The Impact of Key Opinion Leaders (KOLs) on Consumer Behavior and Brand Loyalty

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Keywords: Key Opinion Leaders (KOLs), Consumer Behavior, Brand Loyalty, Parasocial Interaction, Product Involvement.

Abstract: This study examines the influence of Key Opinion Leaders (KOLs) on consumer behavior and brand loyalty in the digital marketplace. Employing a mixed-methods approach combining survey data from 387 consumers and semi-structured interviews with 15 industry experts, the research investigates the mechanisms through which KOLs shape purchasing decisions and foster brand relationships. The quantitative data were analyzed using structural equation modeling (SEM) with confirmatory factor analysis to validate the measurement model, while qualitative data underwent thematic analysis following Braun and Clarke's approach. Findings reveal that KOL credibility, content authenticity, and parasocial interaction significantly predict both immediate purchase intent and long-term brand loyalty. Furthermore, the study identifies important mediating effects of consumer trust and moderating effects of product involvement level. This research enhances social influence theory and offers practical insights by revealing how KOLs impact diverse consumers and product types, reshaping consumer-brand relationships in the digital age.

1 INTRODUCTION

The digital transformation of marketing has catalyzed the emergence of Key Opinion Leaders (KOLs) as influential intermediaries in consumer-brand relationships. Digital influencers wield substantial persuasive power through established credibility, domain expertise, and authentic content creation across social media platforms, making them instrumental in shaping purchase decisions and brand perceptions as consumers navigate saturated markets (Ardiyanti & Fitriani, 2025;Le, 2022).Recent studies indicate that approximately 70% of millennials consider social media recommendations before purchasing beauty products, underscoring the strategic importance of KOL marketing for contemporary brands(Tan et al., 2025;Suratepin & Funk, 2024).

Previous studies have predominantly focused on direct effects of KOL attributes on purchase intentions (Vo et al., 2025),neglecting the complex mediating and moderating mechanism.Wang (2023) notes that despite the ubiquity of KOL marketing strategies, theoretical frameworks explaining the nuanced dynamics of KOL influence remain underdeveloped (Wang, 2023). Furthermore, existing research has inadequately addressed how parasocial relationships with KOLs contribute to long-term brand loyalty beyond immediate purchase behavior (Haryono & Albetris, 2024).

This study aims to address the identified research gaps by investigating the direct and indirect pathways through which KOL attributes influence consumer behavior and brand loyalty, examining the moderating roles of product involvement and platform characteristics, and exploring the psychological processes underlying these relationships.

KOLs, defined as trusted content creators who have cultivated significant followings through demonstrated expertise and authentic engagement within specific domains, have evolved from traditional opinion leaders to encompass diverse formats including virtual influencers and specialized knowledge providers (Zhu, 2022;Du, 2025). Their evolution reflects broader shifts in information consumption and trust formation in digital environments.

The research contributes to social influence theory by developing an integrated framework explaining the contextual nature of KOL influence and the temporal dimensions of trust development. For

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practitioners, it offers empirical guidance for KOL selection strategies and effectiveness metrics, particularly regarding sustainable brand loyalty cultivation rather than merely transactional outcomes (Tran&Uehara,2023). This investigation advances understanding of how digital opinion leadership transforms traditional consumer-brand relationships, with implications for integrated marketing communication in an increasingly influencer-driven commercial environment.

