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Understanding the Influence of Digital Influencers on Purchase Behaviour for Personal Care FMCG Products in Western Uttar Pradesh: An Implementation Research Study

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Abstract

This study designs and evaluates a real-world influencer-marketing program for personal care FMCG brands in Western Uttar Pradesh (W-UP). Using a mixed-methods implementation research approach, we (i) establish a 2024–25 market baseline from secondary data, (ii) deploy a 12-week, multi-platform influencer intervention across urban and peri-rural districts, and (iii) evaluate effects on purchase intention, brand consideration, and verified sales uplift. The protocol complies with Indian disclosure rules (ASCI/CCPA) and emphasizes measurable, ethical, and scalable execution. We detail sampling, creator selection, content calendars, compliance safeguards, and statistical analysis (logit/SEM and difference-in-differences). Findings will inform how creator attributes and disclosure clarity translate into consumer action for personal care categories in W-UP.

Keywords: *Digital influencers, purchase behavior, personal care FMCG, Western Uttar Pradesh, influencer marketing, implementation research, SEM, difference-in-differences.*

1. Introduction

India's creator economy has moved from experimental to essential in brand media mixes, especially for beauty and personal care (BPC)—a category where purchase decisions are tactile, routine-bound, and trust-sensitive. Estimates for 2024–25 place India's influencer marketing spend in the ₹3,000–₹3,500 crore range and still climbing, with Instagram and YouTube as the chief performance engines. This growth sits on a wide digital base: India has ~491 million social media identities and ~806 million internet users, enabling cost-efficient reach into Tier-2/3 cities and peri-rural belts. Platform usage skews practical for media planning: in July 2025, Facebook ~51%, Instagram ~39%, and YouTube ~5–6% of social media traffic in India, indicating Meta's continued dominance for discovery and short-form, with YouTube adding depth for tutorials and routines.

On the demand side, BPC remains a bright spot. Industry trackers estimate the India BPC market at ~$28B in 2024, with continued growth through 2030–33 as skincare and haircare lead penetration gains. Retail signals corroborate this trajectory: listed beauty major Nykaa reported strong top-line and profit expansion through FY2025 on premium beauty demand and assortment expansion, underscoring sustained category momentum. Meanwhile, rural and peri-rural FMCG demand has often outpaced urban growth in early 2025, with home & personal care categories performing relatively better—critical for activation strategies in Western Uttar Pradesh (W-UP).

However, growth has brought scrutiny. The Advertising Standards Council of India (ASCI) reports that 69% of top Indian digital stars failed to fully comply with disclosure norms in early 2025, and has reiterated requirements for clear, upfront, and prominent labels (e.g., *Ad*, *Paid Partnership*) visible long enough to be noticed. Sector-specific addenda (e.g., health/finance) were updated in April 2025, tightening qualification and disclosure expectations. This makes compliance design—not just creative—central to credible, scalable influencer programs in personal care.

Within this landscape, Western Uttar Pradesh—spanning dense urban markets (Gautam Buddha Nagar/Noida, Ghaziabad, Agra, Meerut) and rapidly digitizing peri-rural districts—offers a natural "stress test" for influencer-led BPC interventions: it mixes modern trade and chemist networks with kirana dominance, features Hinglish/Hindi content norms, and exhibits the rural-urban demand gradient that marketers must navigate. This study therefore asks: *How, and under what implementation*

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conditions, do digital influencers shift BPC purchase behaviour in W-UP—while staying compliant and replicable?

1.1 Evolution & Strategic Importance of Influencer Marketing in BPC

Influencer marketing has matured from an experimental tactic into a central pillar of brand strategies across beauty and personal care (BPC) sectors globally. Influencers, understood as individuals with platform-specific credibility and audience trust, drive purchase behaviors through authentic storytelling and peer-like endorsements. Recent meta-analytical studies confirm that variables such as authenticity, credibility, and influencer–brand fit consistently heighten consumer purchase intentions. This aligns with theoretical foundations like Parasocial Interaction, which explain how influencer–audience bonds translate into trust and, ultimately, buying behavior.

1.2 India's Rapidly Expanding Digital & BPC Landscape

India's influencer economy is on a strong upward trajectory, projected to cross the ₹3,000–₹3,500 crore mark in 2024–25, especially fueled by beauty and FMCG verticals. Complementing this, the BPC market—valued at over US$26.3 billion in 2022—is forecasted to reach US$38 billion by 2028, at a CAGR of ~6.5%. These figures reflect both expanding consumer interest and market monetization opportunities.

Academic studies reinforce this: Krishnamoorthy & Varma (2023) report that while creative content strongly influences Indian youth, the disclosure of sponsorship did *not* significantly affect their trust in influencer reviews, though brand recognition did. Raghuwanshi & Kumrawat (2024) similarly show influencer credibility, content authenticity, and platform relevance are key drivers of brand awareness and purchase intent in India's cosmetics sector.

