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SOCIAL MEDIA ENGAGEMENT AND BRAND LOYALTY: AGE AS A MODERATOR IN THE DIGITAL BEHAVIOR OF INDIAN CONSUMERS

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ABSTRACT

In this research, the role of social media engagement in causing brand loyalty among Indian consumers was studied, focusing on how age might change this impact. To build relationships with their brands today, marketers rely heavily on affecting people's emotions, thoughts and actions. Drawing on answers from 247 active users of social media, this research determines which kinds of online interactions help develop trust, satisfaction and loyalty intentions. Especially, participants' age was an important factor that influenced the findings. The study found that younger consumers connect and feel more strongly towards the brand. The results suggest that marketers should design and deliver marketing messages in ways that fit particular age groups to make customers more loyal to the brand.

KEYWORDS: *Social Media Engagement, Brand loyalty, Age Moderation, Digital Marketing, Consumer Behavior.*

1. INTRODUCTION

Earlier, people remained loyal to a brand because the products were reliable and made customers happy. These days, having emotional ties with customers, being visible and interacting with them are just as important in social media marketing (Pansari & Kumar, 2017). How successful engagement is often depends a lot on which platform is used and who the demographic is. In particular, Instagram and Snapchat attract more Gen Z and Millennial users, but older people usually use Facebook and YouTube to access more news and educational content. These age variations play a role in how people look at, interact with and stay with a brand (Hudson et al., 2016).

Emotional writing and influencer stories do well on Instagram, on the other hand, longer videos showing how to use a product or offering a review perform better on YouTube. So, companies must offer different ways to engage with users that fit the personality of each platform and the age groups involved.

Because of the COVID-19 pandemic, more people used the internet and social media, so companies had to pay more attention to them. People today are looking for companies to connect with them in a real, timely and interesting way, rather than only sending them messages about their products or services. Firms showing empathy, giving correct information and communicating in a helpful way were able to keep their loyal customers.

While previous research has touched on social media marketing, it is not fully clear how different platforms or age groups play into the tie between engagement and loyalty, mainly in India and similar markets. For these reasons, the study explores the way brand loyalty of Indian consumers is affected by their level of social media engagement and how age acts as a moderating factor. The purpose of these findings is to give brands ways to personalize their online marketing strategies for people of all ages on multiple social media platforms.

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2. REVIEW OF LITERATURE

Sl. No.	Country	Industry Sector	Variable Description	Research Methodology
1	India	Digital Marketing / E-commerce	Brand loyalty, brand engagement, social media presence, online reviews, influencer recommendations	Quantitative; 102 survey responses; random sampling; percentage-based analysis
2	Global	B2C (Electronics, Apparel, F&B, etc.)	Customer engagement (emotional, cognitive, behavioral), involvement, participation, commitment, loyalty	Cross-sectional quantitative; 391 responses; EFA, CFA, SEM; SPSS & AMOS
3	India	Influencer Marketing / Digital Media	Trust, engagement, authenticity, emotional connection, perceived credibility, social proof	Mixed methods; 300–500 surveys; interviews; regression & thematic coding
4	India	Mobile Brands / Social Media Marketing	Facebook interaction, behavioral, emotional, cognitive engagement, brand loyalty	Quantitative; 167 responses; purposive sampling; SEM & CFA
5	Spain	Cross-industry	Customer loyalty, content quality, campaigns, visuals, trust, recommendation, repurchase	Systematic literature review (1994–2022); conceptual synthesis; Oliver's model
6	China	Digital Marketing / Brand Engagement	Brand interaction, consumer engagement, dissemination breadth/depth, image, relationship, attitude, loyalty	Quantitative; data from 500 brand accounts; SEM, regression, correlation
7	Zimbabwe	Hospitality	Social media marketing, media sharing, review networks, brand loyalty, age (moderator)	Quantitative; 220 responses; convenience sampling; SEM & moderated regression
8	Indonesia	Fast Food (McDonald's)	Social media marketing, brand trust (integrity, concern), brand loyalty (satisfaction, commitment)	Quantitative; 130 responses; SEM using AMOS
9	Qatar	Luxury Fashion	SMM activities (customization, trendiness), community engagement, lovemark, brand loyalty	Quantitative; 464 responses; PLS-SEM using SmartPLS
10	United Kingdom	Online Communities / social media	Tie strength, homophily, source credibility, web reciprocity, online identity	Mixed methods; 30 interviews & forum analysis; NVivo & Social Network Analysis
11	Czech Republic	SMEs / Online Brand Communities	Platform engagement, online brand community, brand relationship, trust, brand loyalty	Quantitative; 122 participants; PLS-SEM using SmartPLS & SPSS