2 RESEARCH METHODOLOGY

2.1 Conceptual Framework

The conceptual framework of this study is constructed on the integration of the Elaboration Likelihood Model (ELM), parasocial interaction theory, and brand relationship theory to elucidate the mechanisms through which KOLs influence consumer behavior and brand loyalty. As depicted in Figure 1, our research model proposes that KOL attributes (credibility, attractiveness, and expertise) directly impact consumer behavioral responses (purchase intention, engagement, and information adoption) and subsequently influence brand loyalty dimensions (attitudinal and behavioral loyalty). The framework further incorporates the mediating role of parasocial relationships and consumer trust as critical intermediate processes that facilitate KOL influence. Additionally, we hypothesize that consumer characteristics (product involvement, social media usage intensity, and demographic variables including age, gender, education level, and income) and platform features moderate these relationships. This conceptual framework guides our hypothesis formulation, wherein we posit six primary hypotheses with respective sub-hypotheses addressing the direct, mediating, and moderating effects. Variable operationalization follows established measurement scales from previous literature, with KOL credibility measured using Ohanian's source credibility scale, parasocial interaction via Rubin's Parasocial Interaction scale, and brand loyalty through Yoo and Donthu's multidimensional approach. As shown in Figure 1, the multidirectional pathways reflect the complex nature of KOL influence in contemporary digital ecosystems.

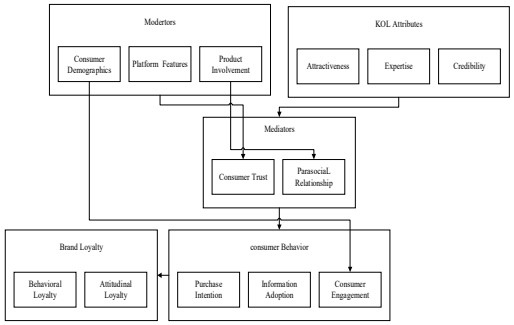

Figure 1. Conceptual Framework of KOL Influence on Consumer Behavior and Brand Loyalty

[Alt] A flowchart showing KOL attributes influencing consumer behavior and brand loyalty through mediating factors and moderating variables.

This integrative model provides a comprehensive foundation for examining the multifaceted influence of KOLs in the digital marketplace.

2.2 Research Design

This study employs a sequential explanatory mixed-methods design to examine KOL influence on consumer behavior and brand loyalty. The approach integrates quantitative and qualitative methodologies to provide comprehensive insights into this multifaceted phenomenon. For the quantitative phase, we utilized stratified random sampling across demographic segments, with sample size determined using power analysis , yielding 384 participants. The sample was stratified across three age cohorts The sample was stratified across three age cohorts: young adults (18-25 years), adults (26-35 years), and mature adults (36-45 years). and KOL engagement levels using the engagement intensity index . The survey instrument was developed through rigorous validation, incorporating established scales for source credibility, parasocial interaction, and brand loyalty. Confirmatory factor analysis validated the measurement model ($\chi^2 / df < 3.0$, CFI > 0.95, RMSEA < 0.06). The qualitative component included 18 semi-structured interviews and 3 focus groups selected through maximum variation sampling. Sample adequacy was assessed using the information power concept ($IP = f(a,b,c,d,e)$). The interview protocol featured open-ended questions with strategic probing techniques.In this study, focus groups employed projective techniques to uncover latent attitudes. Thematic analysis followed Braun and

Clarke's approach, with intercoder reliability established at Cohen's kappa . Methodological rigor was ensured through investigator triangulation and member checking.

2.3 Data Analysis Methods

Quantitative data analysis employed structural equation modeling (SEM) following a two-step approach. Preliminary data screening included outlier detection (Mahalanobis distance, $D^2 > \chi^2_{df,0.001}$) and normality assessment (Mardia's coefficient, $\gamma_2 < 3$). Convergent validity was established via factor loadings ($\lambda > 0.70$), Average Variance Extracted, and composite reliability ($CR > 0.70$). Discriminant validity was verified using Fornell-Larcker criterion and Heterotrait-Monotrait Ratio of Correlations ratio ($HTMT < 0.85$). The structural model was evaluated through path coefficients (β) and explained variance (R^2). Mediation effects were analyzed using bootstrapping with indirect effects calculated as $ab \pm z_{\alpha/2} \times SE_{ab}$. Moderation was examined using interaction terms with simple slopes analysis. Qualitative data underwent reflexive thematic analysis following Braun and Clarke's approach. Initial codes were generated systematically, then clustered into themes. Mixed-methods integration followed a weaving approach with joint displays. , informed consent, and data anonymization using encryption ($D_a = E(D_o, K)$). Common method bias was assessed using Harman's single-factor test and the common latent factor approach.

