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Decentralizing Climate Activism: How Social Media Empowers Grassroots Voices in the Climate Justice Movement

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Abstract

Climate change is an issue that cannot be managed only by state-level policy; it requires an overhaul of production, use of resources, and decision-making. This research investigates the significance of digital media in enabling climate activists to magnify the voice of marginalized groups within their struggle for climate justice. Drawing from McCombs and Shaw's Agenda-Setting Theory, the research uses a mixed method approach and draws from current datasets. The research is concerned with the imperatives of decentralized climate action and social media enabling grassroots activism. The main question inquires: What motivates decentralized climate action, and how does social media empower grassroot voices? Research indicates a linear relationship between web exposure to climate content and increased self-efficacy in participatory engagement. The study identifies the importance of integrating digital and off-line media strategies to augment participation, amplify marginalized voices, and propel equity in climate justice and policy-making.

Keywords: Climate change, decentralized activism, social media, grassroots movements, climate justice, Agenda-Setting Theory, digital communication, marginalized voices, Global solidarity.

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Introduction

Climate action has long been dominated by major institutions and official negotiations. Whereas, governments, international institutions, and powerful policy influencers once defined the climate agenda, now local NGOs, youth movements, and grassroots social movements are taking center stage. Digital technology, such as social media, has enabled decentralization in climate action. This transformation has created new spaces for participation, thus expanding climate justice movements to be more inclusive, representative, and vibrant. In the past, silenced and frontline community voices that went unheard can now introduce their lived realities, stage protests, create awareness, and shape public opinion in ways that were unimaginable in the past.

A growing body of academic research reflects this shift, describing how digital technologies are reconfiguring climate activism at local, national, and global levels. Among scholars, social media and the internet are reported to have enabled new organizational forms, enhanced participation from beyond established actors, and reconfigured the manner of climate communication. For example, scholars such as Eilstrup-Sangiovanni et al. (2024), Segerberg (2017), and Schäfer (2024) discuss the proliferation of activist campaigns through online media platforms and dynamic changes in mobilizing tactics. Others, such as De Moor (2017) and Ren (2022), discuss the constraints of unified global climate summits and suggest alternative strategies that are based on local activism and network activism. Throughout these articles, there is one clear lesson learned: decentralized, socially networked, and digitally enabled modes of activism present positive paths toward improved climate governance and consolidating the voices of grassroots actors.

Climate change activism literature appreciates the gradual and cumulative progression of climate change and increasing pressures towards concerted action. According to Ren (2022), despite the increasing expansion of global governance arrangements over time, they are more likely to operate in isolation with the result of creating disconnected efforts in place of concerted action. De Moor (2017) discusses how global summits like COP21, as popular as they are in gaining worldwide attention, would be seen by most activists as performative and insufficient, which gives rise to calls for more local and autonomous transformational strategies. Tosun and Schoenefeld (2016) mention the rise of renewable energy cooperatives as tangible expressions of decentralized governance. These practices encourage participation at the local scale and create space for localized climate action, opening democratic spaces for action.

Also, Eilstrup-Sangiovanni et al. (2024) discuss how platforms such as Twitter, YouTube, and TikTok enable groups like Fridays for Future and Extinction Rebellion to mobilize millions of people worldwide. These platforms not only mobilize and educate but offer toolkits for momentary coordination and influence public sentiments towards climate matters. Segerberg (2017) refers to the sheer importance of social media as enabling digital climate engagement over physical distances. Applying the collective action space perspective, Chen et al. (2021) demonstrate how social media mobilizations develop in hierarchies and networks and facilitate heterogenous groups to coordinate with one another. Schäfer (2024) discusses a more recent perspective, explaining how digital media—from short video clips to influencers—affects climate journalism and individual action. Gaupp et al. (2024) also emphasize how social media provides a snapshot of public

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opinion and emotional reactions to climate change, presenting digital activism as strategic and personal.

Inspite of such increasing participation, underlying issues still exist. Climate change is still explained in technical or policy-laden language, restricting participation to institution platform-reachable groups. Most affected communities are poorly represented within policy discourses. Schipper et al. (2021) states that, scientific and political answers need to be complemented with social and cultural sensitization if climate solutions are to be equitable and effective. This is where decentralized activism is most essential—not only to add more voices to the discussion but to redefine what society thinks about and does around the climate crisis.

Centralized, mainstream activist movements and state-counted governance models have the capacity to displace grassroots movements and marginalized populations. The value added to this project is that it is a bottom-up climate justice initiative. It adds to policy and academic literature by reasserting the primacy of mass or popular response and participatory modes of governance. Specifically, it affirms the promise of social media as a democratizing factor—enabling activists to disintermediate gatekeepers, address the public directly, and organize collective action that transverses borders.

The main objective of this study is to analyze how social media enables and empowers decentralized climate activism. It reflects on how social media provides voice to grassroots actors, facilitates transnational solidarity, and dismantles top-down models of climate governance. Through a study of activist groups' online activities, this study seeks improved understanding of how climate campaigning is transforming through online spaces. The study argues social media enables decentralized climate activism through facilitating mass mobilization, mobilizing dominated groups, and building transnational anti-centralized climate governance networks. It contends that social media has revolutionized climate activism by facilitating decentralized participation, whereby bottom-up forces—most particularly, frontline and marginalized peoples—have the ability to directly influence climate narratives, mobilize support, and counter institutional hegemony without having to depend on conventional power relations.

Based on qualitative and quantitative analysis, this research delves into how digital media facilitates new types of climate engagement. Subverting and complementing traditional media agenda-setting through agenda-setting theory, it investigates how online activism reconfigures narratives and awakens new voices within the climate justice movement. More broadly, this research hopes to contribute to a deeper understanding of the processes in which climate activism is being reconstituted in the digital age. It proposes that decentralization, facilitated by the ability of digital communication technology, not only expands participation but also reconceptualizes the strategy, objectives, and effects of the climate movement in significant and transformative respects.

