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# The power of social media influencers: unveiling the impact on consumers' impulse buying behaviour

Komal Shamim<sup>1✉</sup> & Muhammad Azam<sup>1</sup>

This study investigates the role of communication factors in influencer marketing communication in influencing trust in influencer's branded posts, subsequently impacting the urge to buy impulsively (UBI). In addition, the study also examines the role of persuasion knowledge as a moderator and product affection as a mediator in the relationship between trust and UBI. The study integrates signalling theory and (SOR) framework to develop a model to be tested through SEM. Results of the data of 481 followers of the influencers unveiled that the credibility of the communication factors plays an essential role in developing trust in influencers' posts, which ultimately induces UBI. Product affection mediates the relationship between trust and UBI and people with low levels of persuasion knowledge were found to have more chances of developing UBI. This study provides valuable insights to the markets and advertisers, enabling them to understand the importance of the credibility of the influencer marketing communication factors, which result in favourable consumer attitudinal and behavioural outcomes. Additionally, it addresses the existing knowledge gap concerning the factors that precede trust formation and examines their subsequent influence on UBI.

<sup>1</sup>Department of Management Sciences, Mohammad Ali Jinnah University, Karachi, Pakistan. ✉email: [fa16phms0017@maju.edu.pk](mailto:fa16phms0017@maju.edu.pk)

## Introduction

Social media has revolutionized how people share, consume, and market content. Unlike Web 1.0, which facilitated a unidirectional flow of information, the evolution of Web 2.0 has significantly amplified the influence of popular social media like TikTok and Instagram (Barquero Cabrero et al., 2023). This surge in the popularity of social media has dramatically impacted marketing strategies and trends. While companies previously relied on traditional celebrities to promote their brands, the progress in social media has spawned a novel category of influential personalities recognized as SMIs. Brands now heavily invest in influencer marketing to promote their products (Chetioui et al., 2020). The expenditure on influencer marketing has witnessed an exponential increase, evident from the fact that spending on influencer marketing reached around \$21.1 bn in 2023 (The state of Influencer: Benchmark report, 2023).

Moreover, SMIs often specialize in specific areas, establishing themselves as authorities. Consumers are inclined to accept and follow the opinions of SMIs, especially when they collaborate with brands aligned with their expertise (Shao, 2024). Conversely, specific unethical methodologies may pose risks and exert influence, albeit detrimental. This prompts contemplation on the ethical correctness of influential marketing about consumers (Guthrie, 2019).

The popularity of influencers is substantially witnessed in the fashion industry as people are more sensitive to fashion trends, which affects their purchasing behaviour (Lang and Armstrong, 2018). Fashion influencers often spearhead these trends (Park and Chun, 2020) and have the ability to influence consumer behavioural intentions (Bigne et al., 2020). Within the Pakistani context, the prevalence of influencer marketing is also on the rise, substantiated by the anticipated expenditure on influencer advertising, which is approximately \$12 million in 2023 (Statista, 2023).

Despite the popularity of influencer marketing, advertisers still need an understanding of the mechanisms through which SMIs influence consumer purchase behaviour (Leung et al., 2022). Prior studies (e.g., Andonopoulos et al., 2023; Kim and Kim, 2021) have focused on studying role of influencers' traits while giving limited attention to analysing the impact of additional communication factors, such as influencers' message and media. However, these elements could influence buying behaviour (Leung et al., 2022). In the contemporary world, where consumers are more aware of the persuasion techniques of marketers and where the credibility of traditional marketing techniques has declined (Venciute et al., 2023), marketers and advertisers need to understand the fundamental mechanism of what makes digital influencers effective. This research gap especially prevails in the fashion sector, where consumers' sensitivity to fashion trends significantly shapes their purchasing behaviour (Jin et al., 2021). Moreover, people are becoming more receptive and swayed in their buying decisions by prevailing fashion trends (Chetioui et al., 2020).

Moreover, existing studies in the domain of influencer marketing have predominantly concentrated on scrutinizing the effect of influencers on planned purchase behaviour, neglecting its role in instigating impulse purchases (Chen et al., 2023; Shamim and Islam, 2022; Trivedi, 2021). Notably, 84% of consumers indulge in impulsive purchases, of which 40% constitute online shopping (Gong et al., 2020). Literature calls for examining the effectiveness of SMIs in inducing impulse buying (Shao, 2024). Moreover, findings about the role of persuasion knowledge are conclusive (van der Bend et al., 2023). Moreover, Persuasion knowledge, encompassing consumers' comprehension of marketers' persuasive tactics, is relevant in understanding the efficacy of influencer marketing. Therefore, this study examines the moderating effect of persuasion knowledge in the proposed mechanism. Furthermore, the literature also highlights that SMIs convey signals about

product quality to consumers and that these informational signals are crucial in influencing consumers' attitudes toward the product (Chen et al., 2019). Therefore, this study also considers the mediating role of product affection in the proposed framework.