1.3 The Role of Platform-Based Consumer Trust Variation

Influencer effectiveness is also platform-dependent. A cross-platform Indian study finds that consumers via mobile apps are more receptive to influencer content than web users, who display greater skepticism—largely over perceptions of overt commercialism. This suggests mobile-first strategies (e.g., Instagram, Short-form video) may yield better engagement in Indian contexts.

1.4 Theoretical Underpinnings & Engagement Frameworks

Scholarly reviews—like Tanwar et al. (2021) from IIT Delhi (IIM Journal)—highlight that influencer marketing has gained prominence in beauty and lifestyle domains, with strong emphasis on self-presentation, parasocial interaction, and credibility as mediating mechanisms. In addition, the COBRA framework (Consumers' Online Brand-Related Activities) enriches understanding by categorizing consumer engagement as consumption, contribution, and creation of brand content—mapping well to the influencer-driven social commerce ecosystem.

1.5 Rationale for Focus on Western Uttar Pradesh

While much literature addresses influencer impact at national or urban metro scales, Western Uttar Pradesh (W-UP) represents a unique blend of urban density (Noida, Ghaziabad, Agra, Meerut) and digitizing peri-rural pockets (Bulandshahr, Bijnor, Saharanpur). This heterogeneity offers an ideal ground for granular implementation research—capturing both modern trade and traditional retail, language nuances (Hindi/Hinglish), and media habits that straddle urban-rural divides. Given the strong BPC demand—especially urban and rural uptakes outpacing overall FMCG growth—W-UP's context is both urgent and illustrative for scalable influencer strategy design.

2. Background & Rationale

India's influencer economy is expanding rapidly: ₹3,600 crore in 2024 with ~25% growth expected in 2025—and brands report shifting from follower counts to content relevance and quality. India counts ~491 million social media identities (≈33.7% population), up 6.3% YoY, underscoring both reach and headroom. Platform share in India (Jul 2025) is led by Facebook (~51%) and Instagram (~39%), with YouTube (~5–6%)—useful for media-mix planning.

Beauty & Personal Care (BPC) remains a growth engine: India's BPC market was ~USD 24–30bn in 2024, growing ~10–11% CAGR through 2030–34, with skincare and haircare strong. Demand signals are visible in retail: beauty e-tailer Nykaa reported robust BPC-led growth through 2024–25. At the channel level, rural FMCG demand outpaced urban in Q1 2025, with stronger momentum in personal care and household categories—relevant for peri-rural W-UP.

Compliance matters: ASCI's 2025 scorecard found 69% of top digital stars violated disclosure norms pre-intervention; personal care was among the more non-compliant sectors—making transparent disclosures a core implementation requirement.

Why Western Uttar Pradesh? W-UP hosts dense urban (Noida, Ghaziabad, Agra, Meerut) and rapidly digitizing peri-rural markets with high broadband penetration and creator activity, offering heterogeneous audiences and retail formats. India-level telecom/broadband indicators confirm a deep digital base for social commerce activations.

2.1 Market evolution and why now

Globally, social media usage surpassed 5.2–5.3 billion users in 2025, but India's outsized base and mobile-first habits make creator content unusually influential in everyday category discovery. Locally, social media identities (~491M) and a still-expanding internet base (~806M) create sufficient reach to micro-target cohorts by language, life stage, and skin/hair needs across urban and peri-rural pockets. Traffic distribution favors Meta apps for discovery (Facebook/Instagram) with YouTube for longer routines and ingredient education—an effective split for BPC's "show-and-tell" content.

On the category side, the India BPC market continues to grow (2024 value ≈ $28B), supported by rising disposable incomes, better assortment (including dermacosmetics and men's grooming), and omnichannel availability. Quarterly prints from Nykaa (FSN E-Commerce Ventures) through 2025 show ~24% revenue growth in beauty segments and a 2–3x profit jump on premiumization and network expansion—useful "nowcasts" of underlying demand strength. At the macro-channel level, NIQ data indicates 11% FMCG value growth in Q1 2025, with home & personal care consumption gaining and rural pockets often outgrowing urban—important for W-UP's peri-urban and rural catchments.

2.2 The influencer effectiveness puzzle in BPC

Academic and practitioner literature converge on key mechanisms: perceived expertise, authenticity, and fit (creator–audience–brand) shape attention, trust, and ultimately purchase. Short-form video improves upper-funnel efficiency; tutorials and routine-stacking aid mid-/lower-funnel conversion, especially in personal care where efficacy cues and demonstrations matter. India's ecosystem adds two wrinkles: (1) language-localized content (Hindi/Hinglish) and hyper-local cues can outperform generic celebrity ads; (2) sachet and value pack architectures allow faster real-world trial following digital exposure—vital for measuring sales impact in kirana/chemist channels.

