



Influence of Social Media on Public Opinion and Decision Making in Varendra Region: Analyzing Netizen's Behavioral Patterns

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ABSTRACT

Social media has become a dominant space for public discussions, which influence public opinion formation and decision-making processes worldwide. Our study examines the influence of social media in shaping public opinion formation and decision-making in Varendra Region of Bangladesh, an area previously unexplored. Combining a mixed method approach, including surveys and open-ended question, the sample size of the study was 1053. It identifies key behavioral patterns from the netizens. Findings reveal that 67% of the respondents use social media on a regular basis, with 73% acknowledging the influence it has on their perspectives, especially regarding political and social issues. Facebook emerged as the most popular social media platform, while video content is the most preferred format. Influencers (68%) and peer networks (57%) significantly influence opinion formation, while 43% of users showed concerns about misinformation. Our study also explores echo chambers, with 62% of users was exposed to content that aligns with their pre-existing beliefs, reinforcing ideological polarization. In decision-making, social media has a key role in career choice and consumer behavior, with influencer endorsements (72%) and peer suggestions (61%) were the major drivers. Urban users showed higher engagement with news and politics (67%) and stronger media literacy (46%), at the same time rural users rely more on peer recommendations (71%). Mostly they consume content for entertainment (58%). Despite its potential to amplify marginalized voices, social media also presents risks such as misinformation, algorithmic bias, and polarization. The study recommends enhancing media literacy, promoting algorithmic transparency, and developing region-specific interventions to create an informed digital public sphere.

Keywords: Social media; Public opinion; Decision-making; Media literacy; Misinformation; Echo chambers; Algorithmic bias

Introduction

Social media has become part and parcel of our daily life, approximately 4.8 billion users, contributing to 59.4% of the global population, engaging spontaneously on platforms like Facebook, X (formerly known as twitter), WhatsApp, Instagram etc. On average, users spend 151 minutes on social media per day. Which

reveals its pervasive influence on daily routines and global communication (Statista, 2023). Historically, discussions and public debates were confined to physical places like tea stalls and salons. At the present time, social media has successfully turned into a digital ‘public sphere’; a space where opinion from public is formed, and anyone can access that discussion (Habermas et al., 1974).

This transformation has redefined the interaction process of individuals, sharing patterns of spreading information, and forming opinions, making social media a powerful tool for changing the collective perspectives.

The influence of social media on public opinion and decision-making is quite vast, especially in encouraging behavioral changes. Social media platforms are specifically designed to encourage behavior change as day progresses. No matter it is through targeted advertisements or influencer endorsements or even viral campaigns (Adewuyi, 2016). These platforms encourage social interaction as well as networking, which enables the users to build good public image and influence others. As a result, cultural, political, ideological and societal convictions are increasingly influenced by digital interactions (Braun, 2012). However, this influence also got its challenges. Social media algorithm often generate ‘filter bubbles’; a personalized information universe where individuals are exposed to content that aligns with their interests and preferences (Gottron & Schwagereit, 2016). This selective exposure can reinforce existing beliefs, limit exposure to different perspectives, thus contributing to societal polarization.

In this context, media literacy has emerged as a critical skill for countering the digital landscape. Media literacy refers to the ability to critically interpret and analyze information that are conveyed through different channels of mass communication, including photography, print, film, television, radio and interactive media (Silverblatt, 1995). As social media has become the primary source for information, the urgency of media literacy is stupendous. Without it, users are vulnerable to misinformation, manipulation and the unintended consequences of algorithmic filtering. This is particularly very much evident in the context of formation of public opinion and decision-making, where social media’s impact can drive to both positive and negative outcomes (Power & Phillips-Wren, 2011).

Our study seeks to explore the influence of social media in driving to formation and shaping of public opinion as well as decision-making. It specifically focuses on the Varendra Region of Bangladesh. While global studies have examined the influence of social media on opinion polarization, misinformation and behavioral change, there is a significant lack of studies that revolves region specific exploration in Bangladesh. Our research aims to fill this gap by investigating how social media algorithms, influencers and peer networks influence public opinion and decision making in this unique socio-cultural context. Through this, it will also contribute to a deeper level understanding of the dynamics that work within the social media influence in developing regions and provide hints for policymakers, platform developers and educators.

Literature Review

The Evolution of Media and the Rise of Social Media

The last three decades have faced a huge change in media technologies, driving to the increase of numbers of media outlets and the emergence of a diverse media landscape (Bennett & Iyengar, 2008; Prior, 2007). Particularly, social media has become the heart of today’s hybrid media system, blending both old and new media to create a new form of communication and interaction (Chadwick, 2013). This transformation has resulted in individualization of the information environment, as users generally construct personalized online social networks which controls their exposure to specific contents e.g. news and information (Rainie & Wellman, 2011). Kushner (2016) highlights the persistence of “lurking” behavior among the users of Web 2.0 environments, where users passively consume content without any active spontaneous participation, which complicates the dynamics of opinion formation of public.