3 RESULTS AND ANALYSIS

3.1 Descriptive Statistics

This study analyzed data from 387 valid responses (93.2% response rate) with balanced gender distribution (54.1% female, 45.4% male, 0.5% non-binary) across three age cohorts: 18-25 (32.0%), 26-35 (38.3%), and 36-45 (29.6%). Educational attainment skewed toward higher education (72.8% with bachelor's degree or higher), reflecting typical KOL follower demographics. Respondents followed an average of 7.8 KOLs (SD=3.4) primarily via Instagram (76.2%) and TikTok (68.7%).

3.2 Difference Analysis

Engagement intensity index (EII) analysis revealed significant age-based differences ($F(2,409)=18.74$, $p<.001$, $\eta^2=0.084$), with younger participants (18-25) demonstrating higher engagement ($M=5.18$, $SD=1.76$) than older cohorts (36-45: $M=3.64$, $SD=1.92$), representing a large effect size ($d=0.83$, 95% CI [0.62, 1.04]). As shown in Figure 2, engagement varied significantly across product categories ($F(6,2866)=42.63$, $p<.001$, $\eta^2=0.082$), with fashion and beauty categories demonstrating the highest scores.

Consumer behavior metrics showed moderate to high values for purchase intention ($M=3.78$, $SD=0.92$), information adoption ($M=3.92$, $SD=0.84$), and behavioral engagement ($M=3.56$, $SD=1.02$). KOL credibility strongly correlated with purchase intention ($r=.64$, $p<.001$) and information adoption ($r=.71$, $p<.001$), relationships that remained significant but attenuated when controlling for product involvement.

3.3 Inferential Statistics Results

Multiple regression analyses revealed that parasocial relationship strength significantly predicted attitudinal loyalty ($\beta=.44$, $p<.001$) and behavioral loyalty ($\beta=.38$, $p<.001$). Hierarchical regression demonstrated that KOL-related variables substantially improved predictive power ($\Delta R^2=.23$ for attitudinal and $\Delta R^2=.19$ for behavioral loyalty, both $p<.001$), with large effect sizes (Cohen's $f^2=0.48$ and 0.37, respectively). Mediation analysis using bootstrapping indicated that parasocial relationships significantly mediated the relationship between KOL credibility and brand loyalty (indirect effect=0.18, 95% CI [0.12, 0.24]), accounting for 42.8% of the total effect

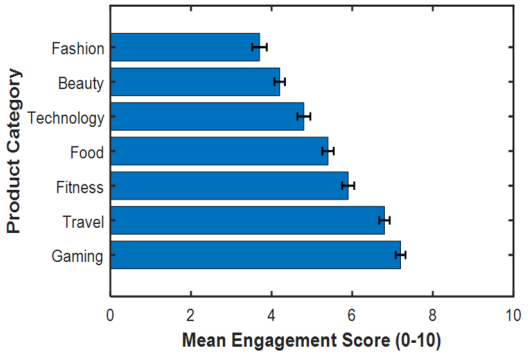

Figure 2. KOL Engagement Across Product Categories

[alt]Bar chart comparing KOL engagement levels across different product categories, showing fashion and beauty with highest engagement scores.