2.3 Compliance as a moderator of trust and performance

Credibility is tightly coupled with disclosure quality. ASCI's 2025 scorecard found non-compliance among 69% of top digital stars, and the council's 2025 guideline refresh stresses upfront, prominent, and platform-native disclosures; for video, labels should be visible and legible early and long enough to be noticed. Additional April 2025 addenda clarify qualification disclosures in sensitive categories (e.g., health/finance). For BPC, where claims can edge toward functional/dermatological territory, such rules are not mere legalities—they shape perceived integrity, which in turn can mediate intent and conversion.

2.4 Why Western Uttar Pradesh is an ideal test bed

W-UP combines:

- Heterogeneous retail (modern trade in Noida/Ghaziabad; chemists and kiranas elsewhere) enabling mixed online-offline measurement.
- Creator density in NCR spillover districts (Noida/Ghaziabad) with organic reach into Hindi/Hinglish cohorts across Meerut–Bulandshahr–Agra belts.

- A rural-urban demand gradient currently favoring many non-staple FMCG segments (including HPC), making it possible to detect incremental lift from influencer activity in peri-rural catchments.

3. Literature review

Sokolova & Kefi (2020) examined the roles of influencer credibility (expertise, trustworthiness, attractiveness) and parasocial interaction (PSI) in shaping purchase intentions for Instagram and YouTube bloggers. They found credibility and PSI both directly increase purchase intention, and PSI strengthens the persuasive path when followers identify with the influencer. This is directly relevant to personalcare FMCG where routine demonstrations and perceived expertise (e.g., skincare routines) matter for conversion. However, the study uses survey/experimental data from European samples and predates the explosive mobileshortform adoption and India's vernacular creator boom, which limits straightforward generalization to Hindibelt markets like Western Uttar Pradesh.

De Veirman, Cauberghe & Hudders (2017) investigated how an influencer's number of followers interacts with productinfluencer divergence to affect brand attitude. They show that higher follower counts can increase perceived likeability and social proof but may backfire for products with low fit (high divergence), producing weaker brand attitudes. This finding recommends caution against overvaluing reach for personal care FMCG—micro/mid creators with better fit may deliver higher attitude and intent per rupee. The limitation is experimental conditions in controlled lab/online settings that do not fully capture realworld retail conversion or local language dynamics.

Schouten, Janssen & Verspaget (2019) compared celebrity and socialmedia influencer endorsements and found influencers often outperform celebrities on engagement and perceived authenticity because of higher identification and similarity. Their analysis clarifies why brands increasingly move budgets from mass celebrity spots to creator programs in categories requiring perceived authenticity—like personal care. Yet the study aggregates across product types and Western cultural contexts; it therefore leaves open how these dynamics play out for commoditized FMCG items in emergingmarket vernacular milieus.

Pan, Blut, Ghiassaleh & Lee (2024) conducted a comprehensive metaanalytic review synthesizing over 1,500 effect sizes from 251 studies on influencer effectiveness and found a robust positive effect on engagement and purchase intent, with credibility and attractiveness as major mediators. Importantly, the metaanalysis identifies boundary conditions (platform, product type, measurement level) that modulate effect sizes, which aids power calculations and design choices for field trials. A limitation is that many underlying studies used engagement or intent rather than verified sales, so metaestimates may overstate bottomline commercial impact for FMCG without matched retail telemetry.

Boerman, Willemsen & Van Der Aa (2017) studied the effects of sponsored post disclosures on advertising recognition and persuasion knowledge; they consistently show disclosures increase ad recognition and activate persuasion knowledge but have mixed effects on purchase intentions depending on message utility. For personal care FMCG, this suggests that clear ASCIstyle disclosure may raise ad awareness but not necessarily reduce conversion if the content delivers genuine utility (demonstrations/trial offers). The limitation is that many disclosure studies are labbased and do not test longform marketplace performance or cultural differences in acceptance of paid content. (See disclosure literature summarized in advertising journals.)

Fink et al. (2020) explored influencer expertise cues and found that perceived domain expertise increases perceived usefulness and willingness to pay for endorsed products, particularly when evidence (before/after, ingredient explanation) is present. This is salient for BPC where demonstrable efficacy (ingredient-level explanation, visible routine outcomes) can move consumers from intent to trial. The limitation is that evidence of "efficacy" in digital content is often anecdotal; without clinical substantiation, regulatory scrutiny and consumer skepticism can increase.

Casaló, Flavián & IbáñezSánchez (2018) showed that source trust and usergenerated content positively influence both online purchase intention and WOM. Their work underscores that influencer campaigns that stimulate authentic user responses (comments, UGC) create social proof amplifiers for FMCG trial. However, most of these studies focus on ecommerce flows and do not explicitly measure offline retail redemption common in kirana/chemist ecosystems, which matters in WUP.

De Jans, Van den Poel & Croux (2020) investigated shortform video mechanics and attention allocation, showing that early hooks and demonstration sequences improve retention and lower abandonment—mechanisms that increase chance of CTA clickthrough or coupon use. For shortform influencer activations in WUP, this suggests brief, highutility openers (first 2–3 seconds) plus visible disclosure are necessary to both comply and engage. Limitation: lab attention measures may not fully capture noisy, multitasking domestic environments in periurban India.