Theoretical Framework

Agenda-Setting Theory developed by McCombs and Shaw (1972) forms the foundation of this research that suggests media has a critical role in influencing public awareness by highlighting some news and filtering others out. Mainstream media always prioritizes official accounts of governments and companies and, in doing so, overlooks voice at the grassroots level. However, social media platforms have changed that paradigm. Decentralized climate action, organized by social movements, young people, and marginalized communities, now bypasses institutional gatekeeping by going straight into

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forming public opinion. Fridays for Future is an example of how activists are employing internet platforms to raise consciousness, set agenda, and put pressure on institutions. This is a symptom of a growing role of bottom-up communication in environmental action. By linking traditional media and new media around the agenda-setting theory, this study sheds light on how civil society players are shaping the environmental agenda and climate justice public interest now.

Methodology

This research uses a mixed-methods design to examine the use of social media in fostering decentralized climate action and amplifying grassroots voices. The Agenda-Setting Theory inspires the research design and offers the theory to describe how online spaces shape public debate and challenge conventional information hierarchies.

The primary data sources are social media posts on social media platforms like Twitter (now X), Instagram, and Facebook, chosen for their global application in activism and instant response. Data was gathered from public posts, hashtags, and institutional pages of the largest decentralized movements, including Fridays for Future and Indigenous movements. Attention was focused on posts on key events such as COP conferences to monitor mobilization spikes, thematic framing, and narrative strategies.

Concurrently, an online quantitative web survey was conducted with 60 random participants between the ages of 18–30 years selected through snowball sampling using a Google Forms link. Survey questions were directed towards respondents' favorite platforms, climate content exposure, views regarding grassroots activism, and behavior of engagement. The survey employed both nominal and Likert-scale variables to gauge perceived credibility and influence of decentralized voices.

Thematic content analysis was used to categorize social media posts into three themes: (1) mobilization by activists, (2) outrage against concentrated power, and (3) empowerment through digital technology. Subversive elite climate discourse and counter-agenda-setting (Chen et al., 2021) were also examined in individual posts. Quantitative data was then analyzed using SPSS for descriptive statistics on trends of online support and participation in grass-roots activism. Double analysis thus provides an integrated perspective on both content dynamics and audience reception. To complement primary data, secondary research entailed peer-reviewed journals, reports from institutions, and environmental media sources like Al Jazeera, NRDC, IIASA, and Fridays for Future. These provided context to trends in digital activism, agenda-framing, and the development of climate advocacy networks.

The Need for Decentralized Climate Activism

Majority of existing political cum institutional systems of industrialized as well as developing countries both are often managed by a select few hence often centralized in character. The short insight about highly reliable systems originates with an American organizational theorist Karl E Weick who said that 'the real trick is to accomplish centralization and decentralization at the same time. In centralized kind of structures, the power of planning and decision making is concentrated to a very few people at upper positions while in decentralized system the authority as well as responsibility of planning and decision making is delegated to middle or lower levels managers. While autonomously confined systems can be constructed as organizationally self-contained and capable of operating smoothly and even profitably on their own, they can become problematic when viewed through the lens of climate change. For climate change is a very serious threat and

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its dangerous consequences affect all spheres of our lives are affects varying degrees. It is a question that tends to arise, why has an issue that threatens mass extinction remained confined to the political domain? The answer is in our centralized systems as participation of stakeholders has been194 discouraged by centralization that has led to reduction in awareness of climate change dangers (Sumiran, 2020). Therefore, this calls for a dire need of decentralized climate activism.

Social Media as a Tool for Decentralized Climate Activism

The first step in decentralizing climate advocacy is changing how the general population views and feels about climate change. People are unlikely to react to the situation with the haste it requires or assume responsibility for taking significant action if they are not aware of it.Through social media recently it has been successful in creating awareness to the public especially the youths on climate crisis. From individual actions, such as signing petitions on social media and changing disposable consumption to collective activism activities such as awareness campaigns and community-based education and training this paper finds that youths get motivated by a deep sense of concern for the future.These activities are especially facilitated by social media, where knowledge can be spread, global connectedness enabled and youth is empowered to participate in climate dialogue even if they are locked out of formal political processes. Youth use social media in their new social movements as key drivers of change through spreading awareness and enforcing environmentally sustainable standard. Millennials may apply social media activism in campaigning against the existing systems of politics and economy and propaganda for climate justice and renewable energy. Youths have been given more recognition in recent years as key players of change in the global climate change. They have achieved in raising climate change as an important global issue of paramount concern, mobilizing support for climate change solutions, and effecting legislative changes in at least several countries. This was more so made possible by the fact that social media gave a platform for grassroot personalities(IIASA, 2024).

Centralized vs. Media-Driven Decentralized Climate Activism

The majority of the world's leaders and leaders of non-profit organizations gathered in Dubai for the COP28 in 2023, the annual United Nations climate conference. While a 'loss and damage' fund was created at the first instance to support the countries that barely emitted greenhouse gases but are now heavily affected, every such Dubai conclave like event has been criticized as have been the following. However, these yearly conferences are often called talk-shows which do not ensure climate justice or massively enhance the Earth's probabilities of rising above higher temperatures(Al Jazeera, 2023).A Pakistani climate change activist and a storyteller who shares stories of the victims of climate change on media voiced her frustration as "Having attended many COPs, it is exhausting witnessing world leaders prioritize power over people" (Dawn, 2024).In some way, this frustration is warranted for this is a tremendous disadvantage of centralized movements whereby the reparations are given to the governments alone and the marginalized vulnerable communities which are the major affected lose out. While leader, government officials, policymakers make policies in conferences and meetings, locals are smoothly filtered out from these processes. That is why they are regularly a target of criticism in social media platforms, including face-book. This affords the locals a reason to go for decentralized movements.