Given the gaps described above, this study seeks to ascertain the influence of the credibility of influencer marketing communication factors (influencers, messages, and media) for developing trust in influencers' posts, with a subsequent effect on UBI. The study also investigates if persuasion knowledge moderators and product affection mediate the trust-UBI relationship. To achieve these goals, the research leverages signalling theory and the Stimulus-Organism-Response (SOR) model to explain how signals related to the influencer, message, and media credibility act as 'stimuli,' developing trust in influencers' posts, thereby influencing product affection (organism) and ultimately impacting UBI (response).

This study has several contributions. Firstly, it aligns with a limited number of studies (Shamim and Islam, 2022; Chen et al., 2019) that have employed signaling theory within influencer marketing, integrating it with the SOR framework to provide a unique perspective on influencer marketing. The integration of theories is used to understand how credibility-signals trigger UBI in social commerce. Secondly, the research examines the impact of communication factors' credibility on trust. The existing literature heavily concentrates on influencers' characteristics, while other aspects have received limited attention. Thirdly, the present study discusses trust and product affection's critical impact in shaping impulse purchase decisions. Lastly, the current investigation explores the effects of persuasion knowledge on the efficacy of influencer marketing. This is particularly relevant due to the mixed and varied findings in the literature (Isaac and Grayson, 2017).

## Literature review and theoretical background

**Influencer marketing and UBI.** Influencer marketing is a contemporary strategy wherein marketers and companies engage SMIs, providing incentives to endorse their products or brands, ultimately aiming to enhance firm performance (Chen et al., 2023). Within the influencer marketing domain, existing literature indicates distinct research streams. The first stream explores identifying desirable influencer traits crucial for effective brand promotion (Lou and Yuan, 2019; Chen et al., 2019). The second stream focused on understanding the negative impact of posts of the influencer (Kim and Kim, 2021). The third stream delved into comprehending the effect of influencer marketing on behavioural outcomes (Jin et al., 2021). These research streams show that although the literature expansively studied several aspects of influencer marketing, a gap in research attention towards understanding the impact of influencer marketing in the context of impulse buying exists (Xiang et al., 2016).

Impulse buying involves spontaneous desire or emotions with certain exceptions (Zhan et al., 2023). Chen et al. (2019) found that impulse purchase is usually measured through UBI and precede impulse buying decisions (Rook, 1987; Zafar et al., 2021). This impulse buying behaviour has been studied in several contexts, including e-commerce, and several factors like demographics and browsing habits have been identified that influence consumers' impulsive buying behaviour (Zheng et al., 2019). However, some studies have examined the prevalence of impulse buying behaviour in influencer marketing (Xiang et al., 2016).

**Signaling theory.** Signaling theory of Spence (1973) postulates that there are certain situations when there exists an asymmetry of information between two parties. To reduce this information

asymmetry, one party (the marketer) sends signals to the other party (the consumer), conveying helpful information to minimize the risk involved in the purchase. Signalling theory is primarily a theory of economic discipline but is now widely used in marketing. Shamim and Islam (2022) used signalling theory to explore how digital influencers emit signals about their credibility, ultimately influencing their buying decisions. Similarly, Chen et al. (2019) categorized signals into two groups, i.e. product-based and recommender-based signals. The theory also employs the signalling theory to investigate how influencers employ signals to develop trust in their branded posts, ultimately shaping their purchase decision. Based on the categorization of signals as proposed by Shamim and Islam (2022), this study classifies signals into three groups i.e. signals relating to influencer credibility, signals relating to message credibility, and signals relating to media credibility with the help of which the influencer may develop trust on their branded posts and increase the likelihood of impulse purchase.

**Stimulus–organism–response (SOR) Model.** The SOR framework elucidates that a person's cognitive and emotional responses are shaped by external stimuli, which lead to specific actions (Jacoby, 2002). The SOR model postulates that external stimuli (S) create processes (O), resulting in responses (R). This framework reflects that stimuli impact consumer behaviour by initially impacting their emotional states. Several studies have employed this theory in the consumer buying behaviour context. In online retail, studies have shown that external cues (e.g. music and ads) tend to impact a person's emotional and cognitive states, significantly influencing their buying decisions (Hu et al., 2019). Huang (2015) explored impulse purchase behaviour in social commerce through the lens of the SOR framework. The present study employs this model by framing influencer, message, and media credibility as stimuli (S), trust and product affections as the organism (O), and UBI as the response (R).

**Research model and hypotheses development.** Source credibility in the communication process measures the believability attributed to an information source Lowry et al. (2014). Ohanian (1990) outlined three dimensions of source credibility, i.e. attraction, expertise, and trustworthiness. This study takes similarity, expertise and trustworthiness as dimensions of source credibility. Uzunoğlu and Kip (2014) emphasized the importance of trustworthiness in establishing trust in influencers' posts, specifically when the influencers use brands in their lives. Moreover, expertise of the influencer is also considered essential for credibility. Followers are more likely to trust influencers' branded posts when they perceive them as experienced, competent, and knowledgeable about the promoted products (Safarova and Rushworth, 2017). In contrast, Lou and Yuan (2019) report no effect of influencers' expertise level on trust in influencers' posts.

