Parasocial relationship as a social-cognitive pathway in influencer marketing: evidence from Indonesian beauty followers

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Background: Social media influencers shape consumer decision-making through relational pathways, yet evidence remains mixed on how credibility cues translate into parasocial bonding and purchase intention in emerging markets. Drawing on Source Credibility Theory and the parasocial relationship framework, this study examines the roles of expertise, trustworthiness, and attractiveness in predicting parasocial relationship and purchase intention, while assessing persuasion knowledge as a cognitive mechanism and self-discrepancy as a boundary condition.

Methods: Survey data were collected from 407 Indonesian beauty-influencer followers and analyzed using PLS-SEM with bootstrapping. Direct, indirect, and interaction effects were tested, and out-of-sample predictive relevance was assessed using PLSpredict.

Results: Expertise and trustworthiness were positively associated with parasocial relationship, whereas attractiveness did not predict parasocial relationship but remained positively related to purchase intention. Parasocial relationship was positively related to purchase intention. Persuasion knowledge showed a small but significant direct association with purchase intention; however, the specific indirect effect PSR → PK → purchase intention was not supported at α = 0.05. Self-discrepancy did not moderate the credibility-to-parasocial relationship links. PLSpredict indicated positive out-of-sample predictive relevance for all endogenous constructs.

Conclusion: These findings clarify the non-uniform roles of credibility cues in parasocial bonding and inform influencer selection and endorsement transparency in emerging digital markets.

1 Introduction

The rapid digital transformation has fundamentally reshaped how consumers interact with brands and make purchasing decisions. Social media platforms such as Instagram, TikTok, and YouTube have become dominant arenas where consumers obtain information, engage with content, and evaluate product claims through influencer communication (De Veirman et al., 2017; Sokolova and Kefi, 2020). In this environment, influencer marketing increasingly operates through relational and social cognitive processes, as influencers function as salient social models whose product demonstrations, opinions, and lifestyle cues are repeatedly observed,

evaluated, and socially reinforced through platform feedback (Bandura, 1986, 2001). One mechanism that captures this relational pathway is the development of parasocial relationships (PSR), defined as one-sided psychological bonds with media figures that foster perceived intimacy, trust, and identification, and may subsequently shape consumer intentions and behaviors (Horton and Wohl, 1956; Labrecque, 2014). Recent influencer marketing studies indicate that PSR is meaningfully associated with recommendation adoption and purchase-related outcomes across contexts and influencer tiers (Balaban et al., 2022; Conde and Casais, 2023; Liu et al., 2024).

Although PSR has become a central construct in influencer marketing, empirical evidence remains fragmented and theoretical explanations are often partial, which motivates a more integrative account of how influencer cues translate into purchase intention. This need is especially salient in high-engagement social media environments, where repeated exposure to influencer communication can amplify observational learning, perceived social presence, and relational attachment. Three gaps motivate this study. First, while source credibility has long been recognized as a core persuasion driver, influencer studies frequently operationalize credibility in an aggregated manner, which can obscure the possibility that expertise, trustworthiness, and attractiveness exert non-uniform effects on PSR and purchase intention within a unified model (Han and Balabanis, 2024; Ohanian, 1990; Sokolova and Kefi, 2020). A disaggregated approach is theoretically important because each credibility cue may activate different social cognitive processes, such as perceived competence, perceived integrity, and social attractiveness, which can shape observational learning and relational attachment in distinct ways (Bandura, 2001). Second, the role of persuasion knowledge (PK), defined as consumers' awareness of persuasive intent, remains ambiguous in influencer settings. Disclosure and inferred commercial intent may activate PK and reduce persuasion or trust, yet authenticity management and transparency strategies can allow promotional content to coexist with engagement and relational closeness (Ai et al., 2024; Audrezet et al., 2020; Boerman et al., 2017; Lou and Xie, 2021). Thus, whether PK operates primarily as a defensive mechanism or as a cognitive lens that coexists with persuasion remains unresolved in the influencer context. Third, boundary conditions for PSR-based persuasion are still under-specified. Self-discrepancy and self-evaluative comparison processes have been proposed as factors shaping how audiences interpret influencer cues and develop PSR, but empirical results are not yet consolidated and may depend on platform dynamics and identity-relevant consumption categories such as beauty (Aw and Chuah, 2021; Lee and Eastin, 2021; Liu et al., 2024). Collectively, these gaps indicate the need for an integrative framework that connects differentiated credibility cues, PSR, PK, and self-discrepancy to explain purchase intention.

These issues are particularly relevant in emerging high-engagement markets such as Indonesia, where social media has become deeply embedded in everyday consumption practices and influencer-mediated communication is prominent in product discovery and evaluation. Recent digital indicators suggest that the country sustains a large and active base of social media users, providing fertile conditions for repeated exposure to influencer content and endorsement cues (Kemp, 2024). In the beauty category, influencer communication often combines product demonstrations, personal narratives, and interactive engagement, which may intensify relational attachment and shape how credibility cues are interpreted. Yet evidence remains limited on how Indonesian consumers differentiate expertise, trustworthiness, and attractiveness when forming parasocial bonds, and on whether persuasion knowledge and

self-related comparison processes meaningfully qualify the translation of those bonds into purchase intention. Addressing these questions helps extend PSR and credibility-based explanations beyond predominantly Western settings and clarifies the boundary conditions of influencer persuasion in Southeast Asian digital markets.

Building on these issues, this study integrates four theoretical perspectives into a unified framework, namely source credibility theory, parasocial relationship theory, the persuasion knowledge model, and self-discrepancy theory, while using Social Cognitive Theory to strengthen the mechanism-based interpretation of influencer effects in high-engagement social media settings (Bandura, 1986, 2001; Dibble et al., 2016; Friestad and Wright, 1994; Higgins, 1987; Horton and Wohl, 1956; Ohanian, 1990). Specifically, the study examines (1) how influencer expertise, trustworthiness, and attractiveness influence PSR and purchase intention, (2) whether persuasion knowledge functions as a cognitive mechanism linking PSR to purchase intention, and (3) whether self-discrepancy moderates the effects of credibility cues on PSR. These objectives are investigated empirically using survey data from 407 Indonesian beauty-influencer followers and analyzed with PLS-SEM.

This study makes three contributions. First, it refines influencer credibility research by demonstrating non-uniform effects, showing that expertise and trustworthiness are more consistent antecedents of PSR formation, whereas attractiveness does not reliably translate into parasocial bonding, despite its positive direct association with purchase intention. Second, it strengthens PSR theorizing by positioning PSR as a dominant relational pathway through which credibility cues shape purchase intention in high-engagement social media environments. Third, it qualifies cognitive and self-related mechanisms by showing that persuasion knowledge shows a small but significant direct association with purchase intention but does not robustly mediate the PSR to purchase intention link at conventional significance levels, and that self-discrepancy does not operate as a stable moderator of credibility-to-PSR effects in this context. For practitioners, the findings suggest prioritizing influencer expertise and perceived integrity when the goal is to cultivate parasocial bonding, while recognizing that attractiveness may still contribute through a more direct route to purchase intention. The results also underscore the importance of transparent endorsement communication to manage perceptions of persuasive intent without undermining engagement.

The remainder of this article is organized as follows. Section 2 reviews the theoretical foundations and develops the hypotheses. Section 3 describes the research design, measures, and analytical procedure. Section 4 presents the results, including measurement quality, structural relationships, and predictive assessment. Section 5 discusses theoretical and managerial implications, limitations, and directions for future research.

2 Literature review and hypotheses development

2.1 Parasocial relationship

Parasocial relationship (PSR) refers to a one-sided, psychologically meaningful bond that audiences develop with media figures through repeated mediated exposure, despite the absence of reciprocal interpersonal interaction (Horton and Wohl, 1956). Contemporary work conceptualizes PSR as involving perceived intimacy, emotional

attachment, and identification that can be strengthened by consistent persona presentation and relational cues such as self-disclosure and ongoing narrative continuity (Dibble et al., 2016; Labrecque, 2014). In social media settings, PSR is particularly salient because influencers provide continuous, personal, and semi-interactive content streams that simulate closeness and trust, thereby intensifying relational perceptions (Lou and Kim, 2019; Sokolova and Kefi, 2020). From a Social Cognitive Theory perspective, influencers also function as salient social models whose behaviors and recommendations are repeatedly observed and evaluated, enabling relational expectations and internalized evaluations that align with PSR formation (Bandura, 1986, 2001). Because stronger parasocial bonds can increase receptivity to recommendations by enhancing perceived credibility and lowering resistance, PSR has been treated as a key relational mechanism linking influencer communication to purchase-related outcomes, with evidence generally supporting positive associations across contexts including beauty-related consumption (Balaban et al., 2022; Conde and Casais, 2023; Labrecque, 2014; W. Liu et al., 2024).