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Another major drawback of centralized movements that makes it necessary to go for decentralized movements is that leaders often prioritize power over people. Currently UNFCCChas around 199 member countries. These assemble once in a year at the COP conferences to discuss emissions(The New York Times, n.d.). This year Saudi Arabia seems to be downshifting these climate talks. General, there are divisions between the developed and the developing countries in the climate talks but obviously, the level of hostility from Saudi Arabia this year is unique. Last year in United Nation Climate Summit, 197 countries including Saudi Arabia passed an agreement whereby countries should shift from use of fossil energy.Sultan Al Jaber (COP28 President UAE) said; "We have confronted realities and we have set the world in the right direction"(Al Jaber, 2023).This agreement was one of its kind as all know Saudi Arabia's economy is heavily dependent on fossil fuels but this year at COP29 right after a year of signing the agreement Saudi Arabia seems to back off. During COP29, the KSA delegation played a proactive role to change references within the COP official negotiating text, especially to the phase out of fossil fuels. A Saudi Arabian delegate was singled out for having made direct changes of the text, a paper which is usually emailed as a read-only PDF from COP presidencies to nations at once (Damian, 2024). Furthermore, Saudi Arabia with Arab Group remained totally against any reference to fossil fuel in the overall text adopted at the conference. One Saudi official said: "The Arab group will not allow any text to be directed at any special segments, specifically fossil fuel"(The New Arab Staff & Agencies, 2024). It is assumed that it is because of the recent US elections as President-elect Donald Trump has hinted at plans to reverse the United States' commitment to global efforts to mitigate climate change by pulling out of the Paris Agreement(Lefebvre & Colman, 2024).

In Media-driven decentralized climate activism on the other hand, the media, according to Agenda-Setting Theory (McCombs & Shaw, 1972), can shape the public's views by giving special importance to some concerns instead of others. For a long time, top news outlets have tended to give priority to climate change discussions centered on the ideas of powerful groups and official policies. However, due to social media this situation has unexpectedly changed significantly in many areas, including climate activism. Currently, the public conversation about climate change is strongly guided by social media (Schäfer, 2024).

Youth discussing climate change issues on social media has strongly motivated community-level climate change activism. Greta Thunberg sat alone outside the Swedish parliament to protest, began the Fridays for Future campaign and it soon became known around the globe (Encyclopedia Britannica, n.d.). Climate activist Greta Thunberg became popular with many people on social media through her famous statements that "Our house is on fire" and "You aren't too young to create change" (Thunberg, n.d.). 4 million posts globally used hashtags like #FridaysForFuture and #ClimateStrike by 2023 (Fridays for Future, n.d.). Thanks to powerful visuals posted online, people across the globe could take part in similar rallies. Because of digital tools, these decentralized movements gave people easy access to take part in discussions and actions on climate change.

Grassroots actions could find greater success on social media than before because anyone could join in. Thanks to online availability of toolkits and templates, local strikes took place in various countries all at the same time. Such digital approaches attracted more youthful participants, as they tend not to join formal policymaking but do feel involved online (Eilstrup-Sangiovanni et al., 2024).

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Examining a few #FridaysForFuture posts on Twitter, Instagram and Facebook, it is clear that youth-focused protest pics, emotional slogans and small P word, action were repeated several times. Posts that use images and hashtags got much more attention than plain text posts, consistent with researchers who point out that emotional and expressive techniques play a key role in successful climate campaigns online (Gaupp et al., 2024; Schäfer, 2024). Thunberg's own tweets have been re-tweeted by large numbers of people and a key message has come from her January 2019 tweet, "Our house is on fire." We see that certain digital formats can increase interest in various topics and help decentralized movements advance.

Decentralized Voices from Global South

This section examines Climate Action Pakistan (CAP) to demonstrate decentralization in digital activism that reforms climate discourse by utilizing content generated at the grassroots level. The evaluation concentrates on selecting social media content through purposive sampling which includes public Twitter (X) and Instagram data from 2023 through 2024. These particular cases advise agenda-setting theory for assessing how local stakeholders modify digital climate policy agendas.

CAP functions as a decentralized youth initiative which manages both digital and offline climate advocacy networks throughout Lahore, Islamabad and Karachi cities. The organization formed during the global Fridays for Future movement while establishing its independent approach through individual city-based units. The regional nodes function autonomously by planning environmental walks as well as establishing online initiatives and targeted press activities that fit their unique metropolitan settings.

Activists employed the hashtags #ClimateJusticePK, #PakistanClimateMarch and #FridaysForFuturePK to build emotionally impactful stories that showed how flooding resulted from climate change and how smog affected Pakistan and its government stayed inactive. The analysis of social media content on Instagram and Twitter between September 2022 and March 2024 shows three main patterns regarding urgency, loss, and youth empowerment. People across Lahore received this statement in their posts at the chapter march: "This isn't just rain." It's policy failure." Digital posts depicted children submerged in floodwater accompanied by the command "Strike for your future" as part of the activism. The social media posts on Pakistani youth networks achieved substantial engagement due to their attraction of more than 500 shares and 1,000 likes during the initial 24 hours after posting. However, because of algorithmic issues combined with English language activism limitations their public reach stayed confined within specific regions (Khan, 2023).These efforts demonstrate how grassroots voices can counter traditional media narratives that often depoliticize or underreport climate events in Pakistan, according to agenda-setting theory. As a kind of counter-agenda setting, the digital strategy highlighted the disconnection between communities impacted by climate change and policy elites (Jan, 2022).

