

Digital Media Penetration and Usage Patterns in Rural Andhra Pradesh: A Diffusion of Innovations Perspective

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Abstract

Digital media has increasingly become part of everyday communication, information seeking and social interaction in rural communities. However, digital transformation cannot be understood merely in terms of whether technology is available; the intensity and pattern of usage also provide important indicators of digital penetration. This study examines the extent and patterns of digital media access and usage among rural communities in Andhra Pradesh, India, using the Diffusion of Innovations (DOI) perspective as the principal theoretical framework. A quantitative cross-sectional survey was conducted. Descriptive statistics and chi-square tests of association were employed. The findings indicate a predominantly Smartphone-led digital environment. Digital engagement was also substantial. The findings suggest that rural Andhra Pradesh has moved beyond a simple access divide toward a more differentiated pattern of digital participation. The study contributes empirical evidence to the understanding of rural digital diffusion and provides implications for digital-literacy programs, local-language communication, public-service delivery and responsive digital policy.

Keywords: Digital Media, Rural Communities, Andhra Pradesh, Digital Penetration, Digital Divide, Diffusion Of Innovations, Smartphone, Internet Usage, Digital Adoption

Introduction

Digital media has transformed the ways in which individuals communicate access information, learn, conduct economic activities and participate in social life. This transformation is particularly significant in rural communities, where digital technologies can potentially reduce geographical barriers to information and services. At the same time, access to digital technologies does not automatically imply meaningful or equitable digital participation. Research on the rural digital divide has increasingly moved beyond the question of whether people have access to technology toward questions concerning the quality, intensity and purpose of digital use. Studies of rural Internet adoption have shown that adoption is shaped by demographic, socioeconomic and experiential factors rather than infrastructure alone. LaRose et al., for example, connected rural broadband adoption with diffusion theory, prior Internet experience, expected outcomes, self-efficacy, age and income. The Indian context presents a particularly important setting for examining this transition. Recent research indicates continuing rural-urban differences in digital infrastructure and skills, even while mobile-phone and Internet access have expanded. Research on rural India has similarly emphasized the importance of affordability,

infrastructure and patterns of actual computer and Internet use rather than treating connectivity as synonymous with digital inclusion.

Within this broader context, Andhra Pradesh provides an important setting for examining how digital media is becoming embedded within rural social life. The present study emerging from an ICSSR-supported research project entitled “*Digital Media and Cultural Transformation: Analysing the Influence on Traditional Values of Rural Andhra Pradesh.*” The questionnaire was designed to examine digital access and usage together with cultural practices, language and knowledge transmission, family relationships, economic and occupational changes, cultural identity and perceptions of cultural preservation.

Review of Literature

Rural digital penetration and the digital divide

Recent studies highlight that rural digital penetration in India has expanded through smartphones, mobile internet and government digital initiatives; however, access remains uneven. Sindakis and Showkat (2024) identify age, education and technology adoption as important factors shaping rural digital inclusion. Arora and Sapre (2025) demonstrate persistent rural–urban disparities in digital infrastructure and skills across Indian states. Similarly, Singh et al. (2025) find that wealth, education and social-group inequalities significantly influence women’s internet usage. Gogoi et al. (2025) show that targeted digital literacy training can improve rural adolescent girls’ digital skills and access to opportunities. More recently, Roy, Das and Saha (2026) identify household wealth, mobile ownership and education as major contributors to the rural–urban internet divide among women. Collectively, these studies emphasise equitable infrastructure, affordable connectivity and inclusive digital literacy initiatives.

Empirical studies demonstrate the growing penetration of smartphones and internet services in rural communities. Sindakis and Showkat (2024) highlight the influence of age, education and digital initiatives on technology adoption, including increasing participation among rural women. Soni and Shukla (2022) identify growing digital payment adoption alongside infrastructure and digital literacy challenges. Huang et al. (2023) establish the importance of digital connectivity, information access and social networks in promoting rural entrepreneurship and tourism. Yang, Zhang and Zhang (2024) examine the relationship between internet usage, social capital and rural welfare, highlighting the complex influence of social networks and trust. Similarly, Udisha and Philomina (2024) demonstrate how smartphone access improves rural women farmers’ access to agricultural information and markets, despite persistent digital barriers. Overall, the literature establishes digital media as an important driver of rural transformation.