On the other hand, Shamim and Islam (2022) found a significant influence on expertise. Besides expertise, this study also takes the similarity between followers and influencers to measure influencer credibility, which is concerned with alignment between the interests of the followers and influencers, reinforcing the influencers' credibility. Building upon the literature, the following hypothesis is suggested:

**H1:** Influencers' credibility significantly impacts the trust in branded posts.

Beyond the credibility of the influencer, content credibility is essential in establishing a connection between the sender and receiver of the message (Wang and Chan-Olmsted, 2020). Message credibility pertains to the perception of content

consistency, which is usually determined by factors such as informational quality and accuracy. Ducoffe (1996) suggested that a lack of credibility in advertisements could negatively evaluate the message. The present study considers message credibility essential in developing followers' trust in influencer's branded posts. Broadly, a post of influencers contains information relating to the brands as claim to be used by the influencer in his daily life (Mehlman-Brightwell, 2021). The informational value tends to influence followers' attitudes towards the brands. Cai et al. (2022) found that the influencers' posts carrying valuable information enhance trust in that post. Besides informational value, this study takes vicarious expressions as another dimension of the message's credibility. Chen and Yao (2018) found that vicarious expressions are important in cultivating affective and cognitive trust in the recommender's posts. This study examines how the influencers' content impacts followers' trust in the branded posts of the influencer.

**H2:** Message credibility has a significant positive impact on trust in branded posts.

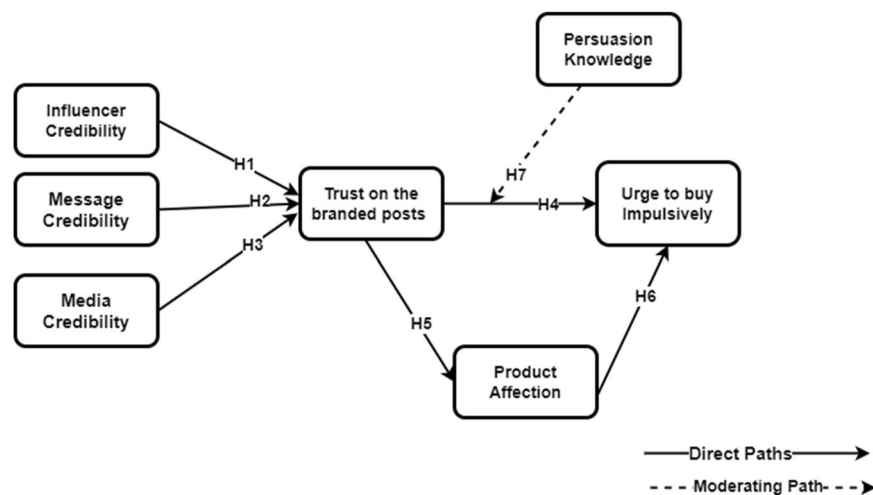
Besides source and message credibility, this study also considers media credibility as an essential factor influencing trust. Leung et al. (2022) suggested that understanding the role of media credibility in influencer marketing is very important, which tends to impact the perception and evaluations of the followers. Media credibility refers to the perception about authenticity and genuineness of a media channel (Adapa et al., 2020). The credibility of traditional media channels has been explored through various variables like layouts and designs (Nash, 2019). This study considers interactivity a critical feature of social media for trusting the available information (Zhou et al., 2021). Besides interactivity, social media transparency reflects how users can openly and transparently share information without hindrance (Butler, 1991). Huang (2015) argued that blogs are more credible because companies do not control such media, allowing users to disseminate the message transparently. By examining the dimensions of interactivity and transparency, this study aims to assess the credibility of the media influencers use to disseminate their branded posts. Hence, the hypothesis suggests that:

**H3:** Media credibility has a significant positive impact on influencers' branded posts.

Trust in the influencer or recommender impacts consumers' desire to buy impulsively by reducing uncertainty (Hajli et al., 2017). It is argued that when the buying process is simple and easy, there is a higher chance that impulse buying will occur (Stern, 1962; Shamim and Islam, 2022). When trust is developed, mental processing becomes simple, requiring little effort and fewer deliberations. Parboteeah et al. (2009) asserted that affective responses, like enjoyment, determine consumers' tendency to purchase impulsively online. Chen and Yao (2018) found a significant positive impact of affective and cognitive trust on the UBI.

