	36,7
	French	9	3,3	3,3	40,0
	German	8	2,9	2,9	42,9
	Other	12	4,4	4,4	47,3
	Egyptian	43	15,6	15,6	62,9
	North European	39	14,2	14,2	77,1
	South/East European	8	2,9	2,9	80,0
	African	19	6,9	6,9	86,9
	Asian	19	6,9	6,9	93,8
	American	17	6,2	6,2	100,0
	Total	275	100,0	100,0	

Appendix C

Questionnaire

After accessing the survey link, participants were randomly directed to one of the six survey conditions. On the initial page, they were presented with the following instruction: *“Please click the link below to continue the study.”* By clicking the link, participants were redirected to the corresponding version of the questionnaire, where the actual survey questions were displayed

Introduction

Welcome and thank you for taking part in this study. This survey is part of a Master’s thesis research project at Universidade Católica Portuguesa.

We are interested in understanding how people form impressions and evaluations based on different types of information.

In this study you will be asked to look at some materials and answer a few questions about your perceptions and opinions. We are interested in how people evaluate different product and product categories.

There are no right or wrong answers. We are simply interested in your personal impressions. Your participation in this study is completely voluntary and anonymous. No information that could personally identify you will be collected.

The survey will take approximately 3–4 minutes to complete. By continuing with the survey, you confirm that you voluntarily agree to participate in this study.

Thank you for your participation.

Section 1: Manipulation Self-Esteem

Q1:(Low Self-Esteem)

For this part of the study, we are interested in people’s personal experiences. Specifically, we would like you to think about situations in your life in which you felt unsuccessful, disappointed in yourself, or experienced a personal failure. These are experiences that reflect moments where you doubted your abilities or were dissatisfied with your performance. Please take a moment to think about it.

When you are ready, list and briefly describe three such situations that you have experienced in your life. You can write your responses in your preferred language. This is intended to make the task more natural and intuitive; responses will be translated.

Q1:(High Self-Esteem)

For this part of the study, we are interested in people's personal experiences. Specifically, we would like you to think about and recall situations in your life in which you felt successful, proud of yourself, or accomplished something important. These are experiences that reflect moments where you felt confident in your abilities or satisfied with your achievements. Please take a moment to think about it.

When you are ready, list and briefly describe three such situations that you have experienced in your life. You can write your responses in your preferred language. This is intended to make the task more natural and intuitive; responses will be translated.

Q2: Please now indicate how much each of the following statements describes you (scale from 1= Not at all to 7= Very much).

- At time I think I am no good at all
- All in all, I am inclined to think I am a failure
- I feel I do have much to be proud of
- On the whole, I am satisfied with myself
- I take a positive attitude toward myself

Section 2

Scenarios

(Control condition)

In the next section, you will be presented with a product. Please take a moment to look at the information carefully and form your impression. You will then be asked to evaluate the product and answer a few questions based on your opinion. Please respond as naturally and honestly as possible based on your own thoughts and experiences.

Please carefully look at the following **product** and **text**.



This facial cleanser is designed to **gently cleanse** the skin and **remove impurities**. It helps leave the skin feeling **clean** and **fresh without drying** it out.

(Influencer message & Knowledge)

In the next section, imagine that you are scrolling through a social media profile. You will see a series of posts from the same user. Please look at them as you normally would and form an impression about this person. After viewing the posts, you will be asked to answer a few questions.

Please carefully look at the following social media posts before continuing.