The studies evaluated explain clearly how social media interactions lead to loyal customers in all types of industries worldwide. At the same time, it becomes obvious that there is a need to pay more attention to how age affects this relationship among Indian consumers. Study objectives are to discover the ways users in various age groups use different digital platforms and find out how their behavior affects their brand loyalty in India.

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3. HYPOTHESIS DEVELOPMENT

H1: Social media engagement positively influences brand loyalty among Indian consumers.
H2: Age moderates the relationship between social media engagement and brand loyalty.

H3: The impact of age as a moderator varies across different social media platforms.

4. METHODOLOGY

In this research, data are examined using a quantitative method and a descriptive approach to determine the relationship between social media use and how much a person stands by the brand, focusing on the role of age in each platform. It examines in what ways emotional, cognitive and behavioral engagement with a brand lead to results like brand trust, satisfaction and loyal intentions. Data from my research and from published works was used to help the theoretical framework. Information was gathered from an online survey (primary data), as well as from existing publications and reports on the industry (secondary data). The survey asked how much participants agreed or disagreed with statements using a five-point scale (Strongly Disagree to Strongly Agree) and it was designed to assess emotional bonding, how they behave on the platform, trust in the brand, their satisfaction and loyalty. Using Cronbach's Alpha, it was found that the items in the instrument are very highly consistent with each other, as shown by the high 0.936 score.

Data was analyzed with IBM SPSS software, using these different methods:

- **Descriptive statistics** (mean, frequency, and percentages) to summarize user behaviour and demographic characteristics.
- **Correlation analysis** to examine relationships between engagement variables and loyalty indicators.
- **Decision Tree Classification using the CHAID (Chi-square Automatic Interaction Detector) method** to explore how age and various engagement factors influence brand loyalty across platforms. This approach also enabled pattern discovery across different age segments.

4.1 Data Collection Participants filled out a Google Form survey which was sent through social media and on academic/student networks. The survey was open for two weeks to allow people to take part.
The survey gathered a total of 257 replies.
After the analysis stage, 247 valid responses were considered (refers to the number of responses candidly provided).
This method used convenience sampling, including people who are involved in branded content found on social media. It was designed with five main portions.

Demographic Details

- Platform Preference
- Engagement Behaviour
- People trust and are satisfied with the brand.
- Measuring brand loyalty includes using indicators.

4.2 Respondents
Age Group

- **18 - 24 years**: Represented the majority of the sample (approximately 70%), reflecting the dominant age group of active social media users in India.
- **25 - 34 years**: Accounted for a secondary yet significant portion.
- **35 years and above**: Represented a small minority of the respondents.

Gender

- Responses were relatively **balanced between male and female** participants, primarily from **urban educational institutions** and student networks.

Educational Qualification

- The majority of respondents were either **undergraduate or postgraduate students**, with a substantial representation of university-level learners.
- The sample also included **young professionals**, indicative of the target population for digital brand engagement.

Geographical Location

- While city-level data was not collected, most responses are inferred to be from **urban and semi-urban areas** in India, based on the mode of distribution (e.g., through university, student, and professional networks).

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- This demographic composition aligns with the objective of the study, which is to understand the **digital behaviour of young, socially active Indian consumers** the most prominent user base on platforms like Instagram, Facebook, and YouTube.