**H4:** Trust has a significant positive impact on UBI.

Trust is the cornerstone of credibility, which tends to provide social validation and mitigate risks associated with the buying process (Kim and Kim, 2021). Findings from the study conducted by Zafar et al. (2021) indicate that trust tends to mitigate uncertainty and enhance purchase chances. Additionally, Shamim and Islam (2022) underscore that trust in influencers cultivates confidence in their posts, leading consumers to view recommendations as accurate. Another essential aspect is product affection, reflecting the ability of branded posts to evoke pleasant feelings in consumers towards the endorsed product (Vonkeman et al., 2017). Literature highlights two levels of trust, i.e., cognitive and affective. Signaling theory has proposed that trust substantially impacts consumer attitudes toward the availability of scarce information (Chen et al., 2019). Moreover, if a reliable



**Fig. 1** Conceptual framework based on signaling theory (Spence, 1973) and SOR framework (Jacoby, 2002). This figure shows the research framework developed to achieve research objectives.

communicator endorses a brand, receivers tend to replace their feelings with those of a credible influencer. People who trust the branded posts of influencers will eventually develop a positive outcome on the product (Chen et al., 2019). Research conducted by Huang (2015) proved that trust in a blog would lead to positive emotions towards the product, as pronounced in the blog.

**H5:** Trust has a significant positive effect on product affection. When people see branded posts of influencers, they consider their posts compassionate. Previous studies have also regarded positive reactions as an important antecedent of impulse buying (Chen et al., 2019). When a credible influencer endorses a brand, receivers substitute their feelings with the influencers. In a state of positive emotion, consumers are likely to make a purchase decision more quickly and efficiently, which may lead to impulse purchases (Chen et al. 2023). Thus, consumers' positive emotional experiences toward a product will increase the UBI (Vonkeman et al., 2017). Moreover, positive emotions tend to augment the impact of trust on behavioural outcomes, including the UBI (Chen et al., 2019). Signaling theory posits a substantial effect of trust in influencers' posts on consumers' attitudes (Shamim et al., 2024).

Consequently, when encountering influencers' branded posts endorsing or recommending a product, these readers interpret the recommendations as benevolent acts, deeming the recommended product significant and relevant. This leads to positive affective responses towards the endorsed or recommended product. Impulse buying involves cognitive information processing, requiring low effort and less deliberation (Shamim and Islam, 2022), aligning with heuristics. As a result, it is posited that:-

**H6:** Product affection has a significant positive impact on an urge to buy impulsively.

**H6a:** Product affection mediates the relationship of trust and the urge to buy impulsively.

Persuasion knowledge pertains to the awareness of consumers about marketers' tactics, which is essential in influencer marketing (Eisend and Tarrahi, 2022). Literature shows that the Implication of persuasion knowledge on behavioural outcomes is positive and negative (Feijoo et al., 2023). Persuasion knowledge can obstruct marketers' objectives of achieving desirable attitudinal and behavioural outcomes (Matthes and Naderer, 2016). However, Isaac and Grayson (2017) found that consumers with activated persuasion knowledge are relatively equipped to recognize credible marketing messages. In the present study, by examining the moderating impact of persuasion knowledge, we aim to understand how consumers' scepticism and

Table 1 Scale and source of measurement.		
Variable	Source	Items
Influencer credibility	Munnukka et al. (2016), Ohanian (1990)	10
Message credibility	Li et al. (2013) and Voss et al. (2003)	8
Media credibility	Munnukka et al. (2016)	7
Trust in branded posts	Wu and Lin (2017)	7
Urge to buy impulsively	Parboteeah et al. (2009)	3
Persuasion knowledge	Vashisht and Royne (2016), Wu (2009)	4
Product affection	Moritz and Watson et al. (1998)	4

comprehension of persuasion tactics may impact their trust in influencer posts and subsequent impulsive buying behaviour. Accordingly, it is hypothesized that:-

**H7:** Persuasion knowledge of consumers moderates the relationship between trust and the UBI, such that followers with low persuasion knowledge are more prone to develop UBI after trusting branded influencer posts.

Figure 1 depicts the research model of the study, illustrating the relationships among influencer, message, and media credibility and their effect on trust. This trust subsequently effect UBI. The model also incorporates persuasion knowledge as moderator and the mediating role of product affection.

Research methodology

**Measurement.** All study constructs were derived from relevant literature, with slight modifications as necessary. Respondents were asked to rate statements on a five-point scale to assess the various variables of interest. The questionnaire also included demographic questions. This study ensures consistency and comparability in assessing the constructs by employing standardized measurement scales and collecting data using a structured questionnaire. Table 1 indicates the scale and source of the constructs. Including demographic questions allows further analysis of potential relationships between these variables and the constructs under investigation. The questionnaire is placed in Appendix I.

**Data collection.** The study focused on Pakistani social media users, considering the country's significant number of SNS users