Though, this individualization of media consumption has also led to selective exposure, where users are more prone to encounter those type of information that aligns with their pre-existing beliefs. This phenomenon can polarize opinions and create echo chambers, which contribute to the exclusion of diverse perspectives (Lee, 2016). For instance, a 2020 study indicates the role of social media in shaping public opinion during political conflicts, which contributes to the need for politicians and policymakers to utilize and use these platforms tactically (Mohammed & Inusa, 2020). Braun (2012) further argues that social media amplifies public opinion formation by opening a platform for the marginalized voices, however, this amplification is mostly uneven and influenced by algorithmic biases.

Social Media, Netizens and the Post-Truth Era

Social media has ushered in a post-truth era, where objective facts are often gets dominated by personal beliefs and emotions. The term 'netizens' refers to individuals who actively engage in online activities, thereby contributing to the virtual communities and digital ecosystems that have emerged in the wake of the internet's pervasive influence. Netizen has a denotation as well as a connotation meaning. A netizen is someone who utilizes the internet to make precise value judgments regarding social practices to an expected audience. Netizen refers to anyone who uses a computer and posts a message on the World Wide Web with no specific target in mind (Lanigan, 2016). Platforms provide users with a space for own expression, but they also submerge truth in a vast sea of information, making it too tough to distinguish fact from fiction (Li, 2023). Although public opinion has its specific purpose, social media gave a revolutionary depth to it. New communication patterns has emerged and it's making its way to influence the people by social media e.g. Facebook, Twitter, YouTube (McGregor, 2019). It is the opinion leaders; individuals who influence their peers on matters of news and politics have traditionally played a major role in forming public opinion, their influence has been questioned in this age of social media (Weeks et al., 2015).

A 2022 study proposed a creative way to encourage public opinion formation, providing importance on the urgency for inclusive consensus-building processes to overcome the polarization effect (Yang et al., 2022). Meanwhile, Su (2022) argues that the post truth era is basically characterized by the erosion of trust in old media which is also known as traditional media, with social media platforms becoming the primary sources of information, although risks of misinformation spreading is a reality.

The Dual Impact of Social Media on Decision-Making

Social media's influence on decision making is a bit complicated process, with both negative and positive outcomes. Alongside, it provides access to different ideas, perspectives and real-time information that help the users to take more in depth and informed decisions. Besides, the rapid dissemination of misinformation can lead to irrational choices and distort perceptions (Power & Phillips-Wren, 2011). For example, multiple studies have shown that misinformation on social media can contribute to affecting political attitudes and consumer behaviors (Guess et al., 2019; Vosoughi et al., 2018)

Media Literacy and Countering Misinformation

Media literacy has shown its potential as a critical tool for combating misinformation and promoting critical engagement with digital content. Research shows that media literacy programs and fact-checking initiatives have been well proven to mitigate the effects of misinformation, however, their long-term proficiency is questionable (Lewandowsky et al., 2020). Zou'bi (2021) further argues the importance of media literacy in promoting critical thinking skills, especially among students, who are often the most active users of social media. Adding to that, the credibility of media literacy varies across diversified contexts, where it is seen that different countries experiencing different levels of digital literacy and media access. For example, urban populations may have higher media literacy while rural areas more often relies on peer networks for information. Which is why the need for context-specific interventions are required.

Research Gaps and Contextual Relevance

However, there are significant gaps remaining in the literature. The impact of social media on opinion polarization and public opinion has been extensively studied within the western context, while there is a

lack of research on these phenomena in the developing regions like Bangladesh. More specifically, the Varendra Region, which is both culturally and politically a significant area in Bangladesh. Not enough studies have been adequately conducted here. This region has a unique socio-cultural dynamic, as well as diversified digital literacy which needs to be explored. Adding to that, while global studies have examined the role of algorithms in shaping social media content, there is limited amount of research on the ethical implications and the impact on user behavior in developing countries (Gillespie, 2018). The effectiveness of interventions aimed toward countering misinformation and encouraging media literacy still remains less studied under these contexts. Answering these gaps is necessary for developing evidence-based policies and interventions that can bring out the positive outcome of social media while mitigating the negative effects.

Research Questions

1. How do social media algorithms influence public opinion formation in the Varendra Region?
2. What role do influencers and peer networks play in shaping decision-making across different domains (e.g., political engagement, consumer behavior, and social activism) in the Varendra Region?
3. How does media literacy vary across urban and rural populations in the Varendra Region?

Methodology

The study uses a mixed-method approach to find both quantitative and qualitative data to analyze the influence of social media on public opinion and decision-making by determining netizen's behavioral patterns. The quantitative part of the data focused on identifying trends among social media users and its impact on opinions, while the qualitative data provided in depth information into user's decision-making process, ideas and perception shaped by digital interactions.