5. RESULTS AND DISCUSSION

Tools used for analysis:

- Descriptive Statistics
- Cronbach's Alpha (for reliability testing)
- Correlation analysis
- ANOVA (to test platform-based engagement variation)
- Decision Tree (CHAID) modelling for predictive relationships

5.1. Reliability Analysis (Cronbach's Alpha)

Case Processing Summary

		N	%
Cases	Valid	247	96.1
	Excluded[a]	10	3.9
	Total	257	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.936	.931	28

Valid Cases: 247 (96.1%) Excluded Cases: 10 (3.9%)

Interpretation:

According to the reliability analysis, the Cronbach's Alpha for the 28 items in the questionnaire was 0.936 which shows high internal consistency. It means that what is used to measure social media engagement and brand loyalty is very dependable and represents the major concepts all the time. Since the measurements are very reliable, future analyses can be trusted and the relationships seen among variables are accurate.

5.2 Item Statistics (Means & Standard Deviations)

- **Item Statistics**

	Mean	Std. Deviation	N
Gender	1.75	.620	247
Age	1.84	.820	247
Occupation	1.76	.838	247
I actively use and engage brand content on Facebook.	1.98	1.361	247
I actively use and engage brand content on YouTube.	2.17	1.024	247
I actively use and engage brand content on Twitter (X).	2.50	1.108	247
I actively use and engage brand content on Facebook.	2.41	1.325	247
I actively use and engage brand content on Instagram.	2.06	1.106	247
I frequently like brand posts on social media.	1.84	.896	247
I frequently comment on brand content.	2.43	1.045	247
I enjoy watching stories and reels posted by brands.	2.19	.968	247
Positive experiences with a brand on social media increase my likelihood of staying loyal to it.	2.27	.939	247
I believe social media helps me better understand a brand's personality and values.	2.27	1.044	247

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I find brand content on social media informative and helpful.	2.30	1.107	247
I often purchase from brands that I engage with on social media.	1.69	.903	247
I am likely to recommend these brands to my friends and family.	2.25	1.056	247
I feel more confident in a brand when I see it actively engaging with users.	2.24	1.084	247
I prefer buying from brands I follow on social media over others.	2.15	1.026	247
I feel a strong sense of loyalty to brands that interact with me online.	2.23	.850	247
How many hours per day do you spend on social media?	2.34	.742	247
I trust the brands that I regularly engage with online.	2.23	.884	247
I look forward to seeing content from brands I like on social media.	2.19	1.049	247
I enjoy interacting with brand content that reflects my personal interests	2.43	.985	247
I feel emotionally connected to some brands I follow on social media.	1.89	1.098	247
I participate in brand contests, polls, or giveaways.	2.31	1.156	247
I send brand posts directly to 3s (DMs).	2.43	1.224	247
I tag friends in brand-related posts.	2.58	1.213	247
I often share brand content on my profile or story.]	2.29	1.109	247

Interpretation: The results showed that people were moderately engaged, scoring mostly between 1.69 and 2.58 on the given 5-point scale. Tagging friends, sharing content related to the brand and commenting had large mean values which shows that these users were often involved. Emotional relationship and interest in buying from brands were found to have lower average scores which means users might interact a lot with brands, but this entertainment doesn't always lead to loyalty or purchases. This makes it clear that engagement and loyalty are linked, but there isn't always a direct relationship which study considers.

5.3 Inter-Item Correlation Matrix

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.179	1.692	2.579	.887	1.524	.058	28
Item Variances	1.069	.384	1.853	1.470	4.828	.114	28
Inter-Item Covariances	.367	-.275	1.242	1.517	-4.524	.080	28
Inter-Item Correlations	.324	-.322	.814	1.136	-2.526	.061	28

Interpretation: The inter-item correlation matrix indicates a moderate to strong positive relationship among most survey items, with an average correlation of 0.324 and a maximum value of 0.814. This suggests that variables measuring engagement (e.g., liking, commenting, following) are positively linked to loyalty-related behaviors such as trust, emotional connection, and willingness to recommend the brand. For example, participants who follow brands closely tend to express stronger loyalty intentions. The results support the idea that higher social media engagement especially emotional and interactive behaviors is closely associated with increased brand loyalty. Overall, the consistency of these relationships strengthens the validity of using these items to measure the constructs in this study.