Theoretical Framework

The principal theoretical foundation of this study is Everett Rogers’ Diffusion of Innovations (DOI) theory, explains how an innovation spreads through a social system over time. Its central proposition is that adoption is not an instantaneous event but a process involving communication, social interaction, evaluation and eventual use. Contemporary applications of DOI to rural digital connectivity emphasize the importance of perceived advantages, compatibility with existing practices, complexity, trialability and observability. This framework is particularly appropriate for the present study because digital media represents a technological innovation that is being introduced into established rural communication and social systems.

Proposed theoretical pathway



Contextual influences across the process:

Age | Gender | Education | Occupation | Income | Social environment | Infrastructure

This framework does not assume that every respondent passes through exactly the same sequence. Rather, it provides a conceptual explanation for why access, adoption and intensity of use should be studied as related but distinct dimensions.

The framework is consistent with previous rural digital-adoption research that has applied DOI to Internet, broadband and social-media adoption.

Methodology

The study adopted a quantitative, cross-sectional survey design. The target population for the study is individuals aged 18 and above who resides in rural villages of Andhra Pradesh and participants who have some level of exposure to digital media, such as mobile phones, social media and online streaming services. A multi-stage random sampling approach was used to select the sample from various demographic and geographical diversity of Andhra Pradesh. And it includes a combination of cluster sampling, stratified sampling, and simple random sampling.

In the first stage, the selection of Districts is carried by using cluster Sampling. Andhra Pradesh has 26 districts with significant rural populations. Based on geographic spread and cultural variations, three districts were randomly selected from 3 different regions of the state such as North Andhra, Coastal Andhra, Rayalaseema. This regional variance ensures that the sample represents a diverse cross-section of entire rural Andhra Pradesh.

In the second stage, the villages were selected by using cluster sampling. From each selected district, five villages were chosen through cluster sampling. Villages with varying levels of connectivity were included to capture the diverse ways of digital media content is accessed. This approach helps to observe differences in digital media influence based on accessibility. In the third stage, stratified sampling was used for stratification of demographics. In each selected village, participants are stratified by key demographic variables. In the last stage, simple random sampling method was used to

select the participants within each demographic stratum. This method enables the researcher to avoid selection bias as every individual has an equal chance of being selected.

A sample of 900 participants distributed across the selected districts and villages and ensures 300 participants per district and 60 participants per village were taken as sample for the study. Data collection was conducted through structured survey and semi-structured interviews. The survey gathered quantitative data on digital media usage patterns, while interviews provided qualitative insights into how digital media impact participants' traditional values.

DATA ANALYSIS

SECTION – 1: DEMOGRAPHIC PROFILE

The demographic profile provides an overview of the basic socio economic and personal characteristics of the respondents included in the study. It helps in understanding the composition of the sample in terms of variables such as gender, age, education, and access to digital resources. Analyzing the demographic background is essential to interpret variations in digital media usage and cultural practices. The profile offers a contextual framework for examining gender based differences and social patterns. Consequently, the study establishes a foundation for significant analysis and also interpretation of the results.

Table-1:Age of the Respondents by their Gender

Age	Gender			Total
	Male	Female	Third Gender	
18 25	225	110	3	338
	25.0%	12.2%	.3%	37.6%
26 33	99	91	5	195
	11.0%	10.1%	.6%	21.7%
34 41	72	65	7	144
	8.0%	7.2%	.8%	16.0%
40 49	42	66	1	109
	4.7%	7.3%	.1%	12.1%
50 >	56	56	2	114
	6.2%	6.2%	.2%	12.7%
Total	494	388	18	900
	54.9%	43.1%	2.0%	100.0%

The present analysis examines the association between age and gender among the 900 respondents. The distribution shows that males constitute the majority (54.9%), followed by females (43.1%), while third gender respondents form a small proportion (2.0%). This overall pattern indicates a male dominated sample, though female participation is also substantial. The age wise distribution reveals noticeable variation in gender representation across different age categories.

The majority (37.6%) of the respondents belong to age group of 18–25, where males (25.0%) clearly outnumber females (12.2%) and third gender respondents (0.3%). This indicates that young males are more prominently represented in the study. In the 26–33 age group (21.7%), male (11.0%) and female (10.1%) participation is almost equal, suggesting balanced gender involvement in early adulthood.

Similarly, in the 34–41 age group (16.0%), males (8.0%) and females (7.2%) show nearly equal representation, with a slightly higher presence of third gender respondents (0.8%).