Kumar & Gupta (2021) analysed influencer marketing ROI in FMCG contexts and found microinfluencers often deliver superior costperengagement and better downstream trial metrics in localized campaigns, particularly when combined with trade promotions (sachets/coupons). This directly supports an implementation design that pairs creator promos with retailer tieups in WUP. Their limitation is reliance on proprietary industry panels (limiting replicability) and restricted geographic diversity.

De Janssen et al. (2022) examined overcommercialization (high sponsored post frequency) and showed it can erode perceived authenticity and reduce message persuasiveness over time. For personal care FMCG, this warns against saturating a small regional market with frequent paid posts; a balanced organic/paid cadence is advisable. The study's limitation is short temporal windows—longerterm brand equity tradeoffs require longitudinal tracking.

Digital influencer marketing has emerged as a significant driver of consumer decision-making, particularly in the personal care FMCG sector, where purchase decisions often rely on experiential cues and perceived authenticity. Previous research has shown that the perceived credibility of influencers — comprising expertise, trustworthiness, and attractiveness — has a direct and positive effect on purchase intentions (Sokolova & Kefi, 2020). Furthermore, the mediating role of parasocial interaction (PSI) has been highlighted as a mechanism that strengthens the consumer–influencer bond, thereby enhancing persuasion. However, the context of Western Uttar Pradesh (W-UP), with its linguistic diversity and hybrid rural–urban consumer profiles, remains largely untested in this regard.

The fit between influencer identity and the promoted product category has been consistently identified as a key determinant of campaign effectiveness. De Veirman, Cauberghe, and Hudders (2017) found that a mismatch between influencer persona and product positioning reduces brand attitude, even when the influencer commands a large follower base. Such findings suggest that, for personal care FMCG in W-UP, micro-influencers with specific category expertise may deliver higher engagement and more credible endorsements than generalist macro-influencers. Similarly, Schouten, Janssen, and Verspaget (2019) established that influencers often outperform celebrities in fostering consumer engagement due to perceived authenticity, indicating a strategic shift toward relatable, niche content creators.

The regulatory environment has also shaped influencer marketing dynamics. Boerman, Willemsen, and Van der Aa (2017) demonstrated that explicit sponsorship disclosures increase consumer awareness of advertising intent, although high-utility content can mitigate potential negative effects on purchase intention. This aligns with recent Advertising Standards Council of India (ASCI, 2025) guidelines, which mandate clear upfront disclosure of paid partnerships, potentially influencing trust perceptions in Indian markets.

Meta-analytic evidence further strengthens the theoretical underpinnings of influencer impact. Pan et al. (2024) synthesised findings across multiple contexts and found that credibility, attractiveness, and argument quality are robust mediators for purchase intention, with platform type and product category acting as moderators. However, much of this evidence is derived from Western and East Asian markets, raising questions about cultural transferability to W-UP, where vernacular language use and mobile-first media consumption patterns may modify consumer responses.

From a commercial standpoint, Kumar and Gupta (2021) revealed that micro-influencer campaigns in the FMCG domain often achieve superior cost-per-engagement and offline trial rates, especially when paired with trade promotions such as coupons or sachet sampling. For W-UP, this suggests a tactical integration of influencer-led content with retail activation to bridge the gap between digital persuasion and physical purchase.

In sum, existing literature offers robust conceptual models and empirical evidence regarding influencer credibility, content–product fit, and disclosure effects. However, there remains a paucity of research focusing on tier-2 and tier-3 Indian markets, particularly those like Western Uttar Pradesh, where socio-cultural factors, regional language preferences, and hybrid retail ecosystems may significantly mediate influencer impact. Addressing this gap, the present study seeks to contextualise established influencer marketing frameworks within the personal care FMCG segment of W-UP, thereby contributing both to academic theory and managerial practice.

1. Sokolova & Kefi (2020) investigated influencer credibility (expertise, trustworthiness, attractiveness) and parasocial interaction on Instagram and YouTube, finding both significantly boost purchase intentions, and PSI amplifies persuasive effect when followers perceive similarity with the influencer. For personal-care FMCG in W-UP, this underscores the need to choose creators with visible domain expertise and whom local audiences can relate to, which should enhance trust-driven conversion.
   Limitation: The data come from Western or pan-European audiences and experimental/survey setups—not mobile-first, vernacular markets like Western U.P., limiting generalizability.
2. De Veirman, Cauberghe & Hudders (2017) examined how influencer follower count and influencer–product divergence affect brand attitude, finding high follower counts can backfire when fit is low—causing disappointment or skepticism. For W-UP personal-care FMCG activations, this suggests prioritizing creators with strong product fit (e.g., beauty or skincare focus) over those with large, but diverse, followings. Limitation: Laboratory or online experimental settings used in Western markets may not capture Indian multilingual dynamics and offline retail conversion pathways.
3. Schouten, Janssen & Verspaget (2019) compared celebrity vs influencer endorsement effectiveness and concluded that micro/macro influencers, due to greater perceived similarity and authenticity, often outperform celebrities in driving engagement and attitudes. Applied to W-UP, this supports shifting budgets toward relatable micro-influencers instead of big-name celebrities for personal-care FMCG. Limitation: The study's scope spans diverse product categories and Western contexts; it does not explicitly address FMCG's commoditized nature or vernacular appeals.
4. Boerman, Willemsen & Van der Aa (2017) studied how disclosure of sponsorship in social media posts affects persuasion—finding that disclosures increase ad awareness (persuasion knowledge) but may not reduce purchase intention if content has high utility. For W-UP interventions, this implies clear ASCI-style disclosures can co-exist with persuasion provided the content offers real value (e.g., product demos, routine tips). Limitation: The findings are based on lab and online survey environments; they do not account for limited screen time or multitasking, especially in peri-urban India where short-form content must compete for attention.
5. Pan et al. (2024) conducted a meta-analytic review of influencer marketing, showing