2.2 Source credibility and parasocial relationship

Source credibility theory suggests that audiences use credibility cues to evaluate a communicator and form responses to their messages. In influencer marketing, credibility is commonly captured through expertise, trustworthiness, and attractiveness (Ohanian, 1990). These cues can also function as relational signals in social media settings, where repeated exposure enables followers to infer stable source qualities that facilitate perceived closeness and identification, which are central to parasocial relationship (PSR) formation (Bandura, 2001; Dibble et al., 2016; Sokolova and Kefi, 2020). Expertise and trustworthiness are expected to strengthen PSR by increasing reliance, reducing uncertainty, and reinforcing perceived sincerity, whereas attractiveness may foster PSR through liking and attention, particularly in visually oriented categories such as beauty (De Veirman et al., 2017; Lou and Kim, 2019). Accordingly:

H1a: Influencer expertise is positively associated with parasocial relationship.

H1b: Influencer trustworthiness is positively associated with parasocial relationship.

H1c: Influencer attractiveness is positively associated with parasocial relationship.

2.3 Source credibility and purchase intention

Beyond relational outcomes, source credibility cues can directly influence purchase intention by shaping how persuasive, diagnostic, and risk-reducing influencer recommendations are perceived. Expertise is expected to increase purchase intention because competent endorsers enhance perceived informational value and reduce decision uncertainty, especially for products involving performance or experiential claims such as beauty items (Lou and Kim, 2019; Ohanian, 1990). Trustworthiness should also increase purchase intention

because perceived honesty and integrity reduce perceived manipulation and increase confidence that recommendations are reliable, thereby lowering perceived risk and strengthening acceptance of purchase-related advice (Audrezet et al., 2020; Lou and Xie, 2021; Sokolova and Kefi, 2020). Attractiveness may increase purchase intention through affective liking, aspirational appeal, and enhanced attention to endorsed products; these effects can be particularly salient in appearance-related categories, where aesthetic cues and identification with the endorser can stimulate favorable product evaluations (De Veirman et al., 2017; Ohanian, 1990). Empirical research in influencer marketing generally supports positive links between these credibility cues and purchase-related outcomes, although the strength of effects may differ across cues and contexts (Han and Balabanis, 2024; Sokolova and Kefi, 2020). Therefore:

H2a: Influencer expertise is positively associated with purchase intention.

H2b: Influencer trustworthiness is positively associated with purchase intention.

H2c: Influencer attractiveness is positively associated with purchase intention.

2.4 Parasocial relationship and purchase intention

Parasocial relationship (PSR) is expected to strengthen purchase intention because perceived relational closeness increases followers' receptivity to influencer recommendations and reduces psychological distance between the endorser and the audience. When followers experience intimacy, identification, and a sense of friendship with an influencer, they are more likely to treat influencer messages as personally relevant and trustworthy, which facilitates acceptance of product-related claims and recommendations (Horton and Wohl, 1956; Labrecque, 2014). From a social cognitive perspective, repeated exposure to an influencer's evaluations and consumption demonstrations can shape outcome expectations and preference internalization, thereby increasing the likelihood that followers adopt the influencer's suggestions in their own consumption decisions (Bandura, 1986, 2001).

Empirical evidence in influencer marketing generally supports this pathway, showing that PSR is positively associated with persuasion outcomes, including recommendation adoption and purchase intention, although effect sizes may vary across platform affordances and product categories (Balaban et al., 2022; Conde and Casais, 2023; Lou and Kim, 2019; Sokolova and Kefi, 2020). Meta-analytic evidence further suggests that relational and credibility-based mechanisms are among the most robust predictors of influencer effectiveness, which is consistent with PSR functioning as a key proximal driver of purchase intention (Han and Balabanis, 2024). In the beauty domain, where consumption is closely tied to identity work and self-presentation, PSR may be especially influential because followers often rely on influencers for experiential guidance and social validation. Therefore, PSR is expected to positively influence purchase intention.

H3: Parasocial relationship is positively associated with purchase intention.

2.5 Parasocial relationship, persuasion knowledge, and purchase intention

Persuasion knowledge (PK) refers to consumers' knowledge and beliefs about persuasion attempts, including the recognition of persuasive intent and the tactics used to influence them (Friestad and Wright, 1994). In influencer marketing, PK is often activated when followers infer commercial motives or encounter disclosure cues, which can shape how influencer messages are interpreted and evaluated (Boerman et al., 2017). Conceptually, PK can operate as a cognitive lens that affects persuasion outcomes in two competing ways. On one hand, recognizing persuasive intent may trigger skepticism and resistance, thereby reducing the effectiveness of endorsements. On the other hand, when followers perceive authenticity and relational closeness, awareness of commercial intent may coexist with engagement, allowing PK to function as informed processing rather than pure resistance (Ai et al., 2024; Audrezet et al., 2020; Lou and Xie, 2021).

PSR may increase PK because stronger relational bonds often intensify attention to influencer content and encourage deeper processing of influencer communication, including the evaluation of motives and sponsorship cues. As followers feel closer to an influencer, they may monitor and interpret endorsement practices more actively, particularly in categories where product demonstrations and brand collaborations are frequent. In this sense, PSR can be linked to heightened cognitive awareness of persuasion attempts rather than passive acceptance, making PK a plausible cognitive correlate of relational engagement (Friestad and Wright, 1994; Lou and Xie, 2021). Accordingly:

> H4: Parasocial relationship is positively associated with persuasion knowledge.

PK is further expected to relate to purchase intention because awareness of persuasive intent does not necessarily eliminate persuasion; instead, it can shape the conditions under which followers accept recommendations. When followers interpret endorsements as transparent, consistent with the influencer's expertise, or aligned with their own preferences, PK may support informed decision-making and still coincide with favorable purchase intentions. Prior influencer research suggests that disclosure and persuasion awareness can have nuanced effects that depend on perceived authenticity and the quality of the influencer–follower relationship (Ai et al., 2024; Audrezet et al., 2020; Boerman et al., 2017). Therefore:

> H5: Persuasion knowledge is positively associated with purchase intention.

In addition to these direct relationships, the model examines whether PK transmits part of the PSR effect on purchase intention through a specific indirect pathway, reflecting the possibility that relational engagement may be linked to purchase intention partly via cognitive processing of persuasion cues.

2.6 The moderating role of self-discrepancy

Self-discrepancy theory posits that perceived gaps between the actual self and salient self-guides (e.g., the ideal self) can trigger self-evaluative discomfort and motivate compensatory responses (Higgins, 1987). In image-based social media, repeated exposure to idealized beauty standards can heighten appearance-focused comparison and increase the salience of these self-guides. Experimental syntheses indicate that exposure to idealized images on social networking sites can shape self-evaluations, with state appearance comparison operating as an immediate pathway and trait comparison tendencies functioning as a vulnerability factor (Fioravanti et al., 2022). Platform-specific evidence similarly highlights upward appearance comparison as a central mechanism in short-video contexts (Mink and Szymanski, 2022).

Within beauty influencer communities, appearance-based comparison is identity-relevant because content frequently cues aspirational standards and norms of self-presentation. Accordingly, self-discrepancy may qualify whether source credibility cues (expertise, trustworthiness, and attractiveness) translate into parasocial closeness or psychological distance. When self-discrepancy is high and content elicits upward comparison and perceived unattainability, credibility cues may reduce perceived similarity and weaken parasocial bonding; conversely, under aspirational identification, higher self-discrepancy may strengthen engagement with the influencer's guidance and narrative, facilitating PSR formation. Evidence that comparison direction and salience shape self-evaluative outcomes supports this contingent logic (Taylor and Armes, 2024), and related work suggests that perceived distance to the comparison target can shape downstream responses (Reid-Partin and Chattaraman, 2023). Overall, these findings position self-discrepancy as a plausible but context-sensitive boundary condition for the credibility-to-PSR linkage (Aw and Chuah, 2021; Lee and Eastin, 2021).