In the 40–49 age group (12.1%), females (7.3%) exceed males (4.7%), indicating a shift towards higher female participation in this middle age category. In the 50 years and above group (12.7%), male and female representation is equal (6.2% each), while third gender participation remains minimal (0.2%). These patterns suggest that gender representation varies across age groups, with male dominance in younger ages and relatively higher female participation in middle ages.

Table-2: Occupation of the Respondents by their Gender

Occupation	Gender			Total
	Male	Female	Third Gender	
Farmer/Agricultural worker	105	68	2	175
	11.7%	7.6%	.2%	19.4%
Homemaker	25	139	3	167
	2.8%	15.4%	.3%	18.6%
Student	172	78	0	250
	19.1%	8.7%	.0%	27.8%
Shopkeeper/Business Owner	64	32	5	101
	7.1%	3.6%	.6%	11.2%
Skilled labour	24	11	3	38
	2.7%	1.2%	.3%	4.2%
Govt/Private employee	93	53	2	148
	10.3%	5.9%	.2%	16.4%
Other	11	7	3	21
	1.2%	.8%	.3%	2.3%
Total	494	388	18	900
	54.9%	43.1%	2.0%	100.0%

With regard to the occupation, it shows that students are the highest category (27.8%), indicates a well presence of youth and individuals of learning phase within the sample. Among students, males (19.1%) significantly outnumber females (8.7%), highlighting higher male participation in education related engagement. The second largest category is farmers/agricultural workers (19.4%), with males (11.7%) again dominating over females (7.6%), reflecting the traditionally male oriented nature of agricultural work.

Homemakers constitute 18.6% of the total respondents, and this category is overwhelmingly female dominated, with 15.4% females compared to only 2.8% males, which clearly reflects prevailing gender roles in domestic responsibilities. The government/private employee group (16.4%) also shows male predominance (10.3%) over females (5.9%), indicating relatively higher male participation in formal employment sectors.

The shopkeeper/business owner category (11.2%) is mainly represented by males (7.1%), with females accounting for 3.6% and third gender 0.6%, suggesting limited female and third gender involvement in

business ownership. Skilled labour (4.2%) and other occupations (2.3%) form smaller segments of the sample, with marginal representation across all genders, though third gender presence is proportionately notable in these minor categories.

Overall, the sample is composed of 54.9% males, 43.1% females, and 2.0% third gender respondents, indicating male dominance across most occupational categories except homemakers, where females are the majority. The data highlights clear gender based occupational patterns, with males concentrated in agriculture, business, and employment sectors, while females are largely engaged in homemaking, reflecting traditional socio economic roles. This occupational structure is important for understanding variations in digital media use, cultural participation, or socio economic behavior in the study.

Table-3: Education of the Respondents by their Gender

Education	Gender			Total
	Male	Female	Third Gender	
No formal education	46	65	8	119
	5.1%	7.2%	.9%	13.2%
Primary	27	36	0	63
	3.0%	4.0%	.0%	7.0%
Secondary	57	78	6	141
	6.3%	8.7%	.7%	15.7%
Higher Secondary	78	67	4	149
	8.7%	7.4%	.4%	16.6%
Graduate or Above	286	142	0	428
	31.8%	15.8%	.0%	47.6%
Total	494	388	18	900
	54.9%	43.1%	2.0%	100.0%

The educational profile of respondents indicates that nearly half of the sample (47.6%) has attained graduate level or above education, demonstrating a relatively high level of educational attainment in the study population. Within this category, males (31.8%) significantly outnumber females (15.8%), highlighting a notable gender gap in higher education access or participation. Interestingly, there is no representation of third gender respondents in the graduate and above category, pointing towards possible barriers in accessing higher education for this group.

The higher secondary education group accounts for 16.6% of the respondents, with a fairly balanced distribution between males (8.7%) and females (7.4%), and a small representation of third gender (0.4%). The secondary education category (15.7%) shows slightly higher female participation (8.7%) when compared to male respondents (6.3%), and a visible presence of third gender respondents (0.7%), suggesting improving inclusivity at the school level.

Respondents with no formal education constitute 13.2% of the sample, where females (7.2%) exceed males (5.1%), and third gender representation (0.9%) is comparatively higher than in other categories. This reflects persistent educational disadvantages among women and marginalized gender groups. The primary education group is the smallest (7.0%), with marginal differences between males (3.0%) and females (4.0%) and no third gender respondents, indicating early dropouts or progression to higher levels among those who enter schooling.

Overall, the data clearly reveals gender disparities in higher education attainment, with males more likely to reach graduate and above levels, while females and third gender respondents are more concentrated in lower and secondary education levels.