5.4 ANOVA Table (Analysis of Variance)

		Sum of Squares	df	Mean Square	F	Sig
Between People		2700.175	246	10.976		
	Between Items	388.501	27	14.389	20.504	.000
Within People	Residual	4660.999	6642	.702		
	Total	5049.500	6669	.757		
Total		7749.675	6915	1.121		

Grand Mean = 2.18

Interpretation: ANOVA results reveal a statistically significant difference among item means ($F = 20.504$, $p < 0.001$), indicating that the responses to different questionnaire items are not uniform. This means each item contributes uniquely to measuring the constructs of social media engagement and brand loyalty. The significant variation across items suggests that participants

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distinguished clearly between various aspects of engagement such as emotional bonding, behavioural actions (e.g., tagging, liking), and loyalty expressions (e.g., trust, repurchase intention).

The grand mean score of 2.18 reflects a generally moderate level of agreement across all responses. However, the high between-items mean square (14.389) compared to the residual mean square (0.702) reinforces that variance is primarily driven by the distinct nature of the items, not random error.

5.5 Decision Tree (CHAID - Classification Tree)

CHAID Decision Tree – Model Summary

Specification	Details
Growing Method	CHAID
Dependent Variable	Age
Validation Method	Cross-Validation
Maximum Tree Depth	3
Terminal Nodes	4
Total Nodes	6
Independent Variables Included	- I feel emotionally connected to some brands I follow on social media. - I believe social media helps me better understand a brand's personality and values.
Minimum Cases in Parent Node	100
Minimum Cases in Child Node	50

Misclassification Costs

Observed	Predicted			
	1	2	3	4
1	.000	1.000	1.000	1.000
2	1.000	.000	1.000	1.000
3	1.000	1.000	.000	1.000
4	1.000	1.000	1.000	.000

Dependent Variable: Age

1. Dependent Variable: Age group
2. Independent Variable

- Emotional connection to brands
- Understanding brand personality via social media

Results

- Users who feel **emotionally connected to brands** are differentiated into age categories.
- Brand personality understanding also splits respondents into different age groups.

2. Misclassification Rate
Cross-validation risk estimate is **45.5%** (moderate).

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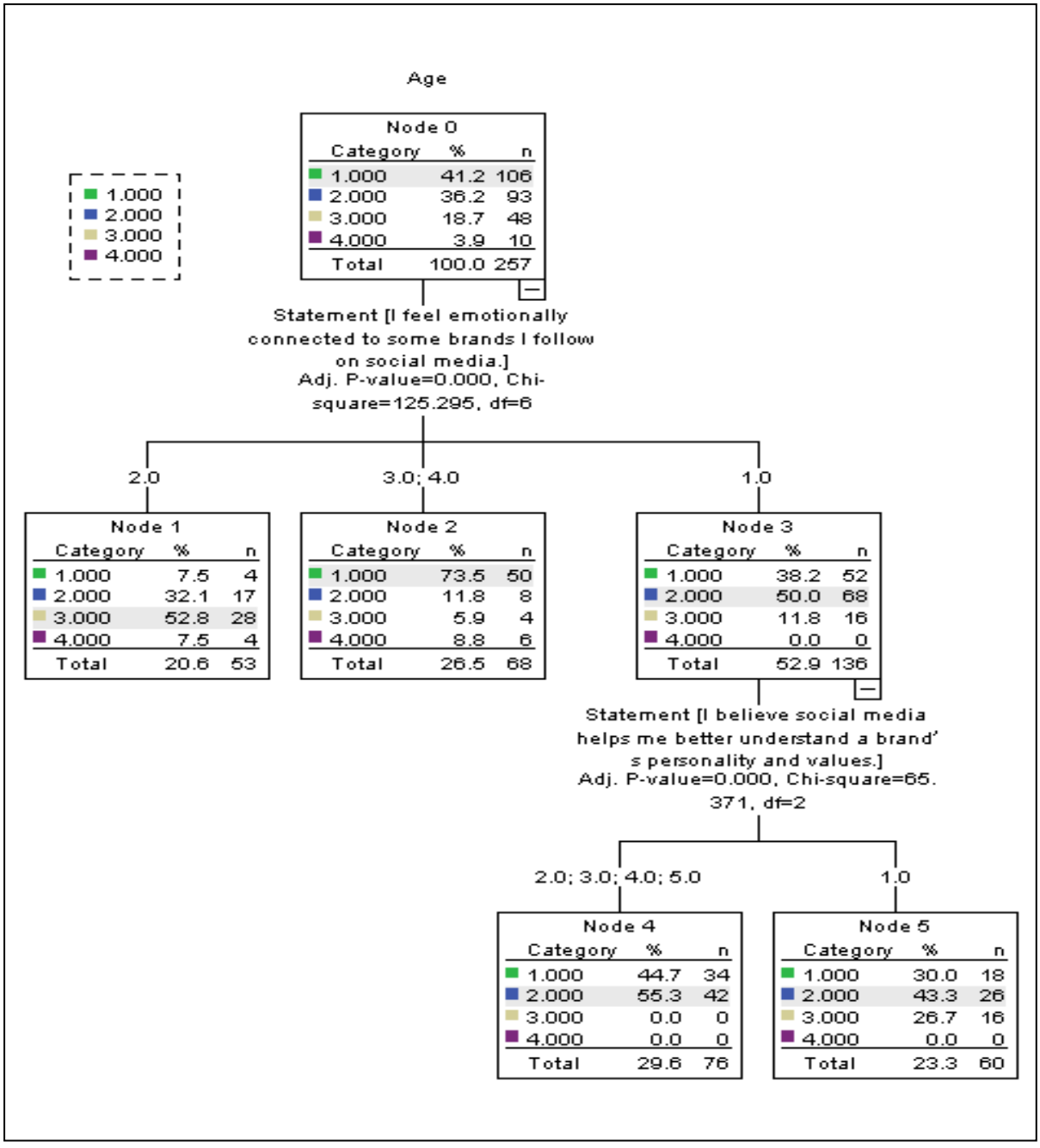