Accordingly, the following moderation hypotheses are proposed:

> H6a: Self-discrepancy moderates the effect of expertise on PSR.
>
> H6b: Self-discrepancy moderates the effect of trustworthiness on PSR.
>
> H6c: Self-discrepancy moderates the effect of attractiveness on PSR.

Based on these hypotheses, the conceptual framework specifies the proposed direct relationships among expertise, trustworthiness, attractiveness, parasocial relationship, persuasion knowledge, and purchase intention, and it evaluates the indirect pathway from parasocial relationship to purchase intention through persuasion knowledge. The research model is illustrated in Figure 1.

3 Methodology

3.1 Research design

This study employs a quantitative, explanatory research design using a cross-sectional online survey to test the proposed structural model. A survey approach is appropriate because the study aims to examine relationships among latent constructs derived from established theories in an applied consumer-behavior context. The analytical strategy follows a prediction-oriented approach, consistent with the objective of explaining variance in the endogenous constructs
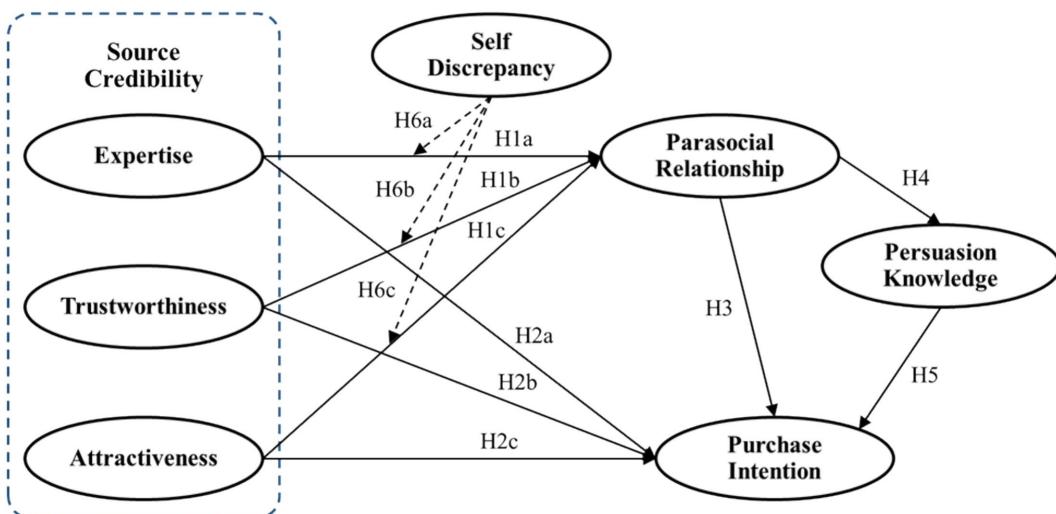
FIGURE 1
Research model.

and assessing the robustness of hypothesized direct, indirect, and moderating relationships.

PLS-SEM was selected as the primary analytical technique because the conceptual model includes multiple constructs and hypothesized indirect (specific indirect) and moderation effects, and because the study emphasizes explained variance and predictive assessment. PLS-SEM is suitable for theory extension and prediction-oriented modelling and is commonly recommended when researchers estimate complex models and evaluate both explanatory and predictive performance (Hair et al., 2019, 2021; Sarstedt et al., 2017).

3.2 Sample and data collection

The study targeted Indonesian social media users who follow beauty influencers and are regularly exposed to beauty-related influencer content and endorsements. Data were collected using purposive sampling, focusing on respondents who met the eligibility criteria of (1) actively following at least one beauty influencer and (2) having recent exposure to influencer content on major platforms (e.g., Instagram, YouTube, and TikTok). To enhance contextual relevance and reduce heterogeneity in product-category involvement, the sample was restricted to female followers, which aligns with the dominant consumer segment in beauty influencer marketing and is commonly adopted in category-specific influencer research designs (Djafarova and Rushworth, 2017; Sokolova and Kefi, 2020). Data were collected in early July 2025 over approximately three weeks. After screening and data cleaning, the final dataset comprised 407 valid responses.

Participants were recruited via an online survey link distributed through social media channels and beauty/follower communities. To anchor evaluations to salient and recognizable influencer stimuli, respondents were instructed to consider one focal influencer when answering all items and to select that influencer from a reference list of nine prominent Indonesian beauty influencers, identified based on the highest follower counts at the

time of sampling, and chosen as the one they followed most closely or engaged with most frequently. This anchoring procedure was intended to standardize the evaluation context, support recall accuracy, and reduce ambiguity in judgements of credibility cues and parasocial engagement, which is recommended when studying target-specific influencer perceptions (Lou and Kim, 2019; Sokolova and Kefi, 2020). Because participation was voluntary and purposive, the sample may overrepresent highly engaged and urban followers, which should be considered when interpreting generalizability.

3.3 Measurement of construct

All constructs were measured using established multi-item scales adapted from prior studies and contextualized to the beauty-influencer setting. Unless otherwise stated, items were rated on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). The questionnaire comprised 34 items across seven constructs. Parasocial relationship (PSR) and purchase intention (INT) were each measured with five and four items, respectively, adapted from Liu and Zheng (2024). Source credibility was specified as three distinct constructs, including expertise (EXP; five items), trustworthiness (TRU; four items), and attractiveness (ATT; seven items), adapted from Rungruangjit (2022). Persuasion knowledge (PK) was measured with five items adapted from Hwang and Zhang (2018) to capture respondents' awareness of persuasive intent and endorsement tactics in influencer content, while self-discrepancy (SLD) was measured with four items adapted from Aw and Chuah (2021) to reflect perceived discrepancies between the respondent's actual self and self-guides in the consumption context. For consistency in reporting, the manuscript uses the abbreviation PK (coded as PEK in the SmartPLS project).

Content validity was enhanced through expert review and contextual refinement. Two academic experts in consumer behavior and marketing evaluated the initial item pool for theoretical consistency and clarity. The instrument was then translated using a

forward and backward translation procedure to ensure linguistic equivalence between the English and Indonesian versions, following established guidelines for cross-cultural scale adaptation (Boateng et al., 2018; Hinkin, 1998). The full list of constructs, measurement items, and sources is provided in Table 1, and the retained indicators are reported in the Results section based on the measurement model assessment.

3.4 Data analysis procedure

Model estimation was conducted using SmartPLS (version 4). Statistical significance was assessed via bootstrapping with 5,000 resamples, using a two-tailed test at $\alpha = 0.05$, which is recommended for evaluating the stability of PLS-SEM estimates and testing effects under minimal distributional assumptions (Hair et al., 2021). The analysis followed a structured sequence to ensure transparent reporting of measurement quality, hypothesis testing, and predictive assessment.

First, the measurement model was evaluated. Indicator reliability was assessed using outer loadings. Internal consistency reliability was examined using Cronbach's alpha and composite reliability, and convergent validity was evaluated using average variance extracted (AVE). Discriminant validity was assessed using the heterotrait–monotrait ratio (HTMT). To evaluate potential common method bias and multicollinearity at the measurement stage, a full collinearity

TABLE 1 Presents the constructs and their corresponding measurement items.