This shows that decentralized movements in the Global South employ social media platforms for creating new climate narratives while also sharing information. The lack of resources along with algorithmic suppression do not prevent these movements from achieving success by producing emotional and politically powerful creative content that gives marginalized voices a seat at global climate discussions.

To find out how social media supports grassroots activism on climate justice, a structured brief poll was used. The goal of asking the questions was to measure people's experience

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with climate information, what they thought about grassroots action and how social media influenced their understanding.

Challenges and Limitations of Social Media in Climate Justice

Climate justice advocates use social media platforms, but these platforms also present some obstacles. On the plus side, they highlight marginalized people, but they can also lead to the spread of wrong information. Because algorithms have a bias to boost engagement no matter the truth, fossil fuel–supported climate denial content is easier to find (Natural Resources Defense Council, n.d.). Climate information resources have been provided online by these platforms, but they normally fail to tackle misinformation. Activists have to deal with attacks online and hate speech directed at them. As an example, Greta Thunberg has been subjected to online abuse and untrue rumors. Social media boosts the influence of activists but also puts them in touch with those who disagree, claim researchers studying the "Greta Effect" ("Greta Thunberg and the Generation of Moral Authority," 2021).

Many scholars observed an increase in racist and climate-denying content after Elon Musk acquired Twitter, which led some users to quit the platform (Al Jazeera, 2021). This is a prime example of how algorithmic settings can turn against advocacy based on science. These voices are not seen by many because the algorithms are designed to hide their content. If your content isn't in English or is not optimized for different algorithms, its reach will be very low (Noble, 2018). Because of filter bubbles and echo chambers, activists are cut off from a large number of people. Many people speak their minds on this subject which leaves unconvinced individuals confused (Flaxman, Goel, & Rao, 2016).

With the way attention economy works, activists are inclined to focus on content that quickly attract viewers rather than on detailed, data-based messaging. Such a system sometimes results in "flash activism," which is limited, unrestricted and does not last beyond a brief period (Milan, 2015). In many countries of the Global South, fewer tools are available to those who want their voices heard online due to bad internet access, language differences and constant monitoring by the government (Mustapha & Rogerson, 2019). In any case, social media is key in creating global unity and inspiring action outside centralized groups. It gives fragmented groups a way to join forces, overcome gatekeepers and request recognition on the global climate stage (Mejias&Couldry, 2019).

Discussion and Analysis

Climate issues receive their presentation through the power of independent media that works with grassroots activists and climate influencers while traditional news outlets have declined in use. Social media allows activists to create priorities which subsequently modify both political debates and public views about climate issues. Although decentralized activism raises awareness, it is still difficult to assess how it will actually affect policy reform. The mathematical algorithm of social media networks chooses contact quantity over accurate information delivery which can boost both untrue information and corporate-sponsored content that hurts activist progress. Despite these challenges, social media-driven initiatives are reshaping the climate justice movement and changing the conversation about climate change by encouraging diversity, quick mobilization, and grassroots action.

The findings of this paper demonstrate how decentralized movements like Fridays for Future and Climate Action Pakistan effectively utilize social media to reshape climate change narratives as they raise the voices of marginal groups throughout the Global South

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according to research findings. This section evaluates digital content using Agenda-Setting Theory to analyze selected 150 social media posts from Twitter/X, Facebook and Instagram based on their narrative structures alongside the methods of user interaction and system functions along with algorithmic constraints.

The **Narrative Frames and Emotional Appeals** served as main elements throughout every movement. The activists at Climate Action Pakistan used “policy failure” as their framing device to demonstrate how human-made policies rather than nature are causing the devastating 2022 floods. The content featured evocative flood-related pictures of children along with the call to act immediately which said "Strike for your future." Youth activism stands as the characterize of Fridays for Future campaigns which focus on school strikes and the famous hashtag #FridaysForFuture while using placards as primary visual messages. The climate stories pushed global supporters to focus on specific environmental challenges occurring within specific local areas.

Every movement took advantage of social media features to boost their reach among participants. Fridays for Future used repeated digital activities including strikes, infographic marketing tools along with hashtag coordination methods to obtain international recognition. The decentralized city-based events which Climate Action Pakistan coordinated utilized the social media hashtags #ClimateJusticePK together with localized multimedia content. Rise Up Movement heavily depended on Twitter/X platform to distribute brief content which easily spread through member regions. Each organization utilized brief messages along with visual content that used hashtags for maximizing viral reach.Each movement adopted decentralization combined with inclusivity as organizational methods which let them respond to their local environments. The worldwide membership of Fridays for Future operated without specificity allowing independent grassroots movement groups to establish themselves in both Northern and Southern geographical areas. Climate Action Pakistan operated its organization through independent chapters situated in various cities.

Furthermore, A **structured survey** was used to collect responses from young people in order to better understand how social media strengthens grassroots voices in the climate justice movement. Participants' exposure to climate-related content, opinions about grassroots activism, and the impact of social media on their awareness and involvement are summed up in the descriptive data that follow. These results offer preliminary understandings of how dispersed online platforms influence public opinion and elevate underrepresented voices in the discourse on climate justice.

Gender

There were 60 responders in the sample, and the distribution of genders was reasonably even. Of them, 48.3% identified as female (n = 29) and 51.7% as male (n = 31). Male and female viewpoints are sufficiently represented in the analysis thanks to this nearly equal participation.