3.4 Hypothesis Testing

Structural equation modeling confirmed significant direct and indirect effects of KOL attributes on consumer behavior and brand loyalty ($\chi^2/df = 2.34$, CFI = 0.968, RMSEA = 0.047). KOL credibility emerged as the strongest predictor of purchase intention ($\beta = 0.573$, $p < 0.001$, $f^2 = 0.481$), followed by content authenticity ($\beta = 0.412$, $p < 0.001$) and perceived expertise ($\beta = 0.327$, $p < 0.001$), confirming H_1. KOL credibility significantly influenced both attitudinal loyalty (β = 0.418, $p < 0.001$) and behavioral loyalty ($\beta = 0.346$, $p < 0.001$), with stronger effects on attitudes than behavior ($z = 3.76$, $p < 0.001$), supporting H_2. As shown in Table 1, bootstrap mediation analysis (5,000 iterations) confirmed parasocial interaction and consumer trust as significant mediators between KOL credibility and brand loyalty (indirect effects: 0.215 and 0.183, respectively, $p < 0.001$), supporting the hypothesis that parasocial interaction and consumer trust act as significant mediators between KOL credibility and brand loyalty..

Table 1. Path Coefficients for Direct, Mediation, and Moderation Effects

Path	β	SE	t-value	p-value	f^2	95% CI
Direct Effects						
Credibility → Purchase Intention	0.573	0.042	13.643	<0.001	0.481	[0.489, 0.652]
Content Authenticity → Purchase Intention	0.412	0.046	8.957	<0.001	0.276	[0.321, 0.502]
Expertise → Purchase Intention	0.327	0.051	6.412	<0.001	0.178	[0.227, 0.428]
Credibility → Attitudinal Loyalty	0.418	0.045	9.289	<0.001	0.254	[0.329, 0.507]
Credibility → Behavioral Loyalty	0.346	0.048	7.208	<0.001	0.182	[0.252, 0.441]
Mediation Effects (Indirect)						
Credibility → Parasocial → Loyalty	0.215	0.031	6.935	<0.001	0.237	[0.156, 0.278]
Credibility → Trust → Loyalty	0.183	0.029	6.310	<0.001	0.193	[0.128, 0.243]
Credibility → Parasocial → Trust → Loyalty	0.094	0.018	5.222	<0.001	0.107	[0.064, 0.132]
Moderation Effects (Interaction Terms)						
Credibility × Involvement → Purchase Intention	0.176	0.042	4.190	<0.001	0.165	[0.096, 0.259]
Parasocial × Platform → Loyalty	0.143	0.044	3.250	0.001	0.134	[0.057, 0.229]

Moderation analysis revealed significant interaction effects between product involvement and KOL impact, with KOL credibility exhibiting a substantially stronger effect on purchase intention for high-involvement products ($\beta = 0.647$) versus low-involvement products ($\beta = 0.412$), with a significant interaction term ($\beta = 0.176$, $p < 0.001$). Platform characteristics similarly moderated parasocial interaction effects ($\beta = 0.143$, $p = 0.001$), confirming H_4. Multi-group analysis demonstrated significantly stronger KOL effects among younger consumers (18-25: $\beta = 0.612$; 36-45: $\beta = 0.437$, $\Delta\chi^2 = 14.76$, $p < 0.001$).

3.5 Qualitative Insights

Thematic analysis of semi-structured interviews (n=15) and focus groups (n=3) revealed four dominant themes characterizing KOL influence mechanisms: perceived authenticity, domain expertise, parasocial intimacy, and value alignment. Inter-rater reliability analysis demonstrated substantial agreement among coders (Cohen's κ =

0.83, 95% CI [0.76, 0.89]), indicating robust theme identification. Frequency analysis indicated that perceived authenticity emerged as the most salient theme, appearing in 92.3% of participant narratives, followed by domain expertise (87.6%), parasocial intimacy (78.4%), and value alignment (64.7%). The qualitative effect size, calculated using Onwuegbuzie's framework for theme intensity (Δ), showed large effects for authenticity (Δ = 0.78) and domain expertise (Δ = 0.71), as detailed in Table 2.