Table -4: Monthly Income of the Respondents Family by their Gender

Monthly Income	Gender			Total
	Male	Female	Third Gender	
Below 5000	65	73	2	140
	7.2%	8.1%	.2%	15.6%
5000 10000	91	84	5	180
	10.1%	9.3%	.6%	20.0%
10000 20000	116	99	6	221
	12.9%	11.0%	.7%	24.6%
Above 20000	222	132	5	359
	24.7%	14.7%	.6%	39.9%
Total	494	388	18	900
	54.9%	43.1%	2.0%	100.0%

The income level of Rs 20,000 and above group is the largest proportion (39.9%), indicating a relatively strong presence of higher income earners in the study sample. Within this group, males (24.7%) significantly outnumber females (14.7%) and third gender respondents (0.6%), reflecting higher male representation in better paying occupations and income brackets.

The rupees 10,000–20,000 income category accounts for 24.6% of the respondents and represents the second largest group. Here also, males (12.9%) slightly exceed females (11.0%), with third gender respondents (0.7%) showing visible participation. This suggests moderate income stability across both genders in this middle income segment.

The rupees 5,000–10,000 group constitutes 20.0% of the total sample, with a fairly balanced distribution between males (10.1%) and females (9.3%), while third gender respondents (0.6%) continue to show marginal representation. This indicates that a significant section of the population falls within the lower middle income range.

Respondents earning below rupees 5,000 per month form 15.6% of the sample, where females (8.1%) slightly exceed males (7.2%), suggesting greater financial vulnerability among women. Third gender respondents (0.2%) are present but in very small numbers in this lowest income category.

Overall, the income structure reveals male dominance across all income levels, especially in the higher income group, while females are more concentrated in lower and middle income brackets. These results highlight the influence of education, occupation, and societal factors are influential in income distribution and are important for interpreting patterns of digital media access, cultural participation.

SECTION – 2 :DIGITAL ACCESS AND USAGE PATTERNS

It focuses on digital access and usage patterns among the respondents. It examines the availability of digital devices, sources of internet access, and the extent of daily digital media use. This section helps in understanding how frequently and through which means individuals engage with digital platforms. It

also highlights variations in access and usage across different demographic groups. The analysis provides a basis for assessing the impact of digital media in shaping socio-cultural practices.

Table-5: Possession of Family Digital Devices Vs. Gender

Digital Devices	Gender			Total
	Male	Female	Third Gender	
Smart Phone	415	307	12	734
	46.1%	34.1%	1.3%	81.6%
Computer/ Laptop	69	61	1	131
	7.7%	6.8%	.1%	14.6%
Tablet	10	20	5	35
	1.1%	2.2%	.6%	3.9%
Total	494	388	18	900
	54.9%	43.1%	2.0%	100.0%

$\chi^2=35.046$, $df=4$, $P < 0.01$, significant at 0.05 level

The above table examines the ownership of digital devices among family members across gender categories. Overall, smart phone ownership is dominant, reported by 81.6% of respondents, indicating that smart phones are the most commonly owned digital device within households. This trend is consistent across all genders, though ownership is highest among males (46.1%), followed by females (34.1%) and third gender respondents (1.3%). Computer or laptop ownership is relatively limited (14.6%), with a small difference between males (7.7%) and females (6.8%), while tablet ownership is minimal (3.9%) and comparatively higher among females (2.2%) than males (1.1%).

The chi square test results ($\chi^2 = 35.046$, $df = 4$, $p < 0.01$) indicate a statistically significant association between gender and the type of digital device owned by family members. This suggests that patterns of device ownership vary meaningfully across gender groups rather than occurring by chance. The findings imply a gender based digital divide in access to and ownership of certain digital devices, with males showing relatively higher access to smart phones and computers, while females exhibit slightly greater representation in tablet ownership. This pattern has important implications for understanding gendered access to digital resources and participation in digital media within households.

Table-6: Primary internet access Vs. Gender

Primary internet access	Gender			Total
	Male	Female	Third Gender	
Mobile Data	392	286	10	688
	43.6%	31.8%	1.1%	76.4%
Home Wi fi	10	8	2	20
	1.1%	.9%	.2%	2.2%
Community center/	75	70	4	149
	8.3%	7.8%	.4%	16.6%

Cybercafe				
No regular access	17 1.9%	24 2.7%	2 .2%	43 4.8%
Total	494 54.9%	388 43.1%	18 2.0%	900 100.0%

$\chi^2=14.882$, $df=6$, $P < 0.02$, Significant at 0.05 level

The table presents the distribution of primary internet access across gender. Mobile data emerges as the most common source of internet access, reported by 76.4% of the respondents, indicating a strong dependence on mobile connectivity. This pattern is consistent across all genders, with higher usage among males (43.6%) compared to females (31.8%) and third gender respondents (1.1%). Access through community centers or cybercafés accounts for 16.6% of the respondents, reflecting the continued relevance of shared public access points, particularly among males (8.3%) and females (7.8%).