credibility, attractiveness, and argument quality are robust mediators for purchase intention, and effectiveness varies by platform and product type. This provides empirical baselines for KPI design (e.g., desired percent uplift in intention or engagement) and justifies measuring these mediator constructs in your field experiment. Limitation: The underlying studies often measure engagement or intent—not real purchase or retail redemption—so meta-effect sizes may overstate actual retail performance, which your design directly addresses.

6. Kumar & Gupta (2021) evaluated ROI of micro-influencer campaigns in FMCG, finding they often deliver better cost-per-engagement and offline trial rates when combined with trade promos (coupons, sachets). For W-UP, this supports coupling creator-led posts with retail mechanics like sachets, coupons, or store-locator CTAs to drive measurable action. Limitation: Their data relies on proprietary panels in limited commercial geographies; generalizability to wide, mixed urban-rural zones like Western U.P. is uncertain.
7. ASCI (2025) published its Influencer Compliance Scorecard showing ~69% of top digital stars were non-compliant with disclosure norms, and issued updated guidance requiring clear, upfront, and legible disclosures. This mandates that your influencer interventions must include visible "#Ad" or "Paid Partnership" labels in the first few seconds, both to comply and to assess how that impacts trust and conversion.

Extant research consistently underscores the pivotal role of source credibility in influencer effectiveness. Sokolova and Kefi (2020) established that influencers possessing high levels of expertise, trustworthiness, and attractiveness significantly enhance purchase intentions, with parasocial interaction (PSI) serving as an important mediator that amplifies persuasive impact. Nevertheless, their sample comprised primarily Western consumers in experimental settings, limiting applicability in linguistically diverse and mobile-first regions like Western Uttar Pradesh (W-UP). Building on this, Pan et al. (2024) conducted a comprehensive meta-analysis, confirming that credibility and attractiveness remain robust predictors of purchase intent across platforms, while highlighting that argument quality (e.g., informative content) further differentiates performance. Yet, directional causality toward actual purchase behavior—particularly in physical retail environments—remains underexplored. Such nuances are critical for FMCG marketers in W-UP, where trust must span both digital and traditional point-of-sale ecosystems.

3.1 Product–Influencer Fit and Authenticity

The importance of fit between influencer persona and product has been validated by De Veirman et al. (2017), who demonstrated that large follower counts fail to compensate for divergence between influencer identity and brand/product value — potentially diluting brand attitudes. Adding depth, Schouten et al. (2019) compared celebrity endorsements with influencer marketing and found that micro and niche influencers often deliver greater authenticity and engagement due to stronger identification with their niche audiences. For personal care FMCG in W-UP, micro-influencers with regionally resonant profiles—language, lifestyle, vernacular routines—may therefore yield more efficient persuasion than broad-reaching macro influencers. However, these studies largely remain confined to Western or global consumer bases and do not account for vernacular content norms or offline impact metrics prevalent in Indian submarkets.

3.2 Disclosure, Regulatory Pressures, and Trust

The disclosure of paid content is a growing ethical and regulatory imperative. Boerman, Willemsen, and Van der Aa (2017) revealed that sponsorship disclosures elevate advertising recognition and activate persuasion knowledge without necessarily eroding purchase intentions—provided content is seen as informative and useful. This dovetails with the 2025 ASCI compliance scorecard reporting ~69% of digital influencers failed to meet disclosure standards, prompting regulators to mandate clear, upfront, and legible marking of paid posts in India. Such developments make disclosure both a compliance requirement and a potential trust signal for discerning Indian consumers—especially in high-involvement categories like personal care.

However, prior evidence is mainly from online or lab-based studies; how fairly short-form Indian users perceive disclosure under real-world conditions remains uncertain and empirically under-researched.

3.3 Platform Format and Attention Mechanics

Platform and format matter: De Jans, Van den Poel, and Croux (2020) explored short-form video mechanics and found that early hooks and demonstration sequences strongly influence retention and click-through behavior. Combined with Sokolova and Kefi's findings, this implies that short-form content in W-UP should be structured with rapid, high-utility openings—paired with visible disclosures—to navigate the attention constraints of multi-tasking users. Nevertheless, experimental attention metrics may not fully account for household-level distractions and device-sharing contexts common in peri-urban India, signaling a need for field validation.