valentinacabassi



valentinacabassi Sveva <3



valentinacabassi



valentinacabassi 🍷🍒🌸🦋

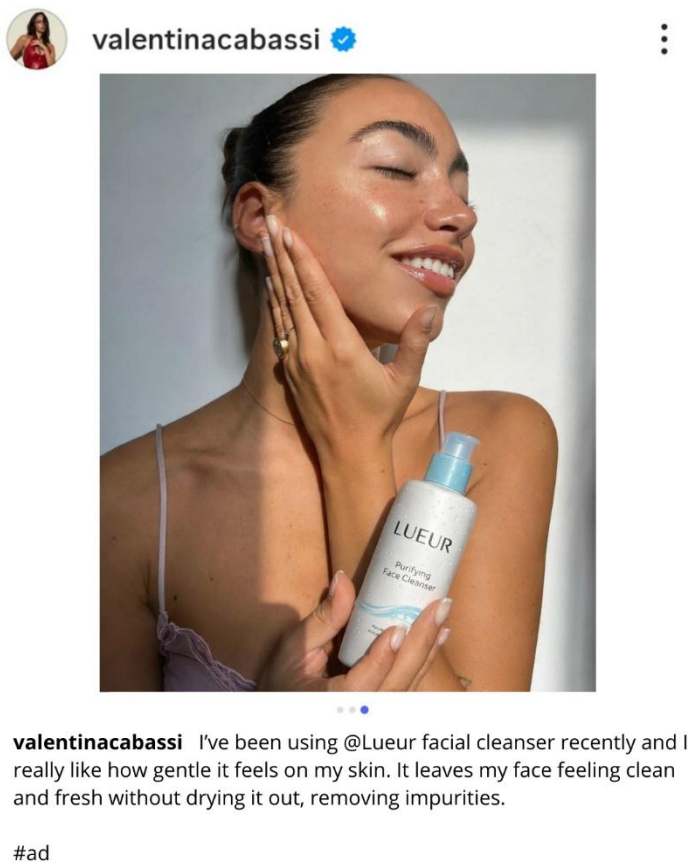
Before continuing, please read the following information.

On social media, influencers often collaborate with brands to promote products. In many cases, influencers receive compensation to feature or recommend products in their content.

These collaborations are designed to make products more appealing and may influence consumers' opinions and purchase decisions.

Q3: How useful do you find this information (scale from 1= Not at all to 7= Very much)

You will now see another post from the same profile. Please continue as you normally would and look it carefully.



Please consider the last Instagram post you were presented with and answer the following questions.

(Influencer message & No Knowledge)

In the next section, imagine that you are scrolling through a social media profile. You will see a series of posts from the same user. Please look at them as you normally would and form an

impression about this person. After viewing the posts, you will be asked to answer a few questions.

Please carefully look at the following **social media posts** before continuing.



valentinacabassi 



valentinacabassi Sveva <3



valentinacabassi 



valentinacabassi    



valentinacabassi



valentinacabassi I've been using @Lueur facial cleanser recently and I really like how gentle it feels on my skin. It leaves my face feeling clean and fresh without drying it out, removing impurities.

#ad

Please consider the last Instagram post you were presented with and answer the following questions.

Section 3: Manipulation check

Q4: To what extent do you think the product in the scenario was promoted by an influencer?
(scale from 1=Not at all to 7= Completely)

Q5: Please, before continuing, answer the following questions (scale from 1= Not at all to 7= Very much)

- To what extent did you think the post was part of a marketing strategy?
- To what extent did you think an/the influencer was trying to persuade people to buy the product?
- To what extent did you think an/the influencer was promoting the product on behalf of a company?

Section 4: Purchase intention and Attitude toward product

Q6: Please indicate your opinion regarding the following statements regarding the facial cleanser shown in the post (scale from 1= Not at all to 7= Completely).

- How likely are you to buy the facial cleanser?
- What is the probability that you would purchase the facial cleanser?
- To what extent do you intend to buy the facial cleanser?
- How interested are you to buy the facial cleanser?

Q7: Please evaluate the facial cleanser using the following scale:

1 = Very negative evaluation 7 = Very positive evaluation

- How good do you think the facial cleanser is?
- How positive is your opinion of the facial cleanser?
- How favourable is your evaluation of the facial cleanser?
- How appealing do you find the facial cleanser?

Section 5: Influencer opinion (Present only in influencer message conditions)

Q8: Please indicate your opinion about the influencer shown in the previous social media post (scale from 1= Not at all to 7= Very much).

- How knowledgeable do you think the influencer is about the product?
- How attractive did you find the influencer?
- How likeable did you find the influencer?
- How much do you feel relate with the influencer?
- How trustworthy do you find the influencer?