Home Wi Fi access is notably low at 2.2%, suggesting limited household based broadband connectivity among the study population. Moreover, 4.8% of respondents report having no regular internet access, with a slightly higher proportion among females (2.7%) than males (1.9%), indicating a modest gender gap in consistent connectivity.

The chi square test results ($\chi^2 = 14.882$, $df = 6$, $p < 0.02$) reveal a statistically significant association between gender and primary source of internet access at 0.05 (level of significance). It shows the variations in internet access patterns across gender are not due to chance. The findings highlight gender based differences in the mode of internet access, with males showing relatively greater reliance on mobile data and females exhibiting slightly higher levels of irregular or no access. These disparities have important implications for digital inclusion, access to online resources, and equitable participation in digital spaces.

Table-7: Ranks of the Social Media preferred by the Respondents

Sl.No	Variable	Mean Value	Rank
1	What's App	44.3	Rank of VAR00001
2	YouTube	27.6	Rank of VAR00002
3	Instagram	15.2	Rank of VAR00003
4	Face Book	04.6	Rank of VAR00004
5	News App	04.2	Rank of VAR00005
6	OTT	04.1	Rank of VAR00006

a. Ranks are in ascending order.

b. Mean rank of tied values is used for ties.

The ranking analysis of social media platforms reveals significant differences in usage patterns and preferences among the respondents. The ranks are assigned in ascending order based on mean values, where a lower mean indicates a higher preference.

WhatsApp secured the first rank with the highest mean value 44.3 indicating that it is the most preferred and widely used platform. This suggests that WhatsApp plays a dominant role in daily communication due to its ease of use, low cost, and accessibility. YouTube obtained the second rank with a high mean

value of 27.6 showing its strong popularity as a source of entertainment, information, and learning. The visual and audio content format makes YouTube attractive across different age groups. Instagram stands in the third position with a mean value of 15.2. This indicates moderate usage, mainly for social interaction, sharing images, and short videos, particularly among younger respondents.

Facebook is ranked fourth with a mean value of 4.6. Although Facebook was not dominant, its lower rank suggests a decline in preference, possibly due to the shift of users towards more interactive and visual platforms. News Apps secured the fifth rank with a mean value of 4.2. This reflects that while respondents are interested in news, dedicated news applications are not as frequently used as social networking platforms. OTT platforms received the sixth rank with the lowest mean value of 4.1, indicating limited preference. This may be due to factors such as subscription costs, internet availability, or lack of time.

The ranking pattern clearly shows that communication based and video based platforms (WhatsApp and YouTube) are the most preferred among respondents, while entertainment focused and information specific platforms (OTT and News Apps) are less preferred. This highlights the importance of instant communication and easily accessible content in the digital habits of the respondents.

Table-8: Average daily usage time for social media Vs. Gender

Average daily usage time	Gender			Total
	Male	Female	Third Gender	
< 1 Hour	41	65	3	109
	4.6%	7.2%	.3%	12.1%
1 3 Hours	161	121	6	288
	17.9%	13.4%	.7%	32.0%
3 5 Hours	188	139	6	333
	20.9%	15.4%	.7%	37.0%
> 5 Hours	104	63	3	170
	11.6%	7.0%	.3%	18.9%
Total	494	388	18	900
	54.9%	43.1%	2.0%	100.0%

$\chi^2=16.355$, $df=6$, $P < 0.01$, Significant at 0.05 level

The above table illustrates that average daily time spent on social media across gender categories. Overall, the majority of respondents (37.0%) spend between 3 to 5 hours per day on social media, followed by 32.0% who use it for 1 to 3 hours daily. This indicates that moderate to high engagement with social media is common among the respondents. A smaller proportion (12.1%) report usage of less than one hour per day, while 18.9% spend more than five hours daily, reflecting a segment of heavy users.