Constructs	Items	Source
Parasocial relationship	PSR1: I feel comfortable with the content uploaded by [influencer's name].	Liu and Zheng (2024)
	PSR2: I trust the information shared by [influencer's name] in their content.	
	PSR3: I will feel sorry if [influencer's name] has problems.	
	PSR4: The information from [influencer's name]'s content is very helpful to me.	
Expertise	EXP1: [Influencer's name] has expertise in beauty.	Rungruangjit (2022)
	EXP2: [Influencer's name] has real experience using the beauty products featured in his/her content.	
	EXP3: [Influencer's name] has extensive knowledge of beauty products.	
	EXP4: [Influencer's name] has professional qualifications in explaining and selling beauty products.	
	EXP5: [Influencer's name] has good skills in presenting and explaining the benefits of beauty products/brands.	
Trustworthiness	TRU1: [Influencer's name] appears genuine and authentic in every piece of content.	Rungruangjit (2022)
	TRU2: [Influencer's name] shows honesty when recommending beauty products in his/her content.	
	TRU3: [Influencer's name] is a figure who can be trusted when providing product reviews.	
	TRU4: I think that [Influencer's name]'s information is accurate and can be trusted as a product reference.	
Attractiveness	ATT1: [Influencer's name] looks very attractive when promoting beauty products.	Rungruangjit (2022)
	ATT2: [Influencer's name]'s face is very attractive.	
	ATT3: [Influencer's name]'s lips look very attractive when presenting beauty products.	
	ATT4: [Influencer's name]'s voice sounds very persuasive when explaining beauty products.	
	ATT5: [Influencer's name] speaks and behaves in a polite and professional manner.	
	ATT6: [Influencer's name] grabs my attention when promoting beauty products through her content.	
Persuasion knowledge	PK1: I think that [Influencer's name] is trying to influence his/her audience in a manipulative manner.	Hwang and Zhang (2018)
	PK2: I find [Influencer's name]'s content disturbing because it is as if he/she is trying to inappropriately control his/her audience.	
	PK3: The content created by [influencer name] is clearly trying to persuade me to buy the product they are promoting.	
	PK4: I can recognize promotional tactics in the content created by [influencer's name].	
	PK5: The content created by [influencer's name] is meant to sell products.	
Self-discrepancy	SLD1: [Influencer's name]'s personality aligns with how I see myself today.	Aw and Chuah (2021)
	SLD2: [Influencer's name]'s personality reflects who I am today.	
	SLD3: In the future I want to have a personality like [influencer's name].	
	SLD4: [Influencer's name]'s personality reflects my ideal future self.	
Purchase intention	INT1: I will definitely purchase a product promoted by [influencer's name] in the near future.	Liu and Zheng (2024)
	INT2: I intend to purchase a product promoted by [influencer's name] in the near future.	
	INT3: I am likely to purchase a product promoted by [influencer's name] in the near future.	
	INT4: I plan to purchase a product promoted by [influencer's name] in the near future.	

PSR5 and ATT7 were removed prior to final estimation due to indicator-level collinearity (VIF >3.3). The final model was estimated with 32 indicators.

assessment was performed using variance inflation factor (VIF) values (Hair et al., 2019; Kock, 2015).

Second, the structural model was assessed and hypotheses were tested. Collinearity among predictor constructs was examined using inner VIF. Direct effects were evaluated using bootstrapped path coefficients (β), t-values, and p-values. Specific indirect effects were tested using bootstrapped estimates to evaluate the proposed mechanism involving persuasion knowledge. Moderation hypotheses were assessed by including interaction terms between self-discrepancy and each source-credibility facet to predict parasocial relationship, with significance evaluated via bootstrapping. Finally, explanatory power was assessed using R^2 for endogenous constructs, and predictive performance was evaluated using PLSpredict (SmartPLS: PLSpredict/CVPAT) with 10 folds and 10 repetitions under a fixed seed, reporting Q^2predict and prediction errors (RMSE and MAE) at the construct level. In this study, Q^2 refers to Q^2predict obtained from PLSpredict as an out-of-sample indicator of predictive relevance, complementing the explanatory assessment.

4 Results and analysis

4.1 Respondent profile

A total of 407 valid responses were retained for analysis. The sample represents Indonesian social media users who follow beauty influencers and are regularly exposed to influencer content, providing an appropriate context for examining parasocial and persuasion-related mechanisms in influencer marketing. A detailed summary of respondent characteristics is reported in Table 2.

Overall, the profile indicates a young and digitally active audience: respondents were primarily aged 18–24 years (54.8%), followed by 25–35 years (45.2%). With respect to the most-followed influencer, Tasya Farasya was identified by 32.7% of respondents, while the remaining 67.3% reported following other major beauty influencers (e.g., Suhay Salim and Jharna Bhagwani). In terms of consumer stage, 57.5% indicated they were considering purchasing products promoted by their followed influencer, and 42.5% reported having purchased such products, suggesting substantial purchase-related involvement among participants.

4.2 Measurement model assessment

The measurement model evaluation began with 34 indicators representing all study constructs. Before assessing reliability and validity, potential common method bias (CMB) and multicollinearity were examined using a full collinearity assessment based on variance inflation factor (VIF). Following Kock (2015), VIF values below 3.3 indicate that neither multicollinearity nor CMB is likely to bias the estimates. As reported in Table 3, two indicators exceeded the recommended threshold (PSR5, VIF = 4.162; ATT7, VIF = 5.909) and were removed to address indicator-level collinearity and improve estimation stability. The remaining indicators continue to represent the intended content domain of PSR and attractiveness, preserving construct meaning, and the final measurement model retained 32 indicators.

TABLE 2 Respondent profile.

Characteristic	Category	Frequency (*n*)	Percentage (%)
Age	18–24 years	223	54.8
	25–35 years	184	45.2
Most-followed influencer	Tasya Farasya	133	32.7
	Others (Suhay Salim, Jharna Bhagwani, etc.)	274	67.3
Purchase stage	Considering purchase	234	57.5
	Already purchase	173	42.5

Indicator reliability was then assessed via outer loadings. Loadings above 0.70 are generally recommended, whereas indicators between 0.60 and 0.70 may be retained when theoretically important and when overall construct validity remains adequate. As shown in Table 4, most indicators exceeded 0.70. Three items (PK1 = 0.600; PK2 = 0.682; INT3 = 0.661) were slightly below 0.70 and were retained to preserve essential content coverage for persuasion knowledge and purchase intention.

Construct reliability and convergent validity were assessed using Cronbach's alpha and composite reliability, alongside average variance extracted (AVE). As summarized in Table 5, all constructs achieved acceptable reliability and AVE levels, supporting internal consistency and convergent validity. Discriminant validity was evaluated using the heterotrait–monotrait ratio (HTMT). As reported in Table 6, all HTMT values were below the recommended threshold, indicating that the constructs are empirically distinct (Henseler et al., 2015).

To complement the measurement evaluation and provide additional methodological transparency, descriptive statistics at the construct level are reported in Table 7 (construct means, standard deviations, and observed ranges). Overall, the results provide strong evidence that the measurement model demonstrates sufficient reliability, convergent validity, and discriminant validity, supporting subsequent estimation and interpretation of the structural model relationships.

4.3 Structural model assessment (direct effects, collinearity, and explanatory power)

The structural model was evaluated by examining the significance of direct relationships, checking collinearity among predictors, and assessing explanatory power. Hypothesis testing was based on bootstrapped path coefficients (β), t-values, and p-values. As reported in Table 8, expertise (EXP) and trustworthiness (TRU) had significant positive associations with parasocial relationship (PSR), supporting H1a and H1b, whereas attractiveness (ATT) did not significantly predict PSR, providing no support for H1c. With respect to purchase intention, EXP, TRU, and ATT were positively and significantly associated with purchase intention (INT), supporting H2a–H2c. In addition, PSR showed a strong positive association with INT, supporting H3. PSR also significantly increased persuasion knowledge (PK), supporting H4, and

TABLE 3 Full collinearity VIF (initial indicators).

Indicator	VIF (Original sample)	Decision	Remarks
ATT1–ATT6	1.938–2.607	Retained	VIF < 3.3
ATT7	5.909	Removed	VIF > 3.3
EXP1–EXP5	1.535–2.015	Retained	VIF < 3.3
INT1–INT4	1.277–1.304	Retained	VIF < 3.3
PK1–PK5	1.337–1.579	Retained	VIF < 3.3
PSR1–PSR4	1.701–1.796	Retained	VIF < 3.3
PSR5	4.162	Removed	VIF > 3.3
SLD1–SLD4	1.715–1.898	Retained	VIF < 3.3
TRU1–TRU4	1.622–2.190	Retained	VIF < 3.3
SLD × ATT	1.000	Retained	VIF < 3.3
SLD × EXP	1.000	Retained	VIF < 3.3
SLD × TRU	1.000	Retained	VIF < 3.3

Indicator-level VIF values are reported from the initial measurement model. Items exceeding VIF = 3.3 (Kock, 2015) were removed prior to final estimation (ATT7 and PSR5).

TABLE 4 Outer loadings (32 indicators).