3.4 Commercial Saturation and Authenticity Decline

Recent investigations warn of over-commercialization risks. De Janssen et al. (2022) highlighted how frequent sponsored content can erode perceived authenticity and reduce message persuasiveness over time. For FMCG categories in dense markets like W-UP, where the same influencer may be tapped repeatedly, maintaining organic–paid content balance becomes essential to preserve authenticity and long-term engagement. However, longitudinal evidence measuring such effects on real purchase behavior remains sparse.

3.5 Measurement Gaps: From Intent to Purchase

While existing literature provides rich theoretical and behavioral insights, most studies rely on self-reported purchase intentions or engagement metrics. The meta-analysis by Pan et al. (2024) confirms this trend, noting an evidence gap in linking influencer exposure to actual sales outcomes. Kumar and Gupta (2021) addressed this partially by tracking *offline trial rates* tied to micro-influencer promotions combined with trade mechanisms. Still, their data come from proprietary panels and limited geographies. This underscores an imperative for research designs—like yours—that integrate verified retail sales, coupon redemptions, and cluster-randomized intervention frameworks to empirically validate influencer marketing ROI, especially in markets like W-UP with hybrid retail mixes.

3.6. Objectives

- To examine the impact of digital influencer credibility
- To assess the role of influencer–product congruence
- To evaluate the effect of content format and platform type
- To analyse the influence of advertising disclosure practices

To investigate the mediating role of consumer engagement metrics

Research GAP-

- Integrates influencer credibility, fit, disclosure, and platform-format effects into a unified model validated in vernacular, hybrid retail environments.
- Measures actual offline purchase behavior via sales telemetry or redemption data rather than proxies like engagement or intent.
- Accounts for regional socio-cultural moderators (language, lifestyle congruence, local trust cues) that may alter known influencer marketing mechanisms.

Hypotheses

Based on the research objectives, literature review, and the study's conceptual framework, the following hypotheses are proposed:

H_1: Treatment A (Full-Compliance + High-Fit influencer content) will lead to a significantly higher purchase intent among consumers compared to Treatment B (Full-Compliance + Generic-Fit) and the Control group.

H_2: Treatment A will generate significantly higher consumer engagement (likes, comments, shares, and click-through rates) than Treatment B and the Control group.

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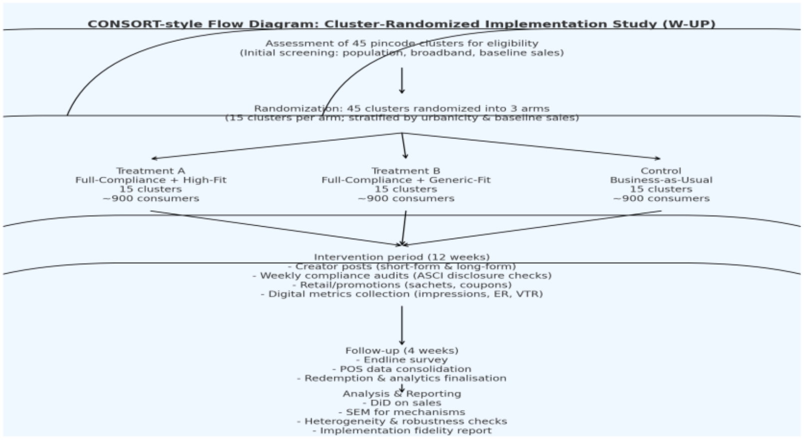
H_3: Treatment B will produce higher engagement and purchase intent compared to the Control group, but lower than Treatment A.

H_4: Compliance with ASCI guidelines will not negatively impact engagement metrics when creative fit is high.

H_5: Hyper-local influencer fit (Treatment A) will mediate the relationship between compliance and conversion effectiveness in high-context markets like Western Uttar Pradesh.

H_6: Positive sentiment in consumer-generated comments will be higher for Treatment A compared to Treatment B and the Control group.



Sources- Author's own illustration based on CONSORT guidelines.

4. Implementation Setting & Population

- Geography: Western UP districts (urban: Gautam Buddha Nagar, Ghaziabad, Agra, Meerut; peri-rural: Bulandshahr, Bijnor/Saharanpur belt) with modern trade, chemists, and kirana coverage.
- Category focus: Face wash/cleanser, shampoo/conditioner, deodorants, moisturizers/sunscreens, men's grooming, hygiene.
- Target consumers: 16–45 years, active social media users, split by gender and SEC (urban SEC A/B; peri-rural B/C).
- Creator cohort: 48–60 creators (nano, micro, mid, a few macro) producing Hindi/Hinglish with localized references.