**Table 2 Survey respondent profile (n = 481).**

Description	Elements	Response (%)
Age	20–29	58.1
	30–39	38.6
	40 or above	3.30
Gender	Male	54.3
	Female	45.7
Education	High School	2.7
	College	10.0
	Bachelors	35.8
	Masters	35.4
	PhD	16.2

with the popular platform Facebook (DataReportal, 2022). While the influencer marketing literature has predominantly focused on platforms like YouTube, this research recognized the importance of including Facebook as it is Pakistan's second most popular platform (Kanaveedu and Kalapurackal, 2022). To examine the suggested model, a sample of social media users in Pakistan was chosen as a representative group for developing countries. The questionnaire underwent a pretest conducted by 30 experienced professionals from the influencers' community to ensure content validity. Feedback and suggestions were sought from the pilot test participants to address any issues with question clarity. The purposive sampling method was employed for practicality. The questionnaire was distributed on the Facebook pages of the fashion influencers, allowing participants to select themselves for participation voluntarily. The starting part of the questionnaire explains the concepts of digital influencers and impulse purchases to facilitate the participants' understanding of the study context. The study questionnaire was administered online to ensure accessibility. Data were collected from 520 respondents based on the rule of ten (Hair et al., 2017). 39 responses from individuals who were not the followers of any influencer were excluded and thus the study had 481 valid responses. Demographic information of the respondents is provided in Table 2. Present study employs a sample of Pakistan social media users to provide valuable insights into the influencer marketing context in developing countries.

## Results

**Standard method variance bias test (CMB).** To deal with the issue of common method variance bias (CMB), we ensure to maintain the privacy of the respondents to ensure ensuring confidentiality and also anonymity. Moreover, complex and confusing questions were avoided (Schwarz et al., 2017) to reduce the chances of response bias. Finally, Harman's single-factor test was used to check the CMB issue. Results revealed that the first factor accounted for 16% of the total variance, which is below the threshold of 40% (Harman and Harman, 1976). The results show that CMB is not a significant concern in the data. The value of the variation inflation factor (VIF) was examined to assess multicollinearity and potential bias in the data, as Kock (2015) recommended. Results indicate that the highest VIF value among the constructs was 2.662, as shown in Table 3, which is below the recommended cutoff value of 3.3, thus showing no issue of multicollinearity. Thus, the data of the present study was found to be valid and reliable, allowing accurate analysis and interpretation of the results.

**Analysis of the measurement model.** Table 3 shows the results of the reliability and validity assessment of the measurement model. Cronbach's alpha (CA) and composite reliability (CR) values are more significant than 0.70, showing satisfactory levels of reliability

**Table 3 Reliability, validity and VIF.**

Constructs	Loadings	VIF	AVE	CR	Cronbach Alpha
Influencer credibility	0.947	1.788	0.871	0.964	0.951
	0.935	1.807			
	0.939	1.194			
	0.902	1.051			
	0.881	1.891			
	0.867	1.972			
	0.901	1.899			
	0.937	1.917			
	0.912	1.819			
	0.922	2.153			
Message credibility	0.795	2.207	0.852	0.945	0.913
	0.823	2.114			
	0.856	1.869			
	0.776	2.364			
	0.846	1.336			
	0.842	1.619			
	0.868	1.987			
	0.850	1.566			
	0.785	1.455	0.631	0.872	0.806
	0.857	1.442			
Media credibility	0.806	1.657			
	0.723	1.223			
	0.877	1.519			
	0.898	2.125			
	0.737	1.997			
	0.863	2.551	0.699	0.934	0.916
	0.854	2.662			
	0.876	2.153			
	0.780	2.068			
	0.872	2.301			
Trust	0.761	2.111			
	0.802	2.114			
	0.899	2.456	0.862	0.962	0.947
	0.926	2.221			
	0.951	2.011			
	0.845	1.336	0.765	0.951	0.938
	0.939	1.168			
	0.921	1.434			
	0.837	1.566			
	0.845	0.689	0.898	0.922	0.913
Persuasion knowledge	0.825				
	0.808				
	0.840				
Product affection					

(Hair et al., 2017). As per Hair et al. (2017), CR values under the range of 0.70 to 0.95 are acceptable. Factor loadings of the measurement items exhibited loadings exceeding 0.7. The general guideline is to keep items loading in the range of 0.60–0.90 (Hair et al., 2017). The factor loadings in this study surpassed these thresholds, indicating a strong relationship between the observed indicators and their corresponding latent constructs. The average variance extracted (values for all latent constructs exceeded the threshold value of 0.50, indicating that their respective latent constructs account for more than 50% of the variance in the measurement items (Hair et al., 2017). Thus, the measurement model provides evidence for the internal consistency and convergent validity of the latent constructs in this study.

Discriminant validity (DV) was measured through the Fornell–Larcker criterion and the heterotrait–monotrait ratio (HTMT). As per the Fornell–Larcker criterion, the square root of

the AVE for each construct should be greater than the correlation between that construct and other constructs in the model. Table 4 shows that the square root of the AVE for each construct exceeds the correlation values with other constructs, indicating discriminant validity (Fornell and Larcker, 1981). The HTMT values, as shown in Table 5, highlight that these are all below the threshold of 0.90; there are no significant issues with discriminant validity. Both the Fornell–Larcker criterion and HTMT method provide evidence for the discriminant validity of the constructs in the research model. The results indicate that the constructs in the study are distinct and measure different underlying concepts.