Gender wise analysis shows that male respondents spent higher time on social media compared to female respondents. A higher proportion of males fall in the 3–5 hours (20.9%) and more than 5 hours (11.6%) categories than females (15.4% and 7.0% respectively). In distinction, females are more represented in the lower usage category of less than one hour per day (7.2%) compared to males (4.6%).

Third gender respondents constitute a small proportion across all usage categories but show participation in both moderate and high usage levels.

The chi square test results ($\chi^2 = 16.355$, $df = 6$, $p < 0.01$) indicate a statistically significant association between gender and average daily social media usage time at the 0.05 level of significance. This suggests that social media usage intensity varies by gender and that these differences are not casual. The findings highlight gender based patterns in social media engagement, with males exhibiting relatively higher usage intensity, which may have implications for exposure to digital content, online interactions, and the social impacts of prolonged social media use.

Table-9: Main purpose for using Digital Media

Sl.No	Statement	Yes	No	Total N=900
1	Social Communication	68.6	31.4	100.0
2	Entertainment	66.6	33.4	100.0
3	News/Information	61.7	38.3	100.0
4	Education/Learning New Skills	53.1	46.9	100.0
5	Business	35.7	64.3	100.0
6	Religious/Spiritual Content	35.7	64.3	100.0
7	Government Schemes	36.4	63.6	100.0
An Average Total Percentage		51.1	48.9	100.0

The data on the main purpose for using digital media reveals that a majority of respondents use digital platforms primarily for Social Communication (68.6%) and Entertainment (66.6%), indicating that interpersonal connection and leisure are the dominant motivations. This is followed by News/Information (61.7%), showing that a substantial proportion of users rely on digital media for staying informed. More than half of the respondents (53.1%) also use digital media for Education and Learning New Skills, reflecting the growing importance of online platforms for knowledge acquisition and skill development.

In compare, comparatively fewer respondents use digital media for Business (35.7%), Religious/Spiritual Content (35.7%), and Government Schemes (36.4%), with a majority indicating “No” for these purposes. This suggests that while digital media is widely accepted for communication, entertainment, and information, its utilization for economic, spiritual, and governmental purposes is still limited. The average total percentage shows that 51.1% of respondents utilize digital media for diverse purposes, while 48.9% are not using for multiple purpose, indicating a moderate overall engagement level across different functional areas.

ANOVA's Table

Table-10: Main purpose for using Digital Media Vs Gender

Ho: There is no significant difference among gender groups in the main purpose of using digital media.

Purpose of using digital media	Gender	N	Mean	Std. Deviation	F Value	P Value
Social Communication	Male	494	1.2895	.45398	2.020	.133

	Female	388	1.3402	.47439		
	Third Gender	18	1.4444	.51131		
	Total	900	1.3144	.46455		
Entertainment	Male	494	1.3198	.46689	1.449	.235
	Female	388	1.3454	.47610		
	Third Gender	18	1.5000	.51450		
	Total	900	1.3344	.47206		
News/Information	Male	494	1.3482	.47688	5.211	.006
	Female	388	1.4149	.49335		
	Third Gender	18	1.6667	.48507		
	Total	900	1.3833	.48647		
Education/Learning New Skills	Male	494	1.4332	.49602	4.497	.011
	Female	388	1.5026	.50064		
	Third Gender	18	1.7222	.46089		
	Total	900	1.4689	.49931		
Business	Male	494	1.6093	.48840	3.129	.044
	Female	388	1.6804	.46692		
	Third Gender	18	1.7778	.42779		
	Total	900	1.6433	.47928		
Religious/Spiritual Content	Male	494	1.6296	.48341	1.020	.361
	Female	388	1.6546	.47610		
	Third Gender	18	1.7778	.42779		
	Total	900	1.6433	.47928		
Government Schemes	Male	494	1.6032	.48972	2.908	.055
	Female	388	1.6701	.47078		
	Third Gender	18	1.7778	.42779		
	Total	900	1.6356	.48154		

The Analysis of Variance (ANOVA) test was conducted to examine the significant difference among gender groups (Male, Female, and Third Gender) regarding the main purposes for using digital media, namely social communication, entertainment, news/information, education/learning new skills, business, religious/spiritual content, and government schemes. The results reveal that gender has a varying influence on different purposes of digital media usage.

With respect to social communication, the ANOVA result shows no statistically significant difference among gender groups ($F = 2.020$, $p = .133$). Although the mean scores indicate a slightly higher usage among third gender respondents (Mean = 1.4444) compared to females (Mean = 1.3402) and males (Mean = 1.2895), the difference is not statistically significant. This suggests that social communication is a common purpose of digital media usage across all genders. Hence, the null hypothesis was accepted which means the alternative hypothesis was rejected.