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	31	51.7	51.7	51.7
	Female	29	48.3	48.3	100.0
	Total	60	100.0	100.0	

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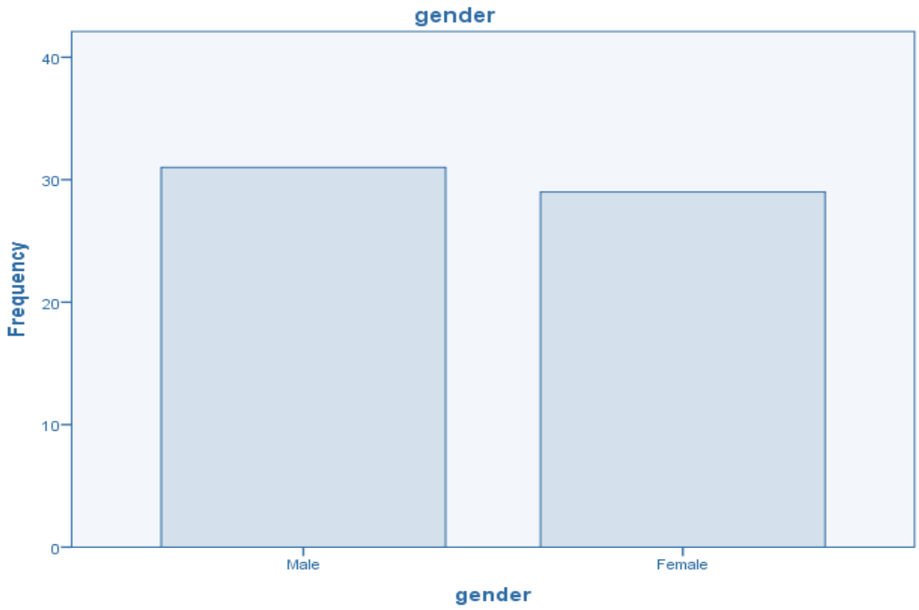

Age Group

The majority of respondents (53.3%) were between the ages of 18 and 24, followed by 25% in the 25–30 age group, and 13.3% in the 30–35 range. Only a small proportion(8.3%) were under the age of 18. The bar chart visually reinforces this distribution, indicating that the survey primarily reached young adults, particularly those in their early twenties, which aligns well with the study's focus on youth engagement in climate activism through social media.

Age-Group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	under 18	5	8.3	8.3	8.3
	18-24	32	53.3	53.3	61.7
	25-30	15	25.0	25.0	86.7
	30-35	8	13.3	13.3	100.0
	Total	60	100.0	100.0	

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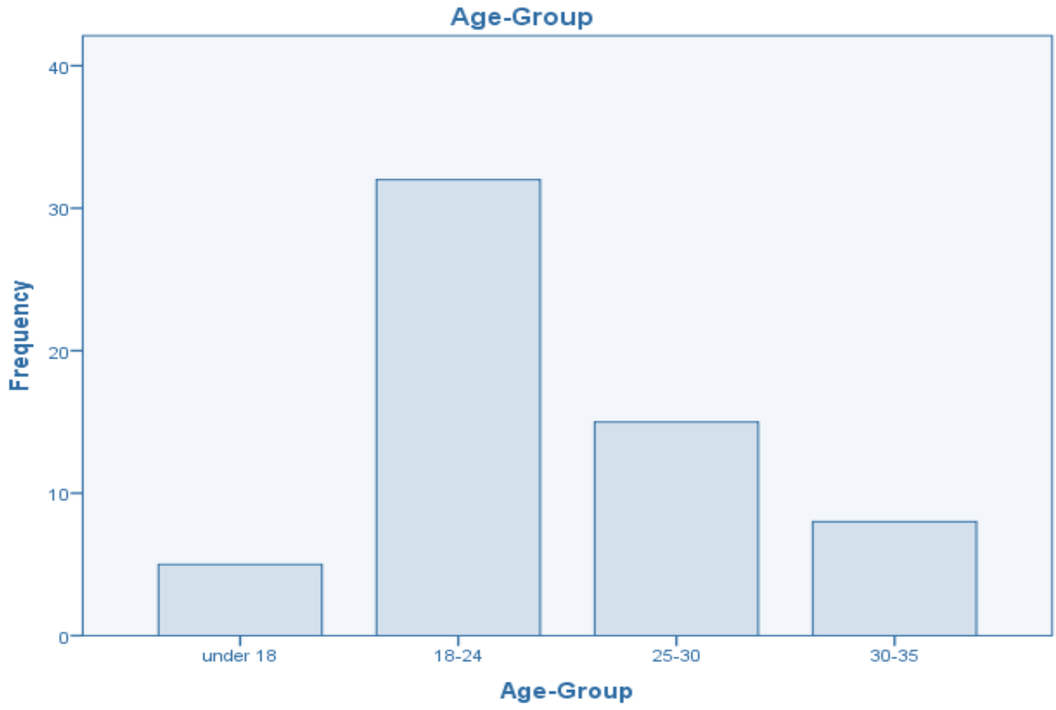

Education Level

Nearly half of the participants (46.7%) were undergraduate students, making them the largest educational group in the sample. Postgraduates made up 26.7%, followed by graduates at 18.3%, while only 8.3% had completed education at the intermediate level. The bar chart mirrors this distribution, highlighting that the survey predominantly engaged individuals pursuing or having completed higher education—an important factor considering the role of educational exposure in shaping climate awareness and engagement on social media platforms.