For the quantitative part, a detailed structured survey with close ended questions as well as few targeted open ended were included for the qualitative part. The survey targeted a sample size of 353 respondents, selected from different districts across the Varendra region which is basically from Rajshahi and Rangpur division's districts. The districts were chosen on purposive sampling. The districts included Rajshahi, Naogaon, Bogura, Pabna, Rangpur. Respondents were chosen using random sampling to ensure a diversified representation across different age groups, educational backgrounds and occupations. The survey gathers ample amount of information on respondent's frequency of social media use, social media preferences, the type of content they engaged with, their trust in online information and the extent to which social media shaped their opinions and decision-making in areas such as politics, consumer behavior and social contexts. To analyze behavioral patterns, two different themes were chosen. One explained the influence on Public Opinion, another explained the decision taking patterns. To analyze the gathered data, correlation, and logistic regression analysis were performed. The findings highlighted clear behavioral patterns among the respondents.

Results

Patterns of Social Media Usage

A majority (67%) of participants admitted that they are actively engaged with social media daily. Only about 22% participants indicated that they use social media occasionally, at the same time, only 11% admitted that they rarely or never engage with social media intentionally or voluntarily.

When it comes to duration of social media usage, 78% of participants stated that they spend more than an hour per day on social media platforms, while 43% spending between 1 to 3 hours and 35% spending more than 3 hours. Additionally, only 22% of the participants engage with social media less than an hour daily. These findings indicate that most individuals are mostly moderate to heavy users of social media. Facebook emerged as the most popular platform, used by 67% of participants, followed by Instagram (21%) and Twitter (10%). Preference for these platforms was attributed to accessibility, user-friendly interfaces, and

community dynamics. A significant proportion of participants (58%) engaged most frequently with video content, while 32% favored text-based posts, indicating a preference for visually engaging and concise formats (Table 1).

Table 1. Frequency Distribution of Social Media Usage Pattern

Variable	Dimensions	Percentage (%)
Frequency of social media Use	Engage daily	67
	Occasionally engage	22
	Rarely or never engage	11
Time Spent on social media	Less than 1 hour	22
	1 to 3 hours	43
	More than 3 hours	35
Preferred social media platform	Facebook	67
	Instagram	21
	X formerly known as Twitter	10
Preferred content of social media	Video content (YouTube, Facebook reels)	58
	Text-based posts	32

Correlation among Education Level, Age, and Social Media Engagement

A moderate positive correlation ($r = 0.512$) was observed between the level of education and the frequency of social media engagement. This suggests that individuals with higher levels of education are more likely to use social media actively (Table 2).

On the other hand, there was a small negative correlation ($r = -0.267$) between age and social media engagement. This indicates that younger individuals tend to be more engaged with social media compared to older individuals, who use it less frequently (Table 2).

Table 2. Correlation among Education Level, Age, and Social Media Engagement

Relationship	Independent Variable	Dependent Variable	Correlation Coefficient (r)	Direction	Strength
Education level and social media use	Level of Education	Frequency of Social Media Use	0.512	Positive	Moderate
Age and social media use	Age	Frequency of Social Media Use	-0.267	Negative	Weak

Reasons and Patterns of Social Media Influence on Public Opinion

Most of respondents acknowledged the substantial impact of social media on shaping perspectives related to political and social issues. This influence is primarily attributed to opinions expressed by influencers, peers and prominent online communities. Social media functions as a public sphere, shaping public opinion by amplifying voices and facilitating discourse across diverse audiences. A significant 73% of survey respondents acknowledged the substantial impact of social media on shaping perspectives regarding political and social issues. This influence stems from opinions expressed by influencers, peers, and prominent online communities.

Our survey finds notion of influencers being able to shift public opinion of netizens by 68%, while peers (Friends and family) contributing to 57% influence. Furthermore, online communities contributing to 49% influence in the Varendra region (Table 3).

One participant noted:

"I use social media to see different opinions on political issues before forming my own stance."

Table 3. Sources of Influence on Social Media

Source of Influence	Percentage (%)
Influencers	68
Peers (friends/family)	57
Online communities	49

Reasons and Patterns of Social Media Influence on Decision Making

Many respondents admitted that social media plays a major role in their decision-making, especially when it comes to buying products, choosing a career path, or shaping their lifestyle. They pointed out that recommendations from influencers, conversations with friends and family, and personalized content suggested by algorithms often influence their choices. Social media has become a space where people explore options, read reviews, and see what others are saying before making up their minds.

Social media's role in decision-making was particularly evident in consumer choices. Approximately 53% of respondents stated that they rely on social media reviews and discussions before making purchases, while 39% reported that they use social media to assess job opportunities and career decisions. This indicates that beyond news consumption, social media plays a crucial role in shaping economic and professional choices among users. Notably, 76% of survey respondents reported that social media played a crucial role in their decision-making process. The most influential factors included influencer endorsements, peer recommendations, and targeted advertisements.