Section 6: Control variables

In the next section, we will ask you a few questions about your opinions and experiences. These questions relate to the product category, as well as your use of social media and influencers.

Please answer as naturally and honestly as possible based on your own experiences.

Q9: Before this study, how familiar were you with the product category of facial cleanser? (scale from 1= Not all familiar to 7= Very familiar).

Q10: How frequently do you use facial cleanser products? (scale from 1= Never to 7= Very frequently).

Q11: Please indicate where your opinion regarding facial cleanser category falls between the two opposite descriptions.

Select a number between 1 and 7, where 1 corresponds to the left-hand description and 7 corresponds to the right-hand description

- Important – Unimportant
- Worthless – Valuable
- Boring – Interesting
- Means nothing to me – Means a lot to me

Q12: How often do you use social media? (scale from 1= Never to 7= Very frequently)

Q13: To what extent do you follow influencers on social media? (scale from 1= Not at all to 7= Completely).

Q14: How interested are you in content shared by influencers on social media? (scale from 1= Not at all to 7= Very much).

Q15: How much do you trust product recommendations made by influencers? (scale from 1= Not at all to 7= Very much)

Q16: How often do you purchase a product because it was recommended by an influencer or content creator that you follow? (scale from 1= Never to 7= Very frequently).

Section 7: Demographics

Q17: Age (slider)

Q18: Gender

- Male
- Female
- Transgender
- Non-binary
- I rather not define my gender

Q19: Nationality

- Italian
- Portuguese
- Spanish
- French
- German
- Other (please specify)

APPENDIX D

Table D1: Post Hoc Comparisons for Knowledge Manipulation Check (Tukey HSD)

Knowledge_Mean			
Tukey HSD ^{a,b}			
Knowledge_Condition	N	Subset for alpha = 0.05	
		1	2
Control	62	4,3226	
NO Knowledge	96		6,1701
Knowledge	117		6,3647
Sig.		1,000	,453

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Knowledge_Mean

Tukey HSD

(I) Knowledge_Condition	(J) Knowledge_Condition	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Control	Knowledge	-2,04209 [*]	,16625	<,001	-2,4339	-1,6503
	NO Knowledge	-1,84756 [*]	,17243	<,001	-2,2539	-1,4412
Knowledge	Control	2,04209 [*]	,16625	<,001	1,6503	2,4339
	NO Knowledge	,19453	,14574	,377	-,1489	,5380
NO Knowledge	Control	1,84756 [*]	,17243	<,001	1,4412	2,2539
	Knowledge	-,19453	,14574	,377	-,5380	,1489

*. The mean difference is significant at the 0.05 level.

Table D2: Post Hoc Comparisons for Promotional Message Manipulation Check (Tukey HSD)

Check_Message			
Tukey HSD ^{a,b}			
Knowledge_Condition	N	Subset for alpha = 0.05	
		1	2
Control	62	3,42	
NO Knowledge	96		6,09
Knowledge	117		6,22
Sig.		1,000	,839

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Check_Message

Tukey HSD

(I) Knowledge_Condition	(J) Knowledge_Condition	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Control	Knowledge	-2,803 [*]	,234	<,001	-3,35	-2,25
	NO Knowledge	-2,674 [*]	,243	<,001	-3,25	-2,10
Knowledge	Control	2,803 [*]	,234	<,001	2,25	3,35
	NO Knowledge	,128	,205	,806	-,35	,61
NO Knowledge	Control	2,674 [*]	,243	<,001	2,10	3,25
	Knowledge	-,128	,205	,806	-,61	,35

*. The mean difference is significant at the 0.05 level.