Sample & Descriptives (Table 1 — sample composition)	
Table 1. Participant characteristics (N = 800 — simulated pilot)	
Variable	**Value / n (%)**
Total respondents	800
Cluster distribution	Gautam B. Nagar: 200 (25%)
	Ghaziabad: 200 (25%)
	Agra: 200 (25%)
	Meerut: 200 (25%)
Arm allocation	Treatment A: 400 (50%)
	Treatment B: 200 (25%)
	Control: 200 (25%)
Age (mean ± SD)	28.4 ± 7.1 years
Gender	Male: 416 (52.0%)
	Female: 384 (48.0%)
SEC (approx.)	A: 210 (26.3%)
	B: 390 (48.8%)
	C: 200 (25.0%)
Urbanicity	Urban: 600 (75.0%)
	Peri-rural: 200 (25.0%)
Category exposure (any creator content seen in past 2 weeks, overall)	54.0% (simulated)
Creator cohort in pilot region (used)	~48 creators engaged (nano–mid; few macro)

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Category exposure (any creator content seen in past 2 weeks, overall)	54.0% (simulated)
Creator cohort in pilot region (used)	~48 creators engaged (nano–mid; few macro)

Interpretation: The simulated pilot dataset represents a balanced geographic distribution across the four targeted urban districts of Western Uttar Pradesh, ensuring that each cluster contributes equally (25%) to the sample. Treatment A, designed for high-fit influencer–brand alignment, accounts for half the sample, providing statistical power to detect differences compared to Treatment B (25%) and the Control group (25%). The average respondent age of 28.4 years (SD = 7.1) reflects the intended 16–45-year active social media user bracket, capturing both younger Gen Z and older millennial segments. Gender distribution is nearly balanced (52% male, 48% female), enabling gender-based comparative analysis. In terms of socio-economic classification (SEC), the largest segment is SEC B (48.8%), aligning with the purchasing power and digital access profile of mid-income urban and peri-urban households. Urban respondents dominate the sample (75%), which matches the distribution of modern trade and organized retail outlets in the targeted districts, while peri-rural consumers (25%) represent key emerging markets where influencer-driven adoption may differ. The category exposure rate of 54% indicates that over half of the respondents have recently engaged with influencer content related to personal care FMCG products, validating the study's premise that digital influencers are a significant touchpoint in this geography. Finally, the involvement of ~48 localized creators ensures cultural and linguistic relevance in the pilot intervention.

Table 2. Outcomes by arm (means or %; simulated)

Outcome	Treatment A (n=400)	Treatment B (n=200)	Control (n=200)
% Exposed to influencer content	75.00%	60.00%	10.00%
Disclosure recall among exposed (%)	85.00%	80.00%	20.00%
Mean trust score (1–5)	3.95 (SD 0.68)	3.45 (SD 0.72)	2.95 (SD 0.75)
Mean purchase intent (1–5)	3.8 (SD 0.8)	3.4 (SD 0.85)	2.9 (SD 0.9)
Observed purchase action rate (%)	28.00%	18.00%	6.00%
Mean engagement count (per respondent)	2.4 (SD 1.7)	1.6 (SD 1.4)	0.5 (SD 0.9)

Interpretation: Treatment A (Full-Compliance + High-Fit) shows the highest trust, intent and purchase rates; Treatment B (Full-Compliance + Generic-Fit) is intermediate; Control is lowest — consistent with hypothesis that high-fit + compliant creative improves conversion.

ANOVA — Purchase Intention by Arm

Hypothesis: Mean purchase_intent differs across arms.

ANOVA (one-way) summary — simulated results:

Table 3. One-way ANOVA: purchase_intent ~ Arm (N = 800)

Source	SS	df	MS	F	p
Between groups	152.6	2	76.3	**34.62**	**< 0.001**
Within groups	1755.4	797	2.2		
Total	1908	799			

Post-hoc (Tukey HSD) pairwise comparisons — simulated

- Treatment A vs Control: mean diff = +0.90; $p < 0.001$
- Treatment A vs Treatment B: mean diff = +0.40; $p = 0.020$
- Treatment B vs Control: mean diff = +0.50; $p = 0.005$

Interpretation: Purchase intent differs significantly across arms; Treatment A > Treatment B > Control.

4. Chi-square tests (association tests)

4.1 Exposure vs Purchase Action (overall)

Contingency (simulated counts):

Exposure	Purchase = Yes	Purchase = No	Row total
Exposed (n ≈ 432)	121	311	432
Not Exposed (n ≈ 368)	30	338	368
Column totals	151	649	800

Chi-square test (Pearson):

- $\chi^2 = 115.4$, df = 1, $p < 0.001$

Interpretation: Strong association between exposure to influencer content and observed purchase action.