**Analysis of structural model.** Table 6 presents the structural model results conducted using PLS-SEM through Smart PLS 4, followed by bootstrapping to obtain standard errors and *p*-values for the path coefficients. The results support hypotheses H1, H2,

H3, H4, H5, H6 and H6a. H1, H2 and H3 propose that the credibility of influencers, messages and media positively influence followers’ trust, respectively. The results indicate that all three factors significantly positively affect followers’ trust in influencers’ branded posts. Influencer credibility ( $\beta = 0.181$ ,  $p = 0.001$ ,  $t = 3.272$ ), influencers’ message credibility ( $\beta = 0.187$ ,  $p = 0.000$ ,  $t = 2.919$ ), and media credibility ( $\beta = 0.193$ ,  $p = 0.000$ ,  $t = 2.919$ ) are found to have a positive impact on followers’ trust. These factors explain around 40% of the variance in trust in influencers’ posts ( $R^2 = 0.39$ , adjusted  $R^2 = 0.38$ ). Hypothesis H4 suggests that trust positively influences consumers’ UBI. The results confirm that trust significantly impacts UBI ( $\beta = 0.408$ ,  $t = 11.277$ ,  $p = 0.001$ ), supporting H4. Overall, the paths in the tested model explain 33% of the variance in the urge to buy impulsively. To evaluate the model fit, various well-established goodness-of-fit indices were employed, including the normed chi-square, the goodness-of-fit index (GFI), the adjusted goodness-of-fit index (AGFI), the comparative fit index (CFI), the root mean square residual (RMR), and the root mean square error of approximation (RMSEA) (Bagozzi and Yi, 1988). Based on the goodness-of-fit indices, the model demonstrated a strong fit to the data ( $X^2/df = 1.816$ , GFI = 0.955, CFI = 0.961, SRMR = 0.060, RMSEA = 0.066), as indicated in Table 6. All indices exceeded their recommended threshold value, i.e. CFI > 0.95 (Hooper et al., 2008), GFI > 0.95, SRMR < 0.08, and RMSEA < 0.06 (Hu and Bentler, 1999).

**Moderation effect.** The research also examines the moderating effect of persuasion knowledge. Table 6 shows that persuasion knowledge significantly interacts with the relationship between trust in influencers and UBI, with a coefficient of  $\beta = 0.170$  and a *t*-value of 2.023. These results show that people with low levels of persuasion knowledge are more likely to develop UBI after trusted branded posts of the influencers. Thus, H5 of the study is supported.

**Mediation analysis.** H6a posits the mediating impact of product affection. The study’s methodology utilized PLS-SEM, following Hair et al.’s (2017) recent approach to assessing mediating effects. The results presented in Table 7 reveal that Trust → Product Affection → UBI ( $\beta = 0.301$ ,  $t = 7.111$ ,  $p < 0.000$ ), indicating that

Table 4 Fornell-Larcker method.								
	1	2	3	4	5	6	7	
1 IC	0.919							
2 MC	0.380	0.889						
3 MEC	0.644	0.411	0.895					
4 Tr	0.391	0.324	0.378	0.832				
5 UBI	0.356	0.196	0.348	0.549	0.889			
6 PK	0.451	0.229	0.309	0.610	0.587	0.827		
7 PA	0.143	0.854	0.764	0.437	0.248	0.037	0.886	

Table 5 HTMT ratio.								
	1	2	3	4	5	6	7	
1 IC								
2 MC	0.52							
3 MeC	0.299	0.717						
4 Tr	0.193	0.125	0.093					
5 UBI	0.628	0.53	0.265	0.214				
6 PK	0.611	0.648	0.479	0.221	0.758			
7 PA	0.143	0.854	0.764	0.437	0.248	0.037	0.397	

Table 6 Structural path analysis.						
	Path estimates	Standard error	T statistics	P value	Hypotheses	Decision
Influencer credibility > Trust in branded posts	0.181	0.555	3.272	0.000	H1	Supported
Message credibility > Trust in branded posts	0.187	0.522	2.919	0.001	H2	Supported
Media credibility > Trust in branded posts	0.193	0.062	3.092	0.000	H3	Supported
Trust in branded posts > UBI	0.408	0.306	11.277	0.000	H4	Supported
Trust > product affection	0.649	0.040	16.148	0.000	H5	Supported
Product affection > UBI	0.461	0.063	7.345	0.000	H6	Supported
Moderation/Interaction effect						
Trust*PK → UBI	0.170	0.084	3.477	0.000	H5	Supported
R <sup>2</sup> Trust	0.39					
Adjusted R <sup>2</sup>	0.38					
R <sup>2</sup> UBI	0.33					
Adjusted R <sup>2</sup>	0.32					
R <sup>2</sup> Product Affection	0.36					
Adjusted R <sup>2</sup>	0.35					
Goodness-of-fit statistics						
X <sup>2</sup> /df	1.816					
GFI	0.955					
CFI	0.961					
SRMR	0.060					
RMSEA	0.066					

**Table 7 Mediation analysis.**

Total effect (Trust->UBI)		Direct effect (Trust->UBI)		Indirect effects of trust on UBI				
Coefficient	p-value	Coefficient	p-value		Coefficient	SD	T-value	P value
0.611	0.000	0.313	0.000	H6a: Trust->PA- > UBI	0.301	0.042	7.111	0.000

**Table 8 Effect size ( $f^2$ ) of latent variables.**

Latent constructs	Effect size ( $f^2$ )	Degree of effect
<i>Trust</i>		
IC	0.219	Medium
MC	0.034	Small
MeC	0.396	Large
<i>UBI</i>		
IC	0.219	Medium
MC	0.034	Small
MeC	0.031	Small
Tr	0.396	Large
PA	0.703	Very Large
Trust		

IC influencer credibility, Tr Trust, MC message credibility, MEC media credibility, PK Persuasion knowledge, UBI urge to buy impulsively, PA product affection.