BIBLIOGRAPHY

- Abdulla, A., & Woods, R. (2025). "I did it before, so I can do it again(?)": Recalling success, expectations of future success and the impact of ease-of-retrieval and attributions. *Psychological research*, 89(4), 117. <https://doi.org/10.1007/s00426-025-02136-x>
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Prentice-Hall.
- Cabassi, V. [@valentinacabassi]. (2026). *Instagram profile*. Instagram. <https://www.instagram.com/valentinacabassi>
- Campbell, C., & Farrell, J. R. (2020). More than meets the eye: The functional components underlying influencer marketing. *Business Horizons*, 63(4), 469–479. <https://doi.org/10.1016/j.bushor.2020.03.003>
- Campbell, M. C., & Kirmani, A. (2000). Consumers' use of persuasion knowledge: The effects of accessibility and cognitive capacity on perceptions of an influence agent. *Journal of Consumer Research*, 27(1), 69–83. <https://doi.org/10.1086/314309>
- Chaiken, S., & Maheswaran, D. (1994). Heuristic processing can bias systematic processing: Effects of source credibility, argument ambiguity, and task importance on attitude judgment. *Journal of Personality and Social Psychology*, 66(3), 460–473. <https://doi.org/10.1037/0022-3514.66.3.460>
- Colliander, J., & Dahmén, M. (2011). Following the fashionable friend: The power of social media—Weighing the publicity effectiveness of blogs versus online magazines. *Journal of Advertising Research*, 51(1), 313–320. <https://doi.org/10.2501/JAR-51-1-313-320>
- Djafarova, E., & Rushworth, C. (2017). Exploring the credibility of online celebrities' Instagram profiles in influencing the purchase decisions of young female users. *Computers in Human Behavior*, 68, 1–7. <https://doi.org/10.1016/j.chb.2016.11.009>
- Dunning, D. (2007). Self-image motives and consumer behavior: How sacrosanct self-beliefs sway preferences in the marketplace. *Journal of Consumer Psychology*, 17(4), 237–249. [https://doi.org/10.1016/S1057-7408\(07\)70033-5](https://doi.org/10.1016/S1057-7408(07)70033-5)
- Eisend, M., & Tarrahi, F. (2021). Persuasion knowledge in the marketplace: A meta-analysis. *Journal of Consumer Psychology*, 32(1), 3–22. <https://doi.org/10.1002/jcpy.1258>
- Feldman Barrett, L., Williams, N. L., & Fong, G. T. (2002). Defensive verbal behavior assessment. *Personality and Social Psychology Bulletin*, 28(6), 776–788. <https://doi.org/10.1177/0146167202289008>
- Friestad, M., & Wright, P. (1994). The persuasion knowledge model: How people cope with persuasion attempts. *Journal of Consumer Research*, 21(1), 1–31. <https://doi.org/10.1086/209380>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Pearson.

- Horton, D., & Wohl, R. R. (1956). Mass communication and para-social interaction: Observations on intimacy at a distance. *Psychiatry*, 19(3), 215–229. <https://doi.org/10.1080/00332747.1956.11023049>
- Hovland, C. I., & Weiss, W. (1951). The influence of source credibility on communication effectiveness. *Public Opinion Quarterly*, 15(4), 635–650. <https://doi.org/10.1086/266350>
- Ilieva, G., Yankova, T., Ruseva, M., Dzhabarova, Y., Klasirova-Belcheva, S., & Bratkov, M. (2024). Social media influencers: Customer attitudes and impact on purchase behaviour. *Information*, 15(6), 359. <https://doi.org/10.3390/info15060359>
- Kahneman, D. (2011). *Thinking, fast and slow*. Farrar, Straus and Giroux.
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47(2), 263–291. <https://doi.org/10.2307/1914185>
- Kelley, N. J., Kay, A. C., & Dawtry, R. J. (2014). Making sense of misfortune: Deservingness, self-esteem, and patterns of self-defeat. *Journal of Personality and Social Psychology*, 107(1), 142–162. <https://doi.org/10.1037/a0036640>
- Kelman, H. C. (1961). Processes of opinion change. *Public Opinion Quarterly*, 25(1), 57–78. <https://doi.org/10.1086/266996>
- Kernis, M. H., Heppner, W. L., Nezlek, J. B., Foster, J., Lakey, C. E., & Goldman, B. M. (2008). Within-person relationships among daily self-esteem, need satisfaction, and authenticity. *Psychological Science*, 19(11), 1140–1145. <https://doi.org/10.1111/j.1467-9280.2008.02215.x>
- Kong, Y., & Lou, C. (2026). Beyond persuasion knowledge: Examining the roles of visual appeal, visual congruence, and social proof in influencer advertising. *Journal of Retailing and Consumer Services*, 88, 104502. <https://doi.org/10.1016/j.jretconser.2025.104502>
- Lou, C., & Yuan, S. (2019). Influencer marketing: How message value and credibility affect consumer trust of branded content on social media. *Journal of Interactive Advertising*, 19(1), 58–73. <https://doi.org/10.1080/15252019.2018.1533501>
- Monteiro, R. P., Coelho, G. L. H., Hanel, P. H. P., Medeiros, E. D., & Silva, P. D. G. (2022). The efficient assessment of self-esteem: Proposing the brief Rosenberg self-esteem scale. *Applied Research in Quality of Life*, 17, 931–947. <https://doi.org/10.1007/s11482-021-09936-4>
- Munnukka, J., Uusitalo, O., & Toivonen, H. (2016). Credibility of a peer endorser and advertising effectiveness. *Journal of Consumer Marketing*, 33(3), 182–192. <https://doi.org/10.1108/JCM-11-2014-1221>
- Nelson, J. E., Duncan, C. P., & Frontczak, N. T. (1985). The distraction hypothesis and radio advertising. *Journal of Marketing*, 49(1), 60–71. <https://doi.org/10.2307/1251176>
- Ohanian, R. (1990). Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness, and attractiveness. *Journal of Advertising*, 19(3), 39–52. <https://doi.org/10.1080/00913367.1990.10673191>