Construct	Indicators	Loading range	Remarks
Parasocial relationship	PSR1–PSR4	0.721–0.770	All loadings meet the recommended threshold
Expertise	EXP1–EXP5	0.704–0.835	All loadings meet the recommended threshold
Trustworthiness	TRU1–TRU4	0.777–0.867	All loadings meet the recommended threshold
Attractiveness	ATT1–ATT6	0.756–0.799	All loadings meet the recommended threshold
Persuasion knowledge	PK1–PK5	0.600–0.806	PK1 and PK2 <0.70 but retained due to theoretical justification
Self-discrepancy	SLD1–SLD4	0.802–0.836	All loadings meet the recommended threshold
Purchase intention	INT1–INT4	0.661–0.729	INT3 <0.70 but retained due to theoretical justification

Loadings >0.70 indicate acceptable reliability; items between 0.60 and 0.70 were retained due to theoretical relevance (Hair et al., 2021).

TABLE 5 Reliability + AVE.

Construct	Items (final)	CA	CR	AVE
Parasocial relationship	4 (PSR5 removed)	0.727	0.830	0.550
Expertise	5	0.849	0.892	0.623
Trustworthiness	4	0.841	0.893	0.676
Attractiveness	6 (ATT7 removed)	0.878	0.907	0.618
Persuasion knowledge	5	0.772	0.840	0.516
Self-discrepancy	4	0.833	0.888	0.665
Purchase intention	4	0.671	0.802	0.504

CA, Cronbach's alpha; CR, composite reliability; AVE, average variance extracted. CA and CR >0.70 and AVE >0.50 indicate satisfactory reliability and convergent validity (Fornell and Larcker, 1981; Hair et al., 2021).

TABLE 6 Discriminant validity (HTMT matrix).

	PSR	EXP	TRU	ATT	PK	SLD	INT
PSR	–	0.186	0.386	0.269	0.306	0.484	0.767
EXP		–	0.108	0.201	0.134	0.076	0.283
TRU			–	0.431	0.149	0.164	0.425
ATT				–	0.108	0.149	0.359
PK					–	0.192	0.245
SLD						–	0.240
INT							–

HTMT values <0.90 confirm discriminant validity (Henseler et al., 2015).

TABLE 7 Descriptive statistics of study constructs (construct means).

Construct	Items (k)	Mean	Std. Dev.	Min	Max
PSR	4	4.328	0.591	2.200	5.000
EXP	5	4.053	0.730	2.250	5.000
TRU	4	4.128	0.614	2.500	5.000
ATT	6	4.241	0.619	2.143	5.000
PK	5	3.906	0.660	1.600	5.000
SLD	4	3.746	0.850	1.000	5.000
INT	4	4.633	0.405	1.500	5.000

Values are computed from construct-level mean scores (N = 407). Items (k) indicate the number of retained indicators per construct in the final measurement model. Scale: 1–5 Likert.

PK exhibited a small but significant positive association with INT, supporting H5. Finally, none of the interaction terms (SLD × EXP, SLD × TRU, SLD × ATT) significantly predicted PSR, providing no support for the moderation hypotheses H6a–H6c. The overall pattern of relationships is summarized in Figure 2 (Structural model results).

Collinearity among predictors in the structural model was assessed using inner VIF. As shown in Table 9, all inner VIF values were below commonly used thresholds, indicating that multicollinearity is unlikely to bias the structural estimates. Explanatory power was then evaluated using R^2 for the endogenous

TABLE 8 Structural model results (direct path and interactions).

Hypothesis	Path	β	t-value	p-value	Decision
H1a	EXP → PSR	0.128	2.807	0.005	Supported
H1b	TRU → PSR	0.225	4.770	<0.001	Supported
H1c	ATT → PSR	0.075	1.495	0.135	Not supported
H2a	EXP → INT	0.127	3.637	<0.001	Supported
H2b	TRU → INT	0.129	3.153	0.002	Supported
H2c	ATT → INT	0.124	3.357	0.001	Supported
H3	PSR → INT	0.432	11.977	<0.001	Supported
H4	PSR → PK	0.250	4.991	<0.001	Supported
H5	PK → INT	0.087	2.053	0.040	Supported
H6a	SLD × EXP → PSR	0.072	1.611	0.107	Not supported
H6b	SLD × TRU → PSR	−0.045	0.979	0.327	Not supported
H6c	SLD × ATT → PSR	0.089	1.923	0.055	Not supported

Two-tailed test; $\alpha = 0.05$; bootstrapping with 5,000 subsamples. β refers to the original sample estimate. Main effects were included for hierarchical consistency; the table reports hypothesized paths only.

constructs. As reported in Table 10, the model explained 35.5% of the variance in purchase intention (INT), 24.7% in parasocial relationship (PSR), and 6.2% in persuasion knowledge (PK), indicating moderate explanatory power for purchase intention and PSR and comparatively weaker explanatory power for persuasion knowledge. Overall, the structural results suggest a non-uniform pattern in which expertise and trustworthiness primarily operate through PSR formation, whereas attractiveness contributes more directly to purchase intention.

4.4 Specific indirect effect assessment (PSR → PK → purchase intention)

The proposed cognitive pathway through persuasion knowledge was evaluated by testing the specific indirect effect PSR → PK → purchase intention using bootstrapping. As reported in Table 11, the specific indirect effect ($\beta = 0.022$, $t = 1.890$, $p = 0.059$) was not significant at $\alpha = 0.05$ (two-tailed). Accordingly, the indirect pathway from PSR to purchase intention via persuasion knowledge was not supported under the study's inferential criterion. This conclusion should be interpreted alongside the significant effect of PSR on persuasion knowledge (H4: $\beta = 0.250$, $t = 4.991$, $p < 0.001$) and the significant direct effect of persuasion knowledge on purchase intention (H5: $\beta = 0.087$, $t = 2.053$, $p = 0.040$). Taken together, while persuasion knowledge contributes directly to purchase intention, it does not statistically transmit the effect of PSR on purchase intention through the specific indirect pathway tested.

4.5 Predictive assessment (PLSpredict)

Predictive relevance was evaluated using Q^2predict from PLSpredict as an out-of-sample indicator, complemented by construct-level prediction error metrics (RMSE and MAE). Positive Q^2predict values indicate that the model improves prediction beyond a naïve benchmark. As shown in Table 12, Q^2predict values were positive for all endogenous constructs, indicating predictive relevance. Predictive relevance was moderate for parasocial relationship (PSR; Q^2predict = 0.209) and purchase intention (INT; Q^2predict = 0.155),

whereas persuasion knowledge (PK) showed weaker predictive relevance (Q^2predict = 0.024). Overall, these results suggest meaningful predictive utility for PSR and purchase intention, while prediction for persuasion knowledge is comparatively limited.

5 Discussion

This study examined how distinct source credibility cues translate into parasocial relationship (PSR) and purchase intention in a high-engagement beauty-influencer context, while also assessing persuasion knowledge (PK) as a cognitive mechanism and self-discrepancy (SLD) as a boundary condition. Overall, the results demonstrate a non-uniform pattern of influence. Expertise and trustworthiness emerged as consistent antecedents of PSR, whereas attractiveness did not significantly predict PSR. In contrast, attractiveness remained positively associated with purchase intention alongside expertise and trustworthiness. PSR showed a strong positive association with purchase intention and also increased PK. Although PK had a small but significant direct association with purchase intention, the specific indirect pathway PSR → PK → purchase intention was not supported at conventional significance levels. Finally, SLD did not significantly moderate the credibility-to-PSR relationships, suggesting that self-discrepancy does not function as a stable boundary condition in this setting. The predictive assessment further indicated meaningful out-of-sample predictive relevance for PSR and purchase intention, with comparatively weaker predictive relevance for PK, reinforcing PSR as the dominant and more predictable relational pathway in this model.