**Table 9 Q<sup>2</sup> of the endogenous constructs.**

Constructs	SSO	SSE	Q <sup>2</sup> = (1 - SSE/SSO)
Tr	2240.00	1580.802	0.293
UBI	960.00	530.012	0.444
PA	1280.00	898.860	0.295

Tr trust, MC message credibility, UBI urge to buy impulsively, PA product affection.

product affection partially mediates the relationship between Trust and UBI. The detailed results can be found in Table 7.

**Effect size ( $f^2$ ).** The effect size is computed by taking the difference between  $R^2$  included and  $R^2$  excluded, divided by  $1 - R^2$ , following the methodology outlined by Hair et al. (2017). Additionally, Cohen (1988) recommends evaluating the  $f^2$  value, where 0.02 indicates a small effect, 0.15 is a medium effect, and 0.35 is a significant effect. The effect sizes for each endogenous latent variable are presented in Table 8.

**Predictive relevance (Q<sup>2</sup>).** The evaluation of cross-validated redundancy for the study's endogenous latent constructs follows the approach outlined by Hair et al. (2017). This relevance is ascertained when the Q<sup>2</sup> value is greater than zero (Henseler et al. 2009). The results of Q<sup>2</sup> are detailed in Table 9.

## Discussion

This research develops an underlying mechanism that highlights the roles of influencers' credibility, message credibility, and media credibility in stimulating the UBI through the development of trust and affection towards the products endorsed by such influencers. The research demonstrates that signals emitting influencers' credibility signals substantially influence trust in branded posts, extending beyond conventional source credibility. This finding partially aligns with previous research by Hu et al. (2019), suggesting that showcasing expertise, trustworthiness, and establishing similarity with followers contribute to building trust in endorsed

brands. The findings relating to expertise contradict the conclusions from Lou and Yuan (2019), which found that expertise has a significant role in strengthening trust. The possible reason for such discrepancy is the context of the study, as Lou & Yuan examined the role of expertise in the context of purchase intention and not impulse buying, as is the case in the current study.

Furthermore, the study reveals that message credibility also plays an essential role in strengthening trust. These findings align with the findings of Chen et al. (2019). The study also responds to the call of research by Lou and Yuan (2019) and finds that media-credibility signals are important for strengthening trust. These findings emphasize that the credibility of the message and media are as important as the credibility of the influencer himself for achieving the desired behavioral outcomes.

Moreover, the study found that trust has a significant and positive impact on UBI, which is consistent with the findings of the study of Zafar et al. (2021). Results also show that persuasion knowledge moderates the association between trust and UBI, as the higher the level of persuasion knowledge, the lesser the changes in the development of UBI. These findings align with the findings of Matthes and Naderer (2016) but are in contradiction with the findings of the study by Isaac and Grayson (2017) and also of Martin and Strong (2016). These findings stress that marketers need to take corrective actions to counter the adverse potential impacts of the activated or high levels of persuasion knowledge in the context of influencer marketing. Lastly, results highlight that product affection mediates the relationship of trust and UBI which underscores the importance of affection towards the products endorsed by influencers.

**Theoretical implications.** The present study used the signaling theory and SOR framework to develop and underlying mechanism through which influencers induce impulse buying. With the help of the signaling theory, we examined how the credibility of the factors of influencer marketing communication influence trust in the branded posts of the influencer, which influences UBI. This study extends the signaling theory by using groups of signals related to SMIs instead of isolated signals. This study emphasizes that it is imperative to study multiple communication components, including source, message, and media features when elucidating the persuasion process of contemporary marketing practices. This study fills the gap between the lack of existing research and dynamic practices of innovative marketing. It thus adds to the range of social media advertising outcomes. By developing trust relationships with their followers, SMIs promote brands among their followers and encourage them to purchase impulsively. Moreover, a few studies have examined the impact of trust on the influencers' branded posts on impulse purchases (Wu et al., 2016). Moreover, the impact of digital influencers on planned shopping has been thoroughly examined, but there is a lack of comprehension regarding how influencers instigate UBI. Moreover, this research used an enhanced version of the SOR framework (Jacoby 2002) to address the research gap and respond to the call of research by Vrontis et al. (2021) for further exploring the role of the SOR framework in comprehending the role of influencer marketing and the impulse purchase.