The primary reason cited for using social media in decision-making was the ability to access real-time feedback and user-generated content. Furthermore, 25% mentioned that they engage in discussions and polls to gather diverse opinions, while 12% reported using social media primarily for exploring new trends and inspirations (Table 4).

One participant emphasized:

"Before making any major purchase, I check social media reviews and influencer recommendations to ensure I make the right choice."

Table 4. Sources of Influence on Social Media for Decision Making

Source of Influence	Percentage (%)
Influencers	72
Peers (friends/family)	61
Online reviews/testimonials	53
Targeted advertisements	47
Career Choices	39
Social media discussion and polls	25
New trends and inspirations	12

Misinformation Concerns over the Time

The study found a gradual increase in netizen's understanding of misinformation over six weeks. The data stipulates a slow rise in public awareness regarding misinformation that are continuously circulating over social media platforms.

Data reveals a comprehensive finding regarding this aspect. In the first week 20% of netizens in Varendra region recognized the definitive patterns of misinformation. By the second week this figure shifts to 25%, suggesting an early but noticeable shift in awareness. This trend continues further as for the third week, the

figure shifts to 30%, indicating a growing concern among the online community. By the fourth week, 34% of netizens in Varendra region expressed awareness, showing a more pronounced engagement with the issue. However, it is the fifth week that shows a sharp increase in public consciousness. It is by the sixth week, 43% of netizens acknowledged misinformation, marking a cumulative increase of 23% over the six-week timespan (Figure 1).

This steady upward trend suggests that exposure to misinformation, discussions around it and possible interventions. Such as fact-checking or increased media literacy may have contributed to the growing awareness among netizens in the Varendra region.

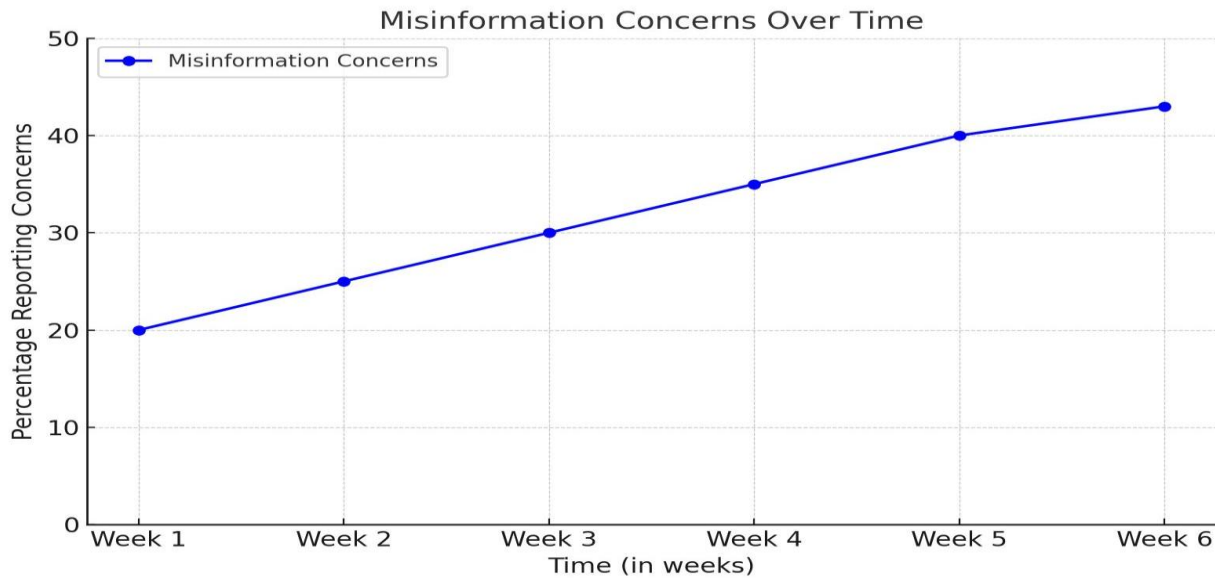


Figure 1. Line Graph of Misinformation Concerns over Time

Opportunities and Ethical Concerns

Among the respondents 65% acknowledged the democratizing potential of social media, especially in amplifying marginalized voices. However, 48% highlighted risks from misinformation campaigns, sponsored content and biased algorithms (Table 5).

Table 5. Opportunities and Risks of Social Media

Aspect	Percentage (%)
Amplifying marginalized voices	65
Risks from misinformation	48
Algorithmic biases	43

Social media plays a complex role in shaping public opinion, it can bring people together for meaningful discussions, but it can also deepen divisions. Many respondents shared that they turn to social media to stay informed about political and social issues, but they also worry about how easily misinformation spreads and how algorithms tend to reinforce existing beliefs rather than challenge them.