Fig: Chaid Decision Tree

Interpretation:

The CHAID decision tree analysis explored how social media engagement factors predict age groups, confirming age as a moderator in the engagement–loyalty relationship. The first and strongest predictor was emotional connection to brands ($\chi^2 = 125.295$, $p < .001$). Participants who reported high emotional connection (scores 3 and 4) were mostly aged 18-24 (73.5%), indicating that younger users build stronger emotional bonds with brands. Those with moderate emotional connection (score 2) were largely in the 35-44 age group (52.8%), suggesting emotional engagement decreases with age.

For users with low emotional connection (score 1), the second key factor was belief that social media helps them understand brand personality ($\chi^2 = 65.371$, $p < .001$). Among these, those who agreed were primarily 25-4 years (55.3%), while those who disagreed were split between 18–24 and 25–34 years. This shows that cognitive engagement becomes more relevant for slightly older users.

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The model generated six nodes, with moderate classification accuracy (56.8%). Overall, the analysis confirms that emotional engagement drives loyalty among younger users, while cognitive engagement is more important for young adults, supporting the moderating role of age in digital consumer behaviour.

6. CONCLUSION

This research demonstrates a strong and positive relationship between social media engagement and brand loyalty among digitally active consumers, particularly in the 18-24 age group. Emotional engagement emerged as the most influential factor, significantly driving trust, satisfaction, and long-term loyalty toward brands. Cognitive and behavioural engagement such as interacting with brand content, commenting, and sharing also contribute meaningfully to consumers' perceived brand value. The CHAID decision tree analysis highlighted age as a significant moderator, revealing distinct engagement and loyalty patterns among different demographic segments. Moreover, consumer preferences across platforms suggest that users respond differently to brand content depending on the nature of the platform (e.g., Instagram for visual engagement, Twitter for updates and opinions, YouTube for immersive content). The findings support the hypothesis that active engagement behaviours beyond passive actions like liking are more strongly associated with increased loyalty and trust. Overall, the study underscores the importance of personalized and emotionally resonant social media strategies for brands aiming to build loyal consumer communities. By leveraging platform-specific engagement techniques and focusing on emotionally engaging content, marketers can effectively strengthen consumer-brand relationships and drive repeat purchase behaviours.