**Practical implications.** This study offers valuable insights for marketers employing influencer marketing strategies. The study highlights that credibility communication factors have a substantial role in influencer marketing communication strategy. Marketers ought to select the influencers who score high in terms of credibility as evident through trustworthiness, expertise and similarity and whose content is rich in terms of information and expressions. Moreover, influencers having a presence in media characterized by a high level of transparency and interactivity should be given priority. The study also stresses the essential role of trust in eliciting UBI. Marketers are encouraged to opt influencers whose posts foster trust. Moreover, marketers ought to devise strategies to mitigate the negative impacts of persuasion knowledge and increase the persuasiveness of influencer marketing strategy. Moreover, marketers must prioritize ethical standards by ensuring transparency in communications regarding influencer endorsements. Adhering to industry-wide ethical guidelines mitigates the risk of exploiting consumers with lower persuasion knowledge, fostering trust between brands and consumers.”

**Limitations.** The research has several limitations which serve as avenues for future research. Firstly, the study focused on only Facebook as the chosen media and assessed its credibility. Given the distinct dynamics inherent in each platform, replicating the model on alternative platforms, like Instagram, is suggested to examine variations in the results. Secondly, the study is based on followers of influencers in Pakistan, reflecting a particular culture and a limited scope of generalizability. Future inquiries could further examine the influence of cultural factors on influencer marketing, investigating how cultural variations may impact influencer campaigns’ effectiveness. They may also study the study’s model in multiple country contexts to enhance the generalizability of the results. Thirdly, potential researches could broaden the scope of the research model by examining other factors that may influence the effectiveness of influencer marketing beyond the factors of source, message, and media. For example, thoroughly exploring receivers’ motivations and psychological characteristics could enhance our understanding of the underlying mechanisms. Experimental designs could be adopted in future studies to establish causal links between the variables, offering more robust evidence for the research model. This approach would enable researchers to manipulate and control variables, providing a more in-depth understanding of the mechanism. Moreover, this study focused on consumers’ UBI rather than impulse buying behaviour. Future studies could incorporate measures of impulse purchases to provide a more direct assessment of the influence of influencer marketing on impulse buying. Considering the rise of virtual marketing, specifically Avatar Marketing, it would be interesting to explore how the study model applies to avatar marketing. Investigating the role of avatars as influencers and their impact on consumers’ trust and impulse buying behaviour would be a relevant and timely research area. Lastly, this research employed a non-probability sampling technique (purposive sampling), associated with limitations such as response bias and non-representation of the entire population. Future studies may consider assessing the research model through a probability sampling technique. While this study relied on survey-based methodology, acknowledging the potential for self-reported data bias is imperative, necessitating caution in interpreting the results. Future research endeavours could explore alternative methods to mitigate the inherent limitations of self-reported data, thus enriching the depth and reliability of subsequent investigations in this field. By addressing these limitations and exploring these avenues, future research can enhance our

understanding of the factors influencing effective influencer marketing and provide valuable insights for practitioners.

## Conclusion

By merging signaling theory with the SOR framework, this study constructs a model emphasizing the crucial impact of the credibility of influencer-related communication factors (influencers, messages, and media) in cultivating trust among followers, thereby influencing the UBI. The research also unveils the interaction between followers’ trust and persuasion knowledge, signaling marketers need to bolster consumer trust by addressing influencers’ perceptions. Additionally, the study identifies product affection as a mediator between Trust and UBI.

While providing valuable insights, the study suggests several avenues for future research, including examining followers’ advertising literacy, cultural differences, motivations, and other communication components. In conclusion, this research significantly contributes to understanding effective influencer marketing in the fashion industry, offering practical implications. Marketers are advised to prioritize influencer-brand relationships, choose credible influencers, create engaging content, and consider media channel credibility to enhance trust, stimulate impulse buying intentions, and achieve success in influencer marketing.

## Data availability

The data presented in this study can be made available upon request from the corresponding author.

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## Author contributions

Komal Shamim: writing the initial draft, collecting data, analysing data, conceptualization. Muhammad Azam: Methodology, writing—review, discussion, editing, and supervision.

## Competing interests

The authors declare no competing interests.

## Ethical approval

All procedures in this study adhered to the institutional research guidelines and the ethical principles outlined in the 1964 Helsinki Declaration, including its later amendments or comparable standards. Since the study did not involve medical research or human experimentation as defined by the Declaration of Helsinki, and the questionnaire posed no risk to the respondents' mental health, ethical approval was not required according to the regulations of the authors' institution (Mohammad Ali Jinnah University) as notified through Review Committee Decision No. MAJU/Notification/FoBA/2024/08/11. Additionally, all participants were at least 18 years old and voluntarily consented to participate in the study by completing the questionnaire. The information collected remains strictly confidential, anonymous, and is used solely for research purposes.

## Informed consent

This article obtained prior consent from all human participants in the pilot test and formal survey.

## Additional information

**Supplementary information** The online version contains supplementary material available at <https://doi.org/10.1057/s41599-024-03796-7>.

**Correspondence** and requests for materials should be addressed to Komal Shamim.

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