One participant put it simply:

"Social media helps me see different perspectives, but I also notice that my feed mostly shows content I already agree with. It makes me wonder if I'm really getting the full picture."

Despite these challenges, social media is not inherently harmful. Many respondents highlighted its power in amplifying the voices of marginalized communities and sparking grassroots movements. In times of crisis or injustice, it has become a vital tool for raising awareness, gathering support, and even pressuring authorities to take action.

As another respondent shared,

"I've seen social media make a real difference. When there's an issue that mainstream news ignores, people come together online to spread awareness and demand change."

At the same time, ethical concerns loom large. Many participants expressed frustration with misinformation campaigns, hidden agendas in sponsored content, and the way algorithms shape what people see. These practices raise questions about whether opinions formed on social media are truly independent or subtly influenced by external forces.

One respondent noted,

"Sometimes I wonder-am I forming my own opinions, or are they being shaped by what the algorithm keeps feeding me?"

While social media has undeniable power, ensuring that it fosters open, informed, and balanced discussions remains a challenge. Addressing issues like algorithmic bias and misinformation is crucial to making it a space where diverse voices can truly be heard.

4.7 Echo Chambers and Selective Exposure

One of the key concerns regarding social media's influence on public opinion is the formation of echo chambers, where individuals are primarily exposed to content that aligns with their existing beliefs. This phenomenon can limit exposure to diverse viewpoints, reinforcing biases and shaping polarized discussions. In the survey, 62% of respondents acknowledged that they mostly see content they already agree with, while 41% reported that they rarely come across opinions that challenge their perspectives.

Table 6. Echo Chamber Effect and Selective Exposure

Variable	Independent Variable	Dependent Variable	Regression Coefficient (β)	Significance (p)
Social Media Engagement	Time Spent on Social Media	Exposure to Opposing Viewpoints	-0.38	< 0.05
Algorithmic Filtering	Algorithm-Personalized Feeds	Diversity of Content	-0.47	< 0.01

Regression analysis was conducted to examine the relationship between engagement with social media and the likelihood of encountering opposing viewpoints. The results indicated a significant negative correlation ($\beta = -0.38, p < 0.05$) between the frequency of social media use and exposure to diverse perspectives, meaning that individuals who spend more time on social media are less likely to engage with viewpoints that differ from their own.

Further, algorithmic personalization played a significant role in shaping user exposure. A stronger negative correlation ($\beta = -0.47, p < 0.01$) was found between algorithm-driven content suggestions and diversity of content exposure, reinforcing the idea that social media platforms predominantly show content aligned with user's preferences (Table 6).

One participant reflected on this by stating:

"Most of my social media feed consists of people and pages that share my views. It rarely challenges me to think differently."

Media Literacy and Critical Consumption of Content

The ability to critically assess information on social media termed ‘Media Literacy’ is a crucial factor in determining whether individuals accept or question the content they consume. The findings revealed that only 38% of respondents actively fact-check news and information before believing or sharing it, while 52% admitted to occasionally questioning sources and 10% rarely or never verify the credibility of content. A progressive regression model was used to analyze the impact of education level and social media engagement on media literacy. The results indicated that higher levels of education were associated with increased fact-checking behavior ($\beta = 0.42, p < 0.05$). However, more frequent social media usage was negatively correlated with media literacy, suggesting that prolonged exposure does not necessarily lead to more critical engagement (Table 7).

Table 7. Factors Influencing Media Literacy

Variable	Independent Variable	Dependent Variable	Regression Coefficient (β)	Significance (p)
Education Level	Years of Formal Education	Fact-Checking Behavior	0.42	< 0.05
Social Media Engagement	Time Spent on Social Media	Fact-Checking Behavior	-0.29	< 0.05
Algorithmic Filtering	Algorithm-Personalized Feeds	Perceived News Accuracy	0.35	< 0.01

These findings indicate that while education encourages media literacy, the nature of social media consumption particularly algorithmic filtering contributes to the spread of unchecked information. One participant noted:

"I rarely verify news from social media because it's usually from sources I trust, but I've realized that trust doesn't always mean accuracy."

Rural vs. Urban Differences in Social Media Influence

To understand how social media influence varies across rural and urban populations, we examined differences in platform usage, content engagement, and trust in social media as an information source. Urban respondents were more likely to engage with news and political content (67%) compared to rural respondents (58%), who primarily used social media for entertainment and social networking.

While urban users exhibited higher media literacy, with 46% actively fact-checking information, compared to only 29% in rural areas. Rural respondents were also more likely to rely on peer recommendations (71%) rather than institutional news sources (29%) when forming opinions (Table 8).