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Intermediate	5	8.3	8.3	8.3
	Under-Graduate	28	46.7	46.7	55.0
	Graduate	11	18.3	18.3	73.3
	Post-Graduate	16	26.7	26.7	100.0
	Total	60	100.0	100.0	

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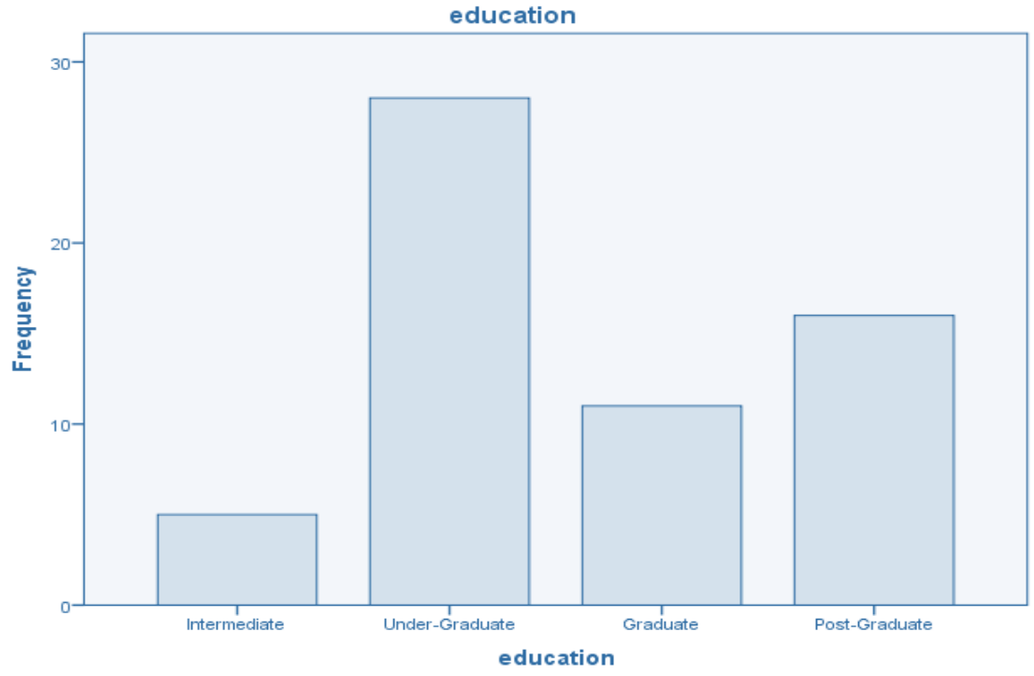

Frequency of Encountering Climate Content on Social Media

Social media users who encounter climate-related content view it on average a few times each week based on the 41.7% of participants who responded. Meanwhile, 31.7% of respondents encounter such content daily. Most people experienced climate-related content at most two times a day while 16.7% experienced multiple viewings of climate content daily and 10% seldom or never encountered it. The bar chart data shows that social media users encounter climate-related updates at a stable rate throughout their daily feed activity.

1# Freq_Climate_Content

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Several times a day	10	16.7	16.7	16.7
	Once a day	19	31.7	31.7	48.3
	A few times a week	25	41.7	41.7	90.0
	Rarely or never	6	10.0	10.0	100.0
	Total	60	100.0	100.0	

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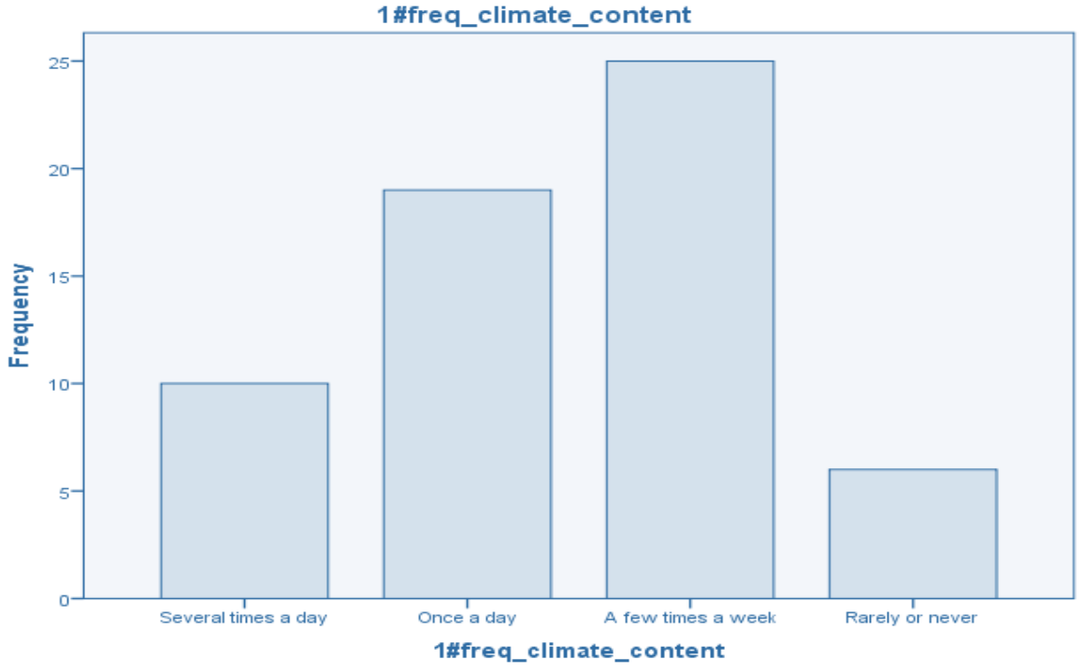

Types of Climate Content That Capture Audience Attention

Social media content about climate issues receives the highest level of engagement when people watch personal stories shared by activists with 35 percent of individuals selecting this material first. Visual campaigns combined with protest footage received 25% of the responses while 21.7% identified scientific data through infographics. Public news headlines on official pages received only 18.3% of overall engagement from the respondents. Visual content and emotionally relevant material seems to capture youth attention much more effectively than institutional communication on social media platforms. Digital audiences respond most strongly to both activism-based narratives and storytelling methods when dealing with climate issues.