5.1 Non-uniform credibility effects and the centrality of PSR

The findings refine how source credibility operates in influencer persuasion by distinguishing the roles of expertise, trustworthiness, and attractiveness rather than treating credibility as a single aggregated cue (Ohanian, 1990). The stronger links from expertise and trustworthiness to PSR are consistent with the idea that sustained
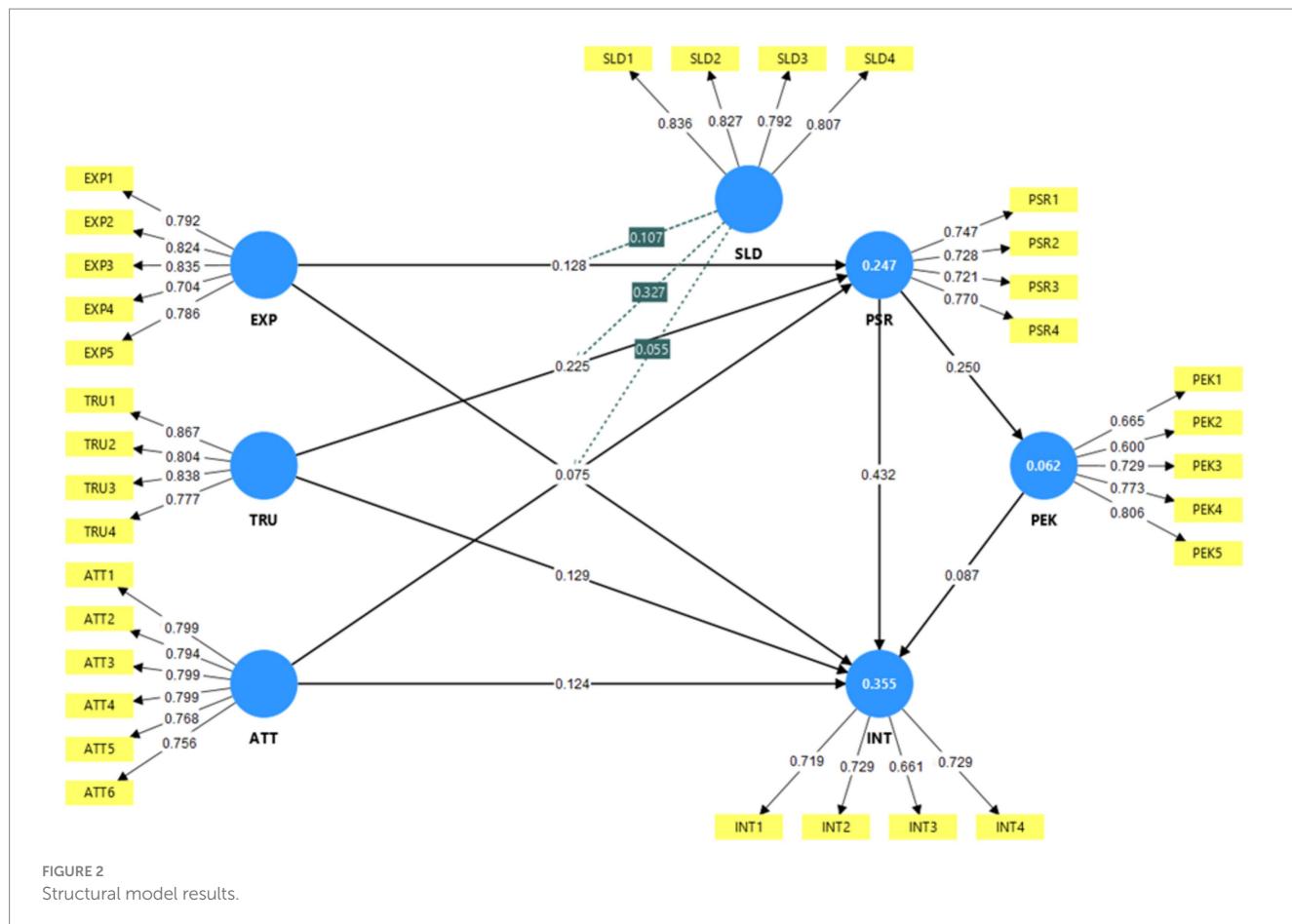
FIGURE 2
Structural model results.

TABLE 9 Inner model collinearity statistics (VIF).

Predictor path	VIF
ATT → INT	1.231
ATT → PSR	1.245
EXP → INT	1.054
EXP → PSR	1.057
PK → INT	1.109
PSR → INT	1.208
PSR → PK	1.000
SLD → PSR	1.057
SLD × ATT → PSR	1.276
SLD × EXP → PSR	1.033
SLD × TRU → PSR	1.277
TRU → INT	1.258
TRU → PSR	1.217

VIF values indicate no critical multicollinearity among predictors.

TABLE 10 Explanatory power (R^2).

Endogenous construct	R^2
INT	0.355
PK	0.062
PSR	0.247

parasocial bonding depends more on perceived competence and integrity than on surface-level appeal, particularly in domains such as beauty where followers repeatedly evaluate product claims, routines, and experience-based recommendations (Conde and Casais, 2023; Sokolova and Kefi, 2020). From a social cognitive perspective, expertise can strengthen the perceived diagnostic value of influencer messages, supporting repeated reliance and internalization, while trustworthiness reduces uncertainty and supports relational stability in environments where commercial intent is salient (Audrezet et al., 2020; Bandura, 2001). Attractiveness, by contrast, may be more likely to operate through attention and affective liking that influence behavioral intention directly, rather than through deeper relational attachment. This helps explain why attractiveness remained significant for purchase intention but did not reliably translate into PSR, aligning with recent work suggesting that attractiveness effects can be contingent and may not generalize to relational outcomes when competence and integrity cues are more central to engagement over time (Han and Balabanis, 2024; Sokolova and Kefi, 2020).

This divergence further suggests that attractiveness can facilitate intention formation without necessarily deepening relational closeness. Aesthetic appeal may increase attention and positive affect toward the influencer and endorsed products, thereby supporting purchase intention through relatively heuristic evaluation, while the psychological ingredients of parasocial bonding, such as perceived reciprocity, intimacy, and continuity, are more likely to emerge from credibility cues that signal competence and integrity. In beauty-influencer settings, visual appeal may therefore be sufficient to elicit

TABLE 11 Specific indirect effect (bootstrapping, 5,000 resamples).

Test	Specific indirect path	β	t-value	p-value	Decision
Indirect effect (implied by H4 and H5)	PSR → PK → INT	0.022	1.890	0.059	Not supported (α = 0.05)

Two-tailed test; α = 0.05; bootstrapping with 5,000 subsamples. β refers to the original sample estimate.

TABLE 12 PLSpredict results (LV summary).

Construct	Q^2predict	RMSE	MAE
INT	0.155	0.940	0.663
PK	0.024	0.994	0.784
PSR	0.209	0.894	0.733

PLSpredict settings: 10 folds, 10 repetitions, fixed seed.

purchase-oriented responses, but it is unlikely to substitute for expertise and trustworthiness when the objective is to cultivate sustained parasocial ties.

The strong PSR–purchase intention association reinforces PSR as a key relational mechanism in influencer marketing. When followers experience perceived intimacy and identification, influencer recommendations become more personally relevant and socially persuasive, increasing receptivity and behavioral intention (Labrecque, 2014; Lou and Kim, 2019). In the Indonesian beauty-influencer context, where influencers frequently provide demonstrations, ongoing narratives, and interactive engagement, PSR may operate as a particularly potent pathway because it combines relational closeness with repeated exposure to consumption-relevant cues, facilitating both trust and adoption of recommendations (Balaban et al., 2022; Liu et al., 2024). Taken together, the structural results substantiate the study's framing that credibility cues translate into behavioral intention through qualitatively different routes, with PSR functioning as the dominant relational route.

5.2 Persuasion knowledge as a limited mechanism

The results also clarify the role of persuasion knowledge in influencer contexts. Consistent with the persuasion knowledge model, stronger relational engagement was associated with higher PK, suggesting that followers who are more connected to an influencer may monitor persuasive intent more actively rather than remaining naïve to commercial influence (Friestad and Wright, 1994; Lou and Xie, 2021). Importantly, PK showed a small but significant direct association with purchase intention, which supports the view that persuasion awareness does not necessarily eliminate persuasion. When followers perceive authenticity or accept sponsorship as normative, PK may coexist with favorable intention, functioning as informed processing rather than pure resistance (Ai et al., 2024; Audrezet et al., 2020).