Table 8. Rural vs. Urban Social Media Influence

Variable	Rural (%)	Urban (%)	Key Observations
Primary Use for Social Media	Entertainment (58)	News & Politics (67)	Urban users engage more with news
Fact-Checking Behavior	29	46	Urban users have higher media literacy
Trust in Peer Recommendations	71	25	Rural users rely more on peers than institutions
Trust in Institutional News	29	75	Urban users rely more on Institutional News
Platform Usage	Facebook (74), YouTube (51)	Facebook (65), YouTube (38), Instagram (21)	Twitter is more popular in urban areas

These findings suggest that social media's role in shaping public opinion varies significantly based on geographical location, with urban populations more critically engaging with content, while rural populations demonstrate higher reliance on peer networks for information.

A rural respondent shared:

"I mostly trust news shared by friends and family. If they post it, I believe it's true."

District-Based Variations in Social Media Influence in the Varendra Region

To assess regional variations in the influence of social media on public opinion, an analysis was conducted on respondent's behaviors across different districts within the Varendra Region, covering areas from the Rajshahi and Rangpur divisions. The findings indicate notable differences in levels of trust in social media, engagement with political content, and reliance on influencers. These variations emphasize the role of socio-cultural and geographical factors in shaping social media usage patterns.

To visualize these variations, a heat map was generated to highlight the intensity of political engagement, influencer trust, and peer influence across the districts. The color gradient, ranging from light to dark, represents low to high levels of engagement, trust, or influence.

In terms of political engagement, Rajshahi exhibited the highest level of engagement with political discourse (69%), followed by Bogura (51%). Conversely, Rangpur (37%) and Naogaon (41%) demonstrated lower engagement with political content, favoring religious and cultural discussions instead. Trust in influencers was found to be most prominent in Bogura (61%), suggesting a significant role of endorsement-based persuasion in the district. Rajshahi (47%) and Pabna (53%) also showed considerable levels of trust in influencers, while Rangpur (50%) and Naogaon (46%) reported comparatively lower trust. Regarding peer influence, Pabna recorded the highest reliance on peer recommendations (57%), followed by Naogaon (51%) and Bogura (50%). This pattern indicates the critical role of peer networks in opinion formation and decision-making in these districts. In contrast, Rajshahi (41%) and Rangpur (36%) showed lower levels of peer influence (Figure 2).

In Rajshahi, a respondent emphasized that social media serves as the primary source of political news, aligning with the high political engagement (69%) observed in the district. This trend may be attributed to the urban nature of Rajshahi and its relatively higher level of digital literacy. In Bogura, the high trust in influencers (61%) can be linked to the district's commercial and cultural dynamism, where influencers play a pivotal role in shaping consumer behavior and public opinion. A respondent from Bogura remarked that influencers significantly impact decisions regarding product purchases and event participation.

The strong reliance on peer recommendations in Pabna (57%) reflects the district's close-knit community dynamics. A participant noted that friends and family serve as the most trusted sources for decision-making, encompassing both political and personal matters. In contrast, Rangpur demonstrated lower engagement with political content (37%) and a greater focus on religious and cultural discussions, likely due to the district's rural and conservative socio-cultural context. A respondent from Rangpur stated that social media serves as a platform for engaging in cultural and religious discussions rather than political debates. In Naogaon, the moderate levels of peer influence (51%) and lower trust in influencers (46%) indicate a preference for community-driven content over individual endorsements.

The district-based variations in social media influence underscore the significance of geographical and socio-cultural factors in shaping digital behaviors. Urban districts such as Rajshahi and Bogura exhibit higher levels of political engagement and trust in influencers, reflecting their greater connectivity and digital literacy. Conversely, rural districts such as Rangpur and Naogaon display a stronger focus on cultural and religious discussions and a greater reliance on peer networks.

The findings indicate that geographical location significantly impacts how individuals engage with social media, trust influencers, and participate in political discourse.

One respondent from Rajshahi emphasized:

"Social media is my main source of political news. I follow debates and discussions online to stay updated."

In contrast, a participant from Rangpur noted:

"I engage more with cultural and religious discussions rather than political ones. Social media helps me connect with people who share my values."