2# Content_Type_Attention

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Personel stories from activists	21	35.0	35.0	35.0
	Scientific data or infographics	13	21.7	21.7	56.7
	Protest footage or visual campaigns	15	25.0	25.0	81.7
	News headlines from official pages	11	18.3	18.3	100.0
	Total	60	100.0	100.0	

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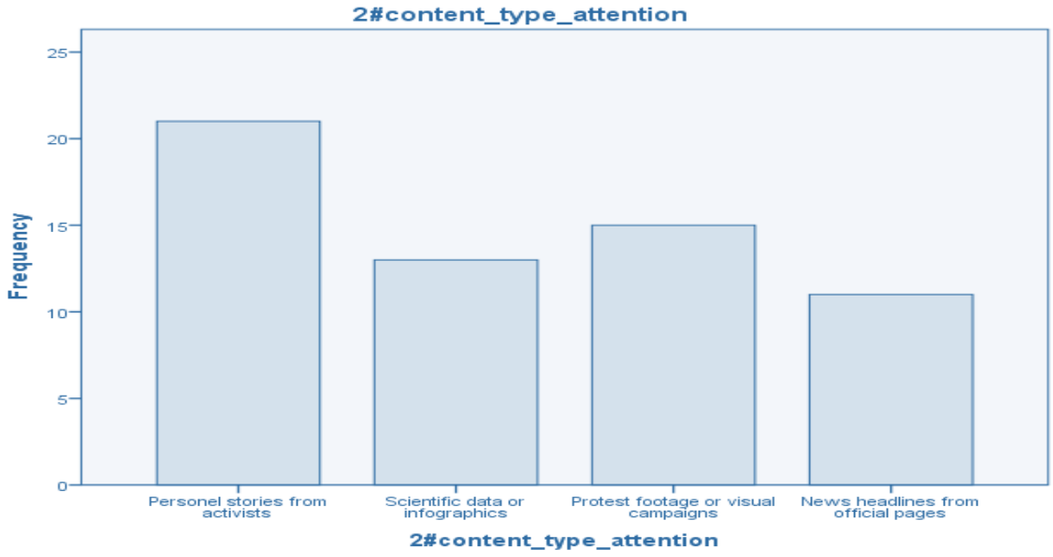

Primary Platforms for Accessing Grassroots Climate Activist Content

Social media users indicated Instagram as their main source for grassroots climate activist content. According to survey results Instagram stands as the most popular social media platform with 48.3% of respondents choosing it. The data indicates that Instagram received 48.3% of responses while TikTok reached 23.3% of participants and Twitter/X received 18.3%. The survey results showed Facebook trailed behind the other platforms to a substantial degree since respondents limited their mentions to 10%. This illustrates the widespread movement of users toward newer platforms. A bar chart demonstrates that Instagram serves as the most effective platform for youth audiences to support grassroots climate content.

3# Platform_Grassroots

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Instagram	29	48.3	48.3	48.3
	Twitter/X	11	18.3	18.3	66.7
	TikTok	14	23.3	23.3	90.0
	Facebook	6	10.0	10.0	100.0
	Total	60	100.0	100.0	

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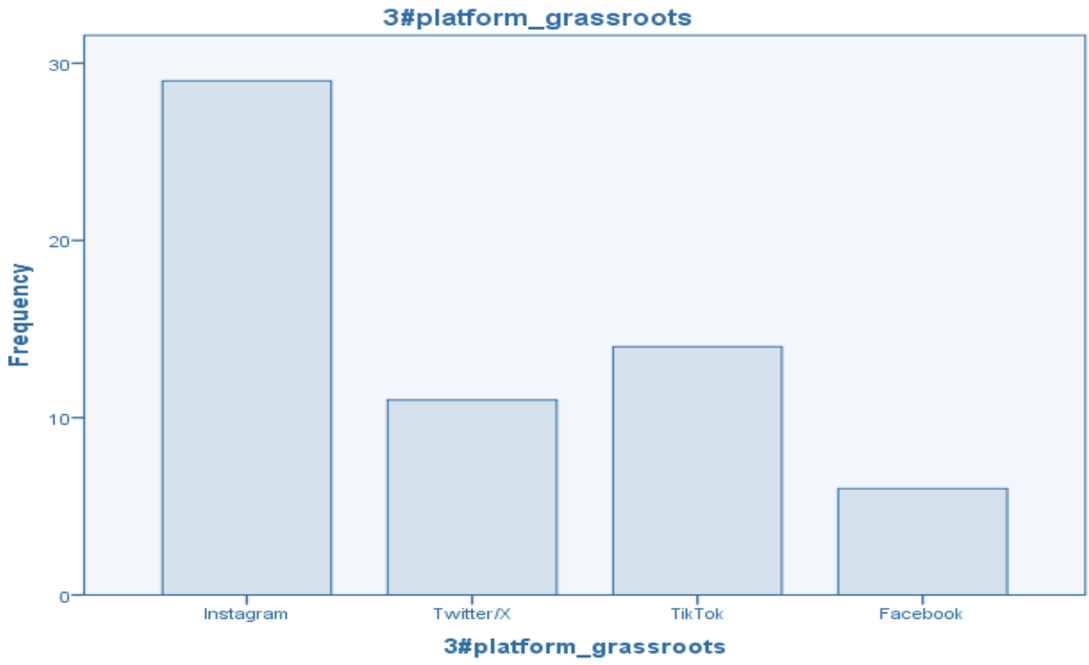

Visibility of Activists from the Global South on Social Media

Survey participants indicated their frequency of encountering posts by climate activists who live in the Global South regions including Africa, South Asia and Latin America. Most users acknowledged seeing climate activist content infrequently while extra users believed it appeared rarely at most. The majority of respondents admitted that they encounter such content at a low frequency as they only see it sometimes or rarely (39% + 39% = 78.6%). More rarely but also substantial, 18.6% confirmed regular frequent viewing of these posts. On the other end, 3.4% never encounter such materials. The research demonstrates that activists from the Global South experience limited presentation on social media platforms. The bar graph shows this limited exposure because it demonstrates a clear peak in the middle frequency bands.