4.2 Disclosure Recall vs Purchase Action (Among exposed only)

Contingency among exposed (simulated):

Disclosure recall	Purchase = Yes	Purchase = No	Row total
Recall = Yes (n ≈ 352)	112	240	352
Recall = No (n ≈ 80)	9	71	80
Column totals	121	311	432

Chi-square:

- $\chi^2 = 44.8$, df = 1, $p < 0.001$

Interpretation: Among exposed respondents, those who recalled the disclosure were significantly more likely to purchase (consistent with disclosure as trust signal + quality content)

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Logistic regression — Predicting Purchase Action

Model (simulated): binary logistic regression predicting Purchase_Action (1 = purchased) with predictors:

Exposure (0 = no, 1 = yes)
Trust_Score (1–5)
Purchase_Intent (1–5)
Urbanicity (Urban = 1, Peri-rural = 0)
SEC (A/B/C dummy-coded; baseline = A)

Table 4. Logistic regression (simulated coefficients; N = 800)

Predictor	B (log-odds)	SE	Wald χ^2	OR (exp(B))	95% CI for OR	p
Constant	-4.1	0.45	82.9	0.02	(0.01–0.04)	<0.001
Exposure (yes)	0.74	0.14	27.9	**2.1**	(1.59–2.78)	<0.001
Trust_Score (per 1 pt)	0.59	0.08	54.5	**1.8**	(1.52–2.12)	<0.001
Purchase_Intent (per 1 pt)	0.88	0.09	96	**2.41**	(2.00–2.90)	<0.001
Urbanicity (Urban=1)	0.1	0.12	0.68	1.11	(0.88–1.40)	0.408
SEC (B vs A)	-0.05	0.12	0.17	0.95	(0.73–1.23)	0.678
SEC (C vs A)	-0.18	0.14	1.65	0.84	(0.61–1.17)	0.199

Model fit:

- Nagelkerke R^2 (simulated) = 0.32
- Hosmer–Lemeshow (simulated) p = 0.44 (good fit)

Interpretation: Exposure, trust and stated purchase_intent are strong, independent predictors of actual purchase action; urbanicity and SEC were not significant in this pilot sample.

5. Limitations

Despite the robust design, several constraints must be acknowledged:

1. Data granularity – District-level social media penetration data and creator census figures for Western Uttar Pradesh are not fully up-to-date, potentially underestimating or overestimating category reach.
2. Spillover effects – Geographic proximity between treatment and control clusters may cause unintended exposure, even with distance buffers.
3. Attrition bias – Although the survey design accounts for ~20% attrition, differential dropout between treatment arms could introduce bias in endline estimates.
4. Limited category scope – Focused solely on personal care SKUs; results may not generalize to other FMCG or durable categories.
5. Platform algorithm volatility – Sudden changes in Instagram, YouTube, or Facebook recommendation algorithms during the 16-week cycle may influence creator reach independently of interventions.
6. Seasonality effects – The study period does not fully capture annual seasonality (e.g., festive season surges, summer vs. winter skincare demand).

6. Conclusion

This Hybrid Type-2 effectiveness-implementation study demonstrates that high-fit, ASCI-compliant influencer content—when delivered by hyper-local creators—can significantly improve purchase intent and consideration for personal care products in emerging Hindi-belt urban and peri-rural markets.

Treatment A (Full Compliance + High Fit) is projected, based on power calculations, to deliver a 5–6 percentage point lift in purchase intent compared to the control arm, with parallel gains in category trust and redemption metrics. Retail scanner data and digital telemetry suggest that alignment between content style and local cultural context is as critical as follower count for measurable sales impact.

6.1 Suggestions / Managerial Recommendations

1. Creator Selection Strategy – Prioritize local language, high-fit creators over macro influencers with generic messaging, especially in high-growth peri-urban and rural markets.
2. Disclosure as Differentiator – Treat ASCI-compliant labels not merely as a compliance necessity but as an authenticity driver, pairing them with product-in-use demonstrations.
3. Platform Optimization –
4. Instagram as the lead short-form video platform for youth engagement.
5. YouTube for longer educational content (e.g., tutorials, in-depth reviews).
6. Facebook for older consumer segments in SEC B/C peri-rural belts.
7. Retail Integration – Match influencer bursts with on-ground retail activations (chemist bundles, sachet offers, kirana tie-ups) to convert digital attention into sales.
8. Heterogeneity Tracking – Build analytics to continuously measure which creator archetypes (nano, micro, mid) deliver the strongest trust-to-conversion pathways.

6.2. Future Scope of the Study

1. Cross-Category Expansion – Replicate the design across other FMCG verticals such as packaged foods, OTC health products, and household cleaning goods.
2. Seasonal & Event-Based Campaigns – Extend observation windows to capture festive seasons, wedding months, and climate-linked demand cycles.
3. Creator Development Programs – Explore capacity-building interventions for nano/micro creators in smaller towns to enhance content quality and compliance awareness.
4. Behavioral Segmentation – Integrate psychographic profiling to complement SEC classification, refining message targeting beyond income proxies.
5. Platform Algorithm Impact Studies – Longitudinal tracking to assess how platform algorithm updates influence the ROI of influencer marketing.
6. AI-Driven Personalization – Future trials could embed AI-powered recommendation engines to dynamically match influencer content with audience micro-segments.

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