Heatmap of District-Based Social Media Influence in the Varendra Region

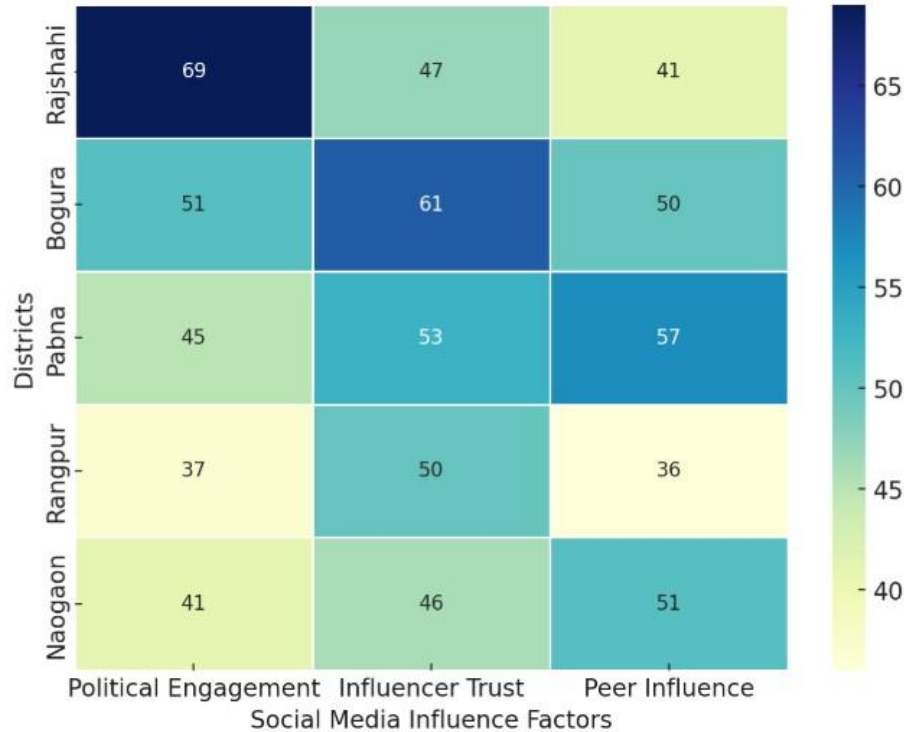


Figure 2: Heatmap Representing District-Based Variations in Political Engagement, Influencer Trust, and Peer Influence in the Varendra Region.

Discussion

The findings from the study provide staple information into the patterns of social media usage, influence of social media on public opinion and the factors that determine decision making processes. The results showcase the evidence of social media having a pervasive role in everyday life, with 67% of the participants engaging daily and over 78% spending more than an hour on these platforms. These findings align with previous literature, which has consistently shown that social media has become a central hub for communication, dissemination of information and entertainment (Smith et al., 2020; Anderson & Jiang, 2021). The dominant role of Facebook as preferred platform (67%) shows that it is growing and becoming popular, while the preferred format being video content (58%) reflects broader and more depth of trends in digital media consumption, where interactive formats and visuals are increasing liked by the audience (Pew Research Center, 2022).

Social Media as a Shaper of Public Opinion

The study revealed that 73% of the respondents admitted that the influence of social media is significant on their perspectives regarding political and social issues. This aligns with another literature, with the concept of social media as a “public sphere”, where diverse voices and opinions converge to change the collective discourse (Habermas, 1989; Papacharissi, 2002). Although, the reliance on influencers (68%) and peers (57%) for opinion formation raises certain concerns about the exclusivity and reliability of information that

is consumed promptly. This is very much relevant particularly given the prevalence of misinformation, as 43% of the respondents did agree and expressed concerns about the lack of fact-checking on these platforms. These results echo were echo studies by Vosoughi et al. (2018), who found out false news spreads on a larger scale and quickly compared to accurate information on social media, focusing on the need for better and improved media literacy and more critical engagement. Furthermore, Kushner (2016) argues that the role of passive consumption which is also known as “Lurking” is responsible for shaping public opinion, as most of the social media users often consume content without deeply or critically analyzing it.

The formation of echo chambers is particularly evident where 62% respondents admitted that they have had this experience of exposure primarily to content aligning with their beliefs, which brings out the hint of polarization. The negative correlation ($\beta = -0.38, p < 0.05$) between social media engagement and exposure to diverse viewpoints that expose the role of algorithmic filtering in reinforcing selective exposure. Particularly, this phenomenon is widely documented in prior literatures, where it was suggested that personalized algorithms create feedback loops that restrict user’s exposure to opposing perspectives (Pariser, 2011; Bakshy et al., 2015). Zhou and Jenkins (2020) emphasizes on the psychological effects of selective exposure, for instance, the Dunning-Kruger effect, where individuals get overestimation of their own ability to discern credible information. Which in the long run complicates the efforts to combat misinformation.

Echo chamber is causing a limited radius, which is limiting the dissemination of information to all. Targeted posts and social media algorithm are creating both ‘Comfort Zone’ and ‘Irritation’ to the users. Selective exposure is quite evident. These findings align with another study which found when a content has strong social endorsement, people are more likely to choose it and do not go beyond it (Messing & Westwood, 2012).

Social Media and Decision-Making

Social media’s influence extends beyond opinion formation to decision-making processes, which is particularly evident in consumer behavior and career choices. Our study found out that 76% of respondents rely on social media for decision-making, with endorsement of influencers hold accountable for (72%) and peer recommendations (61%) being the most influential factors. This is continuous with the increasing body of literature on the role of social media in influencing consumer behavior, where user-generated content and influencer play a subtle role in initiating that drive to purchasing decisions (Djafarova & Bowes, 2021; Abidin, 2016).