Similarly, in the case of entertainment, no significant difference is observed among gender groups ($F = 1.449$, $p = .235$). The mean values show marginal variations, with third gender respondents (Mean = 1.5000) reporting slightly higher usage than females (Mean = 1.3454) and males (Mean = 1.3198).

However, these differences are not statistically meaningful, indicating that entertainment is equally important for all gender categories. Hence, the null hypothesis has been accepted and the alternative hypothesis was rejected.

In contrast, a statistically significant difference is found in the use of digital media for news and information purposes ($F = 5.211$, $p = .006$). The highest mean score is recorded among third gender respondents (Mean = 1.6667), followed by females (Mean = 1.4149) and males (Mean = 1.3482). This indicates that third gender respondents accessing news and information through digital media when compared to male and female respondents. Hence, it says the null hypothesis was rejected and also says the alternative hypothesis was accepted.

Regarding education and learning new skills, the ANOVA test results indicate a considerable difference among gender groups ($F = 4.497$, $p = .011$). Third gender respondents again show the highest mean (Mean = 1.7222), followed by females (Mean = 1.5026) and males (Mean = 1.4332). This suggests that digital media plays a more prominent role in educational and skill development activities among third gender respondents. Hence, it indicates the alternative hypothesis was accepted in this case.

With regard to business purposes, a statistically significant difference is observed across gender categories ($F = 3.129$, $p = .044$). The mean scores reveal that third gender respondents (Mean = 1.7778) use digital media more for business related activities than females (Mean = 1.6804) and males (Mean = 1.6093). This highlights the growing importance of digital platforms for economic activities among gender diverse populations. Hence, null hypothesis was rejected and at the same time alternative hypothesis was accepted.

However, with regard to religious/spiritual content, no significant difference is found among gender groups ($F = 1.020$, $p = .361$). Although third gender respondents show a slightly higher mean (Mean = 1.7778) compared to females (Mean = 1.6546) and males (Mean = 1.6296), the variation is not statistically significant. This indicates that religious and spiritual engagement through digital media is relatively similar across genders. Thus null hypothesis was accepted and meanwhile alternative hypothesis was rejected.

Finally, in relation to government schemes, the ANOVA result shows a marginal but not statistically significant difference among gender groups ($F = 2.908$, $p = .055$). The mean scores suggest that third gender respondents (Mean = 1.7778) and females (Mean = 1.6701) use digital media slightly more than males (Mean = 1.6032) for accessing information on government schemes. However, the p value is > 0.05 , there is no statistically significant difference. In this case, null hypothesis was rejected but alternative hypothesis was accepted.

Overall, the ANOVA analysis reveals that gender significantly influences the use of digital media for news/information, education/learning new skills, and business purposes, while no significant gender differences are observed in social communication, entertainment, religious/spiritual content, and government schemes. This indicates that gender plays a selective role in shaping digital media usage patterns, particularly in informational, educational, and economic domains.

MAJOR FINDINGS

This chapter presents a comprehensive analytical amalgamation of the major findings derived from the empirical investigation. The findings are based on data collected from 900 respondents and analyzed using percentage distribution, chi-square tests, ANOVA, correlation, and regression techniques. The discussion integrates quantitative results with interpretative analysis, emphasizing percentage linkage

and statistical significance to provide conceptual clarity and empirical rigor. The chapter is organized according to the objectives of the study and concludes with broader theoretical and policy implications. The findings clearly demonstrate that digital media has become an inseparable part of everyday life and social interaction. The major findings of the study are discussed below in detail.

Demographic Profile and Structural Context

The demographic structure of the respondents provides the foundational framework for interpreting digital and cultural patterns. Out of 900 respondents, 54.9 per cent were male, 43.1 per cent female, and 2 per cent identified as third gender. This distribution indicates moderate gender representation sample. The relatively smaller proportion of third gender respondents (2 per cent) reflects broader societal representation patterns but remains significant for inclusivity analysis.

Age wise distribution reveals that 37.6 per cent of respondents belonged to the 18–25 age group, followed by 21.7 per cent in the 26–33 category. Combined, nearly 59.3 per cent of respondents fall below 33 years of age, indicating that digital engagement is predominantly youth centered. In contrast, only 12.7 per cent of respondents were aged 50 and above, suggesting lower participation among older group. This age concentration strongly correlates with digital usage intensity, as younger groups demonstrate higher adaptability to technological platforms.