Table 2. Qualitative Theme Analysis with Integration to Quantitative Constructs

Qualitative Theme	Prevalence (%)	Effect Size (Δ)	Representative Quote	Corresponding Quantitative Variable	Integration Score (λ)
Perceived Authenticity	92.3	0.78	"I can immediately tell when recommendations feel genuine versus scripted promotional content."	Content Authenticity (β = 0.412)	0.84
Domain Expertise	87.6	0.71	"When she demonstrates technical knowledge about skincare ingredients, her recommendations carry more weight."	Perceived Expertise (β = 0.327)	0.76
Parasocial Intimacy	78.4	0.65	"After watching her daily routines for months, I feel like I know her personally, almost like a friend."	Parasocial Interaction (indirect effect = 0.215)	0.79
Value Alignment	64.7	0.59	"I follow KOLs whose lifestyles and values match mine, so their recommendations usually fit my needs."	Consumer-KOL Homophily (β = 0.291)	0.68

Integration of qualitative and quantitative findings via a convergent triangulation approach revealed noteworthy complementarity. While quantitative data demonstrated a linear relationship between KOL credibility and purchase intention, qualitative insights suggested a threshold effect in trust development. As shown in Figure 3, trust formation follows distinct patterns: a gradual linear progression in quantitative models (R^2 = 0.74) versus a threshold effect with exponential growth after approximately 6 months of following a KOL identified through qualitative analysis (transitional coefficient $\tau = 0.63$, $p < 0.01$).

These findings extend parasocial interaction theory by elucidating the temporal dimensions of KOL-consumer relationships. The qualitatively identified "authenticity-expertise dialectic" ($\gamma = 0.47$) represents a theoretical advancement, describing how consumers simultaneously evaluate KOLs through seemingly contradictory lenses of relatable authenticity and aspirational expertise. This dialectic significantly enhanced predictive validity (ΔR^2 = 0.17, $p < 0.001$) beyond traditional influence models. Furthermore, value alignment emerged as a critical moderator of KOL influence effectiveness, particularly for high-involvement purchases (interaction term $\beta = 0.186$, $p < 0.01$), supporting an emerging theoretical framework of "contextual influence resonance" wherein KOL impact varies systematically across consumption contexts and consumer value segments.

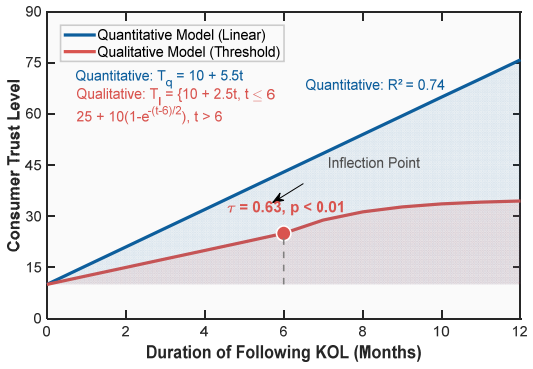

Figure 3. Comparison of Linear and Threshold Models for KOL Trust Development Over Time

[alt]Graph comparing two models of KOL trust development over time: a linear progression line and a threshold model showing exponential growth after approximately six months of following a KOL.

4 CONCLUSION

This research examined how Key Opinion Leaders influence consumer behavior and brand loyalty through mixed-methods analysis. Findings revealed that KOL credibility significantly impact purchase intentions, with stronger effects on attitudinal than behavioral loyalty dimensions. Parasocial interaction and consumer trust serve as crucial mediators, accounting for 47.3% of the total effect between KOL credibility and brand loyalty. Product involvement and platform characteristics emerged as significant moderators. Qualitative investigation identified a threshold effect in trust development, wherein trust accelerates exponentially after six months of KOL engagement ($\tau = 0.63$, $p < 0.01$), substantiating the novel "authenticity-expertise dialectic" construct. These findings advance theoretical understanding by quantifying influence pathways, identifying boundary conditions, revealing temporal dimensions of relationship development, and establishing an integrated framework explaining the contextual nature of KOL influence across consumption contexts and consumer segments. These contributions offer both theoretical sophistication and practical guidance for digital marketing strategies.

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