Although, the heavy reliance on social media for aspects like career decisions (39%) shows the expanding nature in professional contexts, where social media platforms like LinkedIn and Twitter serve as spaces for networking and job seeking.

Media Literacy and Critical Engagement

Our study’s results of media literacy reveals a concerning gap in critical engagement with the content of social media. Relatively smaller percentage (38%) actively fact-check information, at the same time 52% raises questions about the information sources, which is also, not regular but occasional. This lack of critical engagement is so evident among the frequent users of social media, which is indicated by the negative correlation ($\beta = -0.29, p < 0.05$) between social media engagement and fact-checking behavior. Findings align with studies by McGrew et al. (2018), who found that individuals who have higher media literacy skills are better able to discern credible information from misinformation. The positive correlation ($\beta = 0.42, p < 0.05$) between education level and fact-checking behavior clearly shows the role of education in promoting the level of critical thinking and media literacy. Zou’bi (2021) adds that media literacy programs also need to focus on developing critical thinking mindset. It especially needs to be commenced among younger users. Which will help counteract the effects of misinformation and algorithmic bias.

Geographical and Demographic Variations

Our study has also focused on significant diversification on social media usage and the influence across rural and urban populations. Urban respondents showed higher engagement with news and political content (67%) and greater media literacy (46%), at the same time rural respondents relied heavily on peer recommendations (71%). They used social media primarily for entertainment purpose (58%). These results are consistent with research by Blank and Groselj (2014), which found out that urban populations tend to have greater access to different types of information and higher levels of digital literacy. The regional variations within Varendra Region also indicates the need for context-specific approaches to media literacy and social media regulations. For example, the high trust in influencer opinions in Bogura (61%) suggests that the endorsement-based-persuasion is particularly effective in this district, at the same time the focus on cultural and religious discussions in Rangpur (57%) reflects the socio-cultural dynamics of the region.

Ethical Concerns and Algorithmic Bias

The study also highlights the ethical concerns that surround within social media, including misinformation campaigns (48%) and algorithmic biases (43%). These results align with broader debates about the ethical implications of social media platforms, which have been heavily criticized for prioritizing engagement over accuracy and for spreading biases through opaque algorithms (Zuboff, 2019; Noble, 2018). The negative correlation ($\beta = -0.47, p < 0.01$) between algorithm-driven content suggestions and diversity of content exposure highlights the need for greater accountability and transparency in algorithmic design. Furthermore, Rainie and Wellman (2019) argue that the internet's role in daily life has fundamentally altered how individuals interact with information. Creating both risks and opportunities for public discourse. This issue requires a multi-stakeholder approach which involves policymakers, platform developers and civil society organizations.

Implications and Future Directions

The findings that came out from the study have several suggestions for policymakers, educators and social media platforms. First and foremost, there is a pressing need to enhance the media literacy aspect through organizing different programs, particularly in rural areas, which in short will equip the individuals with skills to critically analyze and evaluate online content. Secondly, social media platforms must give priority to algorithmic transparency and apply measures to counteract echo chambers and misinformation. Lastly, future research should cover the long-term effects of social media on public opinion and decision-making, alongside, the potential of algorithmic interventions to encourage and promote diverse yet balanced discourse.

Limitations of the Research

While the study has provided valuable findings regarding influence of social media on public opinion and decision making in the Varendra Region of Bangladesh, at the same time it is also important to acknowledge the limitations of the study.

The study relies on self-reported data heavily. This might be subject to biases such as recall inaccuracies or social desirability bias. Sometimes it might happen participants may overstate or understate their social media usage, engagement, opinion formation and decisions. It might affect the reliability and validity of the findings. This study also focuses extensively on the Varendra region, which, while providing valuable findings to Varendra Region but other regions in Bangladesh is also needed to be explored. Comparative studied would enhance the broader applicability of the result. Sample size was also another factor, 322 respondents into the survey, though it provides a context of the situation in the Varendra Region, but broader sample size would have provided a more reliable finding. The findings are context-specific to the Varendra Region and may not be directly applicable to other regions or countries with different socio-economic, cultural, and political contexts. Replicating the study in diverse settings would help validate the findings and identify broader trends.

Conclusion

All in all, our study focuses on the dual nature of social media as a source of both democratizing yet ethical challenges. While it has the chances to amplify the marginalized voices and initiate meaningful discussions, the role it holds in shaping public opinion and decision-making is full of risks including misinformation, algorithmic bias and polarization. To mitigate the challenges, a concerted effort to promote media literacy, enhance algorithmic transparency and encouraging a more in depth, inclusive and informed digital public sphere.

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