However, the non-significant indirect pathway indicates that PK does not robustly transmit the PSR effect to purchase intention in the specific mediation tested. Substantively, this suggests that PSR primarily strengthens purchase intention through relational attachment and trust-based receptivity rather than through a

PK-driven cognitive channel. Methodologically, it also supports a more cautious interpretation of mediation claims in influencer research, where PK can matter directly yet may not operate as a stable mediator across contexts and measurement specifications. This pattern contributes to resolving inconsistent prior findings by indicating that PK's role may be more complementary than central when PSR is strong, particularly in high-engagement contexts where relational cues dominate persuasion dynamics (Boerman et al., 2017; Sokolova and Kefi, 2020).

5.3 Self-discrepancy as a non-robust boundary condition

Contrary to expectations, self-discrepancy did not significantly moderate the credibility–PSR relationships across the three credibility cues, suggesting that its boundary role may be context-contingent rather than universal. One plausible explanation is that self-discrepancy becomes influential mainly when influencer content activates upward comparison or identity threat, whereas such cues may not be consistently present in general survey conditions. Experimental evidence indicates that upward comparison elicits different self-evaluative reactions than neutral or downward comparison, implying that effects depend on the momentary activation of appearance-based standards (Taylor and Armes, 2024). Relatedly, experimental syntheses suggest that state comparison processes are stimulus-driven, while trait comparison tendencies reflect broader vulnerability, implying that moderation may be episodic rather than stable (Fioravanti et al., 2022). Substantively, credibility cues may foster parasocial closeness through relatively robust relational mechanisms, while self-discrepancy may qualify this process only under exposures that heighten comparison cues. Thus, the non-significant moderation effect does not negate the theoretical relevance of self-discrepancy, but points to comparison direction and activation as conditions for its emergence.

5.4 Predictive relevance of the model

The PLSpredict results provide complementary evidence on the model's out-of-sample predictive relevance. Positive Q^2predict values across the endogenous constructs indicate that the model performs better than a naïve benchmark in predicting new observations. Predictive relevance was stronger for parasocial relationship and purchase intention than for persuasion knowledge, which is consistent with the structural results positioning PSR as the dominant pathway to behavioral intention. Substantively, this pattern suggests that credibility cues and PSR offer more stable predictive leverage for purchase intention in this context, whereas persuasion knowledge is comparatively less predictable within the current model specification.

5.5 Limitations and future research

This study has several limitations that also indicate directions for future research. First, the cross-sectional survey design limits causal inference. Future studies could employ longitudinal designs to examine whether changes in perceived credibility cues precede changes in parasocial relationship (PSR) and purchase intention. Experimental designs would further strengthen causal claims by manipulating credibility signals (for example, expertise cues, disclosure clarity, or message transparency) and observing their effects on PSR formation and purchase-related outcomes.

Second, the sample was purposively drawn from highly engaged followers of beauty influencers in Indonesia. Because recruitment relied on voluntary online participation, the sample may overrepresent highly engaged and urban followers, which may further constrain generalizability. While this context is theoretically relevant for understanding influencer persuasion in an emerging high-engagement market, generalizability may be limited across cultures, product categories, and platforms. Because beauty-related self-presentation norms and endorsement expectations are culturally patterned, the observed relationships may reflect context-specific cultural biases and may not fully generalize to other cultural settings. Replication across countries and influencer domains (for example, technology, fitness, or lifestyle), as well as explicit comparisons among Instagram, TikTok, and YouTube, would clarify whether the observed non-uniform effects reflect beauty-specific identity dynamics or more general influencer processes.

Third, the study relied on self-reported measures, which may inflate associations due to common method variance and social desirability bias. Future work could triangulate survey data with behavioral indicators (for example, engagement traces, click-throughs, and purchase proxies) and incorporate content analysis to link perceived credibility to observable communication practices (for example, informational depth, consistency, and disclosure style). Such approaches would strengthen construct validity and reduce reliance on perception-only indicators.

Fourth, although persuasion knowledge (PK) showed a direct association with purchase intention, the specific indirect effect PSR → PK → purchase intention was not supported under the study's inferential criterion. Future research could examine message-level boundary conditions (for example, disclosure prominence, sponsorship density, and influencer–product congruence) and differentiate facets of PK (recognition versus coping) to clarify when PK is more likely to intervene in the PSR–purchase intention linkage and intention formation.

Fifth, self-discrepancy (SLD) did not function as a robust boundary condition for the credibility–PSR linkage. This may reflect the fact that SLD effects depend on which self-domain is activated and on the direction of comparison induced by exposure. Evidence from image-based and video-based platforms underscores upward appearance comparison as a key mechanism that varies by comparison conditions and individual vulnerability (Fioravanti et al., 2022; Mink and Szymanski, 2022; Taylor and Armes, 2024). Future studies could strengthen boundary-condition tests using domain-specific SLD measures and experimental primes (ideal-self versus ought-self) combined with controlled comparison stimuli to increase self-evaluation salience.

Finally, the model could be extended by incorporating additional relational and marketplace contingencies, such as perceived authenticity, identification, and influencer–brand fit, to explain heterogeneity in parasocial bonding and in the translation of PSR into purchase intention across different levels of commercialization and audience involvement.

6 Conclusion and implications

This study examined how influencer source credibility shapes parasocial relationship and purchase intention in a high-engagement digital context, while assessing the roles of persuasion knowledge and self-discrepancy. The findings indicate that credibility cues do not work uniformly. Expertise and trustworthiness are the primary drivers of parasocial relationship, whereas attractiveness does not meaningfully strengthen parasocial ties. Attractiveness nonetheless remains relevant through its direct association with purchase intention. Parasocial relationship, in turn, is a substantive proximal predictor of purchase intention, reinforcing the importance of relational closeness in influencer-based persuasion.

6.1 Theoretical contributions

First, the results support a differentiated view of source credibility. Rather than treating credibility as a single composite, the evidence suggests that expertise and trustworthiness function mainly as relational foundations that facilitate parasocial relationship formation, while attractiveness operates more directly on purchase intention. This pattern refines credibility theory by clarifying that parasocial bonding is grounded more in perceived competence and integrity than in surface appeal.

Second, the study reinforces parasocial relationship theory in digital environments by confirming parasocial relationship as a key mechanism linking influencer cues to consumer intentions. At the same time, the non-significant mediation through persuasion knowledge implies that audiences may recognize persuasive intent without this recognition necessarily becoming the main pathway through which parasocial bonding translates into purchase intention. Finally, the absence of moderation by self-discrepancy suggests that self–other comparison gaps may be contingent on situational salience and content activation, rather than serving as a universal boundary condition.

6.2 Practical implications

For practitioners seeking durable influence, influencer selection and campaign design should prioritize expertise and trustworthiness cues that build relational capital, such as consistent informational value, verifiable experience, transparent disclosure, and avoidance of excessive promotional density. These cues are particularly important for strengthening parasocial relationship, which is closely tied to purchase intention.

Attractiveness can still be leveraged for conversion-focused objectives, but it should not be treated as a substitute for expertise and trustworthiness when the goal is to cultivate parasocial closeness. Finally, the limited role of persuasion knowledge as a mediator suggests that disclosure and transparency should be managed as trust-preserving practices rather than assumed to reduce effectiveness, especially in high-engagement environments where sponsored content is normative.

6.3 Conclusion

Overall, the findings demonstrate non-uniform credibility effects: expertise and trustworthiness primarily support parasocial relationship formation, attractiveness contributes directly to purchase intention, and parasocial relationship remains central in explaining purchase intention. Persuasion knowledge and self-discrepancy appear more context-sensitive than universal in the tested model, pointing to the value of future work that examines when cognitive defenses and self-comparisons become more salient in influencer marketing contexts.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

The studies involving humans were approved by Research Ethics Committee, Faculty of Economics and Business, Universitas Esa Unggul, Jakarta, Indonesia. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

AM: Conceptualization, Methodology, Visualization, Software, Project administration, Investigation, Formal analysis, Data curation, Writing – original draft, Writing – review & editing, Validation. TS: Validation, Supervision, Writing – review & editing, Resources, Conceptualization. AA: Supervision, Validation, Writing – review & editing.

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Conflict of interest

The author(s) declared that this work was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Generative AI statement

The author(s) declared that Generative AI was used in the creation of this manuscript. Generative AI (ChatGPT, OpenAI, San Francisco, CA, USA) was used to assist in improving the language clarity, grammar, and formatting of the manuscript. The authors verified all generated content, ensured factual accuracy, and take full responsibility for the final version of the text. No AI-generated data, analysis, or interpretations were used in the research findings.