- Petty, R. E., & Cacioppo, J. T. (1986). *Communication and persuasion: Central and peripheral routes to attitude change*. Springer-Verlag.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton University Press.
- Schouten, A. P., Janssen, L., & Verspaget, M. (2019). Celebrity vs. influencer endorsements in advertising: The role of identification, credibility, and product-endorser fit. *International Journal of Advertising*, 39(2), 258–281. <https://doi.org/10.1080/02650487.2019.1634898>
- Sherman, D. K., & Cohen, G. L. (2002). Accepting threatening information: Self-affirmation and the reduction of defensive biases. *Current Directions in Psychological Science*, 11(4), 119–123. <https://doi.org/10.1111/1467-8721.00182>
- Simon, H. A. (1955). A behavioural model of rational choice. *Quarterly Journal of Economics*, 69(1), 99–118. <https://doi.org/10.2307/1884852>
- Spears, N., & Singh, S. N. (2004). Measuring attitude toward the brand and purchase intentions. *Journal of Current Issues & Research in Advertising*, 26(2), 53–66. <https://doi.org/10.1080/10641734.2004.10505164>
- Statista. (2024). *Influencer marketing market size worldwide from 2016 to 2024*. Retrieved March 2026, from <https://www.statista.com/statistics/1092819/global-influencer-market-size/>
- Stuppy, A., & Smith, R. H. (2023). Self-esteem influences the willingness to engage in COVID-19 prevention behaviour and persuasion efficacy. *Social Science & Medicine*, 320, 115715. <https://doi.org/10.1016/j.socscimed.2023.115715>
- Swann, W. B., Jr. (1983). Self-verification: Bringing social reality into harmony with the self. In J. Suls & A. G. Greenwald (Eds.), *Social psychological perspectives on the self* (Vol. 2, pp. 33–66). Lawrence Erlbaum Associates.
- Swann, W. B., Jr. (2011). Self-verification theory. In P. A. M. Van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), *Handbook of theories of social psychology* (Vol. 2, pp. 23–42). SAGE Publications.
- Zaichkowsky, J. L. (1985). Measuring the involvement construct. *Journal of Consumer Research*, 12(3), 341–352. <https://doi.org/10.1086/208520>
- Zaichkowsky, J. L. (1994). The personal involvement inventory: Reduction, revision, and application to advertising. *Journal of Advertising*, 23(4), 59–70. <https://doi.org/10.1080/00913367.1993.10673459>
- Zak, Š., & Hasprová, M. (2020). The role of influencers in the consumer decision-making process. *SHS Web of Conferences*, 74, 03014. <https://doi.org/10.1051/shsconf/20207403014>