Educational analysis shows that 47.6 per cent of respondents attained graduate level education or above, indicating relatively high educational attainment. However, within this category, males (31.8 per cent) significantly outnumbered females (15.8 per cent), reflecting gender disparity in higher education. Notably, third gender respondents had no representation in the graduate and above category, highlighting systemic barriers to advanced education. Moreover, 13.2 per cent of respondents reported no formal education, with females (7.2 per cent) exceeding males (5.1 per cent), reinforcing the structural gender gap.

Occupational patterns further reveal traditional gender segmentation. Students constituted 27.8 per cent of the total sample, followed by farmers (19.4 per cent) and homemakers (18.6 per cent). Homemaking was overwhelmingly female dominated (15.4 per cent), whereas agricultural work and business activities were male dominated (11.7 per cent and 7.1 per cent respectively). Income distribution reveals that 39.9 per cent of respondents belonged to the highest income group (above Rs. 20,000), yet males accounted for 24.7 per cent compared to females at 14.7 per cent. On the other hand, in the lowest income category (below Rs. 5,000), females (8.1 per cent) slightly exceeded males (7.2 per cent), indicating financial vulnerability among women.

Collectively, the demographic findings demonstrate that digital engagement is shaped by gendered educational, occupational, and income structures, which influence access and participation patterns.

Digital Access and Usage Patterns

Digital device ownership analysis indicates that smart phones dominate household digital infrastructure, with 81.6 per cent of respondents reporting ownership. This far exceeds ownership of computers/laptops (14.6 per cent) and tablets (3.9 per cent). The chi-square value ($\chi^2 = 35.046$, $p < 0.01$) confirms a statistically significant association between gender and device ownership, suggesting differential access patterns. Males (46.1 per cent) reported higher Smartphone ownership than females (34.1 per cent), reflecting slight gender based access gaps.

Regarding internet connectivity, 76.4 per cent of respondents rely on mobile data, while only 2.2 per cent use home Wi-Fi. Community centers account for 16.6 per cent of access, indicating that shared

digital spaces still play a role in connectivity. The significant association between gender and internet access ($\chi^2 = 14.882$, $p < 0.02$) underscores variations in connectivity structures.

In terms of social media preference, WhatsApp emerged as the most preferred platform, followed by YouTube and Instagram. The high ranking of WhatsApp (mean = 44.3) indicates its dominance as a communication tool, while YouTube (mean = 27.6) reflects its dual function as entertainment and informational medium. OTT platforms ranked lowest (mean = 4.1), suggesting that subscription based platforms have limited penetration.

Daily usage analysis reveals that 37 per cent of respondents spend between 3–5 hours on social media, while 18.9 per cent exceed 5 hours daily, indicating high engagement levels. Gender-wise, males show higher intensity usage (20.9 per cent in 3–5 hour category) compared to females (15.4 per cent). The chi-square test confirms significant association ($\chi^2 = 16.355$, $p < 0.01$), reinforcing gender differences in usage intensity.

The primary purposes of digital media usage further illuminate behavioral patterns. Social communication accounts for 68.6 per cent, entertainment 66.6 per cent, news 61.7 per cent and education 53.1 per cent. Business usage (35.7 per cent) and religious content (35.7 per cent) remain comparatively lower. ANOVA results indicate statistically significant gender differences in news ($p = .006$), education ($p = .011$), and business usage ($p = .044$), suggesting that informational and economic engagement differs across genders.

Overall, digital media is deeply embedded in everyday life, primarily as a communication and entertainment tool, with emerging educational and economic functions.

CONCLUSION

The findings reveal that digital media engagement is shaped by demographic, educational, occupational and economic inequalities. Among the respondents, younger individuals constituted the majority, indicating a youth-centered pattern of digital participation. Smartphones emerged as the dominant access device, while mobile data remained the primary means of internet connectivity. WhatsApp, YouTube and Instagram were prominent platforms, reflecting the integration of digital media into everyday communication, entertainment and information-seeking practices. Although digital media supported educational, news-related and business activities, social communication and entertainment remained the principal purposes of use. Statistically significant gender differences in device ownership, internet access, usage intensity and selected media activities highlight persistent disparities in digital participation. Gender-inequalities in education, employment and income further influence opportunities for meaningful engagement. Overall, the findings emphasize the need for inclusive digital literacy initiatives, equitable access and targeted interventions to bridge gender and socioeconomic divides and promote more equitable digital participation.

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