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References

Ai, Y. J., Kiat, N. P., Jin, N. Y., Toong, T. H., Sze, C. C., and Yee, L. J. (2024). Streaming to success: amplifying purchase intentions among Malaysian consumers. *Int. J. Econ. Manag.* 18, 103–112. doi: 10.47836/ijeam.18.1.07

Audrezet, A., de Kerviler, G., and Guidry Moulard, J. (2020). Authenticity under threat: when social media influencers need to go beyond self-presentation. *J. Bus. Res.* 117, 557–569. doi: 10.1016/j.jbusres.2018.07.008

Aw, E. C.-X., and Chuah, S. H.-W. (2021). "Stop the unattainable ideal for an ordinary me!" fostering parasocial relationships with social media influencers: the role of self-discrepancy. *J. Bus. Res.* 132, 146–157. doi: 10.1016/j.jbusres.2021.04.025

Balaban, D. C., Mucundorfeanu, M., and Naderer, B. (2022). The role of trustworthiness in social media influencer advertising: investigating users' appreciation of advertising transparency and its effects. *Communications* 47, 395–421. doi: 10.1515/commun-2020-0053

Bandura, A. (1986). Social foundations of thought and action: a social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (2001). Social cognitive theory: an agentic perspective. *Annu. Rev. Psychol.* 52, 1–26. doi: 10.1146/annurev.psych.52.1.1

Boateng, G. O., Neilands, T. B., Frongillo, E. A., Melgar-Quiñonez, H. R., and Young, S. L. (2018). Best practices for developing and validating scales for health, social, and behavioral research: a primer. *Front. Public Health* 6, 1–18. doi: 10.3389/fpubh.2018.00149

Boerman, S. C., Willemsen, L. M., and Van Der Aa, E. P. (2017). "This post is sponsored": effects of sponsorship disclosure on persuasion knowledge and electronic word of mouth in the context of Facebook. *J. Interact. Mark.* 38, 82–92. doi: 10.1016/j.intmar.2016.12.002

Conde, R., and Casais, B. (2023). Micro, macro and mega-influencers on instagram: the power of persuasion via the parasocial relationship. *J. Bus. Res.* 158:113708. doi: 10.1016/j.jbusres.2023.113708

De Veirman, M., Cauberghe, V., and Hudders, L. (2017). Marketing through instagram influencers: the impact of number of followers and product divergence on brand attitude. *Int. J. Advert.* 36, 798–828. doi: 10.1080/02650487.2017.1348035

Dibble, J. L., Hartmann, T., and Rosaen, S. F. (2016). Parasocial interaction and parasocial relationship: conceptual clarification and a critical assessment of measures. *Hum. Commun. Res.* 42, 21–44. doi: 10.1111/hcre.12063

Djafarova, E., and Rushworth, C. (2017). Exploring the credibility of online celebrities' Instagram profiles in influencing the purchase decisions of young female users. *Comput. Hum. Behav.* 68, 1–7. doi: 10.1016/j.chb.2016.11.009

Fioravanti, G., Bocci Benucci, S., Ceragioli, G., and Casale, S. (2022). How the exposure to beauty ideals on social networking sites influences body image: a systematic review of experimental studies. *Adolesc. Res. Rev.* 7, 419–458. doi: 10.1007/s40894-022-00179-4

Fornell, C., and Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *J. Mark. Res.* 18, 39–50. doi: 10.1177/002224378101800104

Friestad, M., and Wright, P. (1994). The persuasion knowledge model: how people cope with persuasion attempts. *J. Consum. Res.* 21, 1–31. doi: 10.1086/209380

Hair, J. F., Hult, G. T. M., Ringle, C. M., and Sarstedt, M. (2019). A primer on partial least squares structural equation modeling (PLS-SEM). 2nd Edn. Thousand Oaks, CA: SAGE Publications.

Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., and Ray, S. (2021). Partial least squares structural equation modeling (PLS-SEM) using R. 3rd Edn. Thousand Oaks, CA: SAGE Publications.

Han, J., and Balabanis, G. (2024). Meta-analysis of social media influencer impact: key antecedents and theoretical foundations. *Psychol. Mark.* 41, 394–426. doi: 10.1002/mar.21927

Henseler, J., Ringle, C. M., and Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *J. Acad. Mark. Sci.* 43, 115–135. doi: 10.1007/s11747-014-0403-8

Higgins, E. T. (1987). Self-discrepancy: a theory relating self and affect. *Psychol. Rev.* 94, 319–340. doi: 10.1037/0033-295X.94.3.319

Hinkin, T. R. (1998). A brief tutorial on the development of measures for use in survey questionnaires. *Organ. Res. Methods* 1, 104–121. doi: 10.1177/109442819800100106

Horton, D., and Wohl, R. R. (1956). Mass communication and Para-social interaction. *Psychiatry* 19, 215–229. doi: 10.1080/00332747.1956.11023049

Hwang, K., and Zhang, Q. (2018). Influence of parasocial relationship between digital celebrities and their followers on followers' purchase and electronic word-of-mouth intentions, and persuasion knowledge. *Comput. Hum. Behav.* 87, 155–173. doi: 10.1016/j.chb.2018.05.029

Kemp, S.. (2024). Digital 2024: Indonesia. DataReportal. Available online at: https://datareportal.com/reports/digital-2024-indonesia (accessed September 2025)

Kock, N. (2015). Common method bias in PLS-SEM. *Int. J. E-Collabor.* 11, 1–10. doi: 10.4018/ijec.2015100101

Labrecque, L. I. (2014). Fostering consumer–brand relationships in social media environments: the role of parasocial interaction. *J. Interact. Mark.* 28, 134–148. doi: 10.1016/j.intmar.2013.12.003

Lee, J. A., and Eastin, M. S. (2021). Perceived authenticity of social media influencers: scale development and validation. *J. Res. Interact. Mark.* 15, 822–841. doi: 10.1108/JRIM-12-2020-0253

Liu, W., Wang, Z., Jian, L., and Sun, Z. (2024). How broadcasters' characteristics affect viewers' loyalty: the role of parasocial relationships. *Asia Pac. J. Mark. Logist.* 36, 241–259. doi: 10.1108/APJML-10-2022-0856

Liu, X., and Zheng, X. (2024). The persuasive power of social media influencers in brand credibility and purchase intention. *Humanit. Soc. Sci. Commun.* 11:15. doi: 10.1057/s41599-023-02512-1

Lou, C., and Kim, H. K. (2019). Fancying the new rich and famous? Explicating the roles of influencer content, credibility, and parental mediation in adolescents' Parasocial relationship, materialism, and purchase intentions. *Front. Psychol.* 10:2567. doi: 10.3389/fpsyg.2019.02567

Lou, C., and Xie, Q. (2021). Something social, something entertaining? How digital content marketing augments consumer experience and brand loyalty. *Int. J. Advert.* 40, 376–402. doi: 10.1080/02650487.2020.1788311

Mink, D. B., and Szymanski, D. M. (2022). TikTok use and body dissatisfaction: examining direct, indirect, and moderated relations. *Body Image* 43, 205–216. doi: 10.1016/j.bodyim.2022.09.006

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

Reid-Partin, K., and Chattaraman, V. (2023). Social comparisons and compensatory consumption: the art of buying a superior self. *Sustainability* 15:15950. doi: 10.3390/su152215950

Rungruangjit, W. (2022). What drives Taobao live streaming commerce? The role of parasocial relationships, congruence and source credibility in Chinese consumers' purchase intentions. *Heliyon* 8:e09676. doi: 10.1016/j.heliyon.2022.e09676

Sarstedt, M., Ringle, C. M., and Hair, J. F. (2017). Partial least squares structural equation modeling with R. *Pract. Assess. Res. Eval.* 21, 1–16.

Sokolova, K., and Kefi, H. (2020). Instagram and YouTube bloggers promote it, why should i buy? How credibility and parasocial interaction influence purchase intentions. *J. Retail. Consum. Serv.* 53:101742. doi: 10.1016/j.jretconser.2019.01.011

Taylor, J., and Armes, G. (2024). Social comparison on Instagram, and its relationship with self-esteem and body-esteem. *Discov. Psychol.* 4:126. doi: 10.1007/s44202-024-00241-3