4# Freq_Global_South

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Frequently	11	18.3	18.6	18.6
	Occasionally	23	38.3	39.0	57.6
	Rarely	23	38.3	39.0	96.6
	Never	2	3.3	3.4	100.0
	Total	59	98.3	100.0	
Missing	System	1	1.7		
Total		60	100.0		

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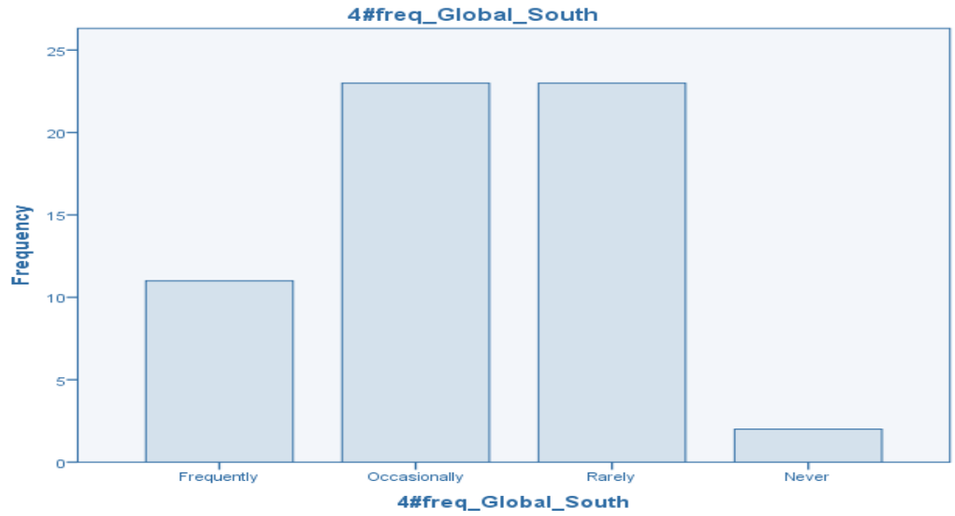

Perceived Credibility of Grassroots Climate Activists

The survey revealed that most individuals deemed grassroots climate activists on social media “very credible” with a total of 51.7% while 38.3% rated them as “somewhat credible.” The group which viewed grassroots climate activists as not very credible represented just 10% of the sample population. The results reveal participants did not select the most doubtful response i.e. "not credible at all" because they hold a generally favorable impression of grassroots activists in the climate justice movement. The provided bar graph shows a clear distribution of credibility ratings that confirms the results described in the sentence.

5# Credibility_Grassroots

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very credible	31	51.7	51.7	51.7
	Somewhat credible	23	38.3	38.3	90.0
	Not very credible	6	10.0	10.0	100.0
	Total	60	100.0	100.0	

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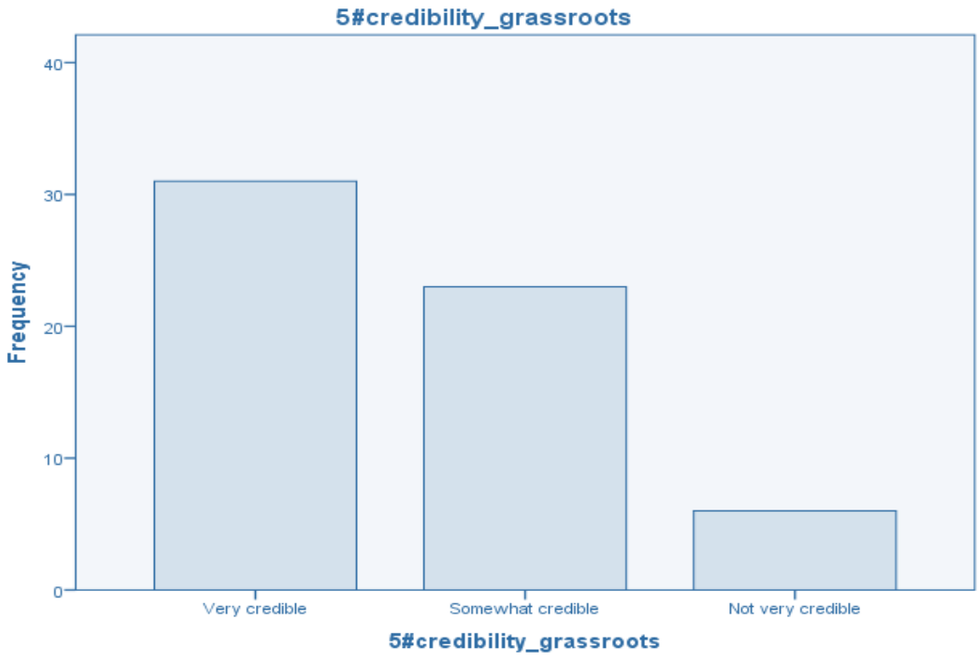

Awareness of Marginalized Communities through Social Media

Most survey participants acknowledged how social media boosts visibility of minority groups participating in climate justice discussions. The survey findings indicate widespread consensus as 48.3% strongly agreed and 43.3% agreed that social media effectively promotes visibility about underrepresented groups' problems. The survey findings showed that most participants (89.7%) backed this assertion while only 1.7% disagreed with it among all respondents. The data indicates that people strongly agree social media is an effective platform which showcases how marginalized communities struggle and contribute to climate activism. The chart shows this pattern explicitly.

6# Awareness_Marginalized

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	29	48.3	48.3	48.3
	Agree	26	43.3	43.3	91.7
	Disagree	1	1.7	1.7	93.3
	Neutral	4	6.7	6.7	100.0
	Total	60	100.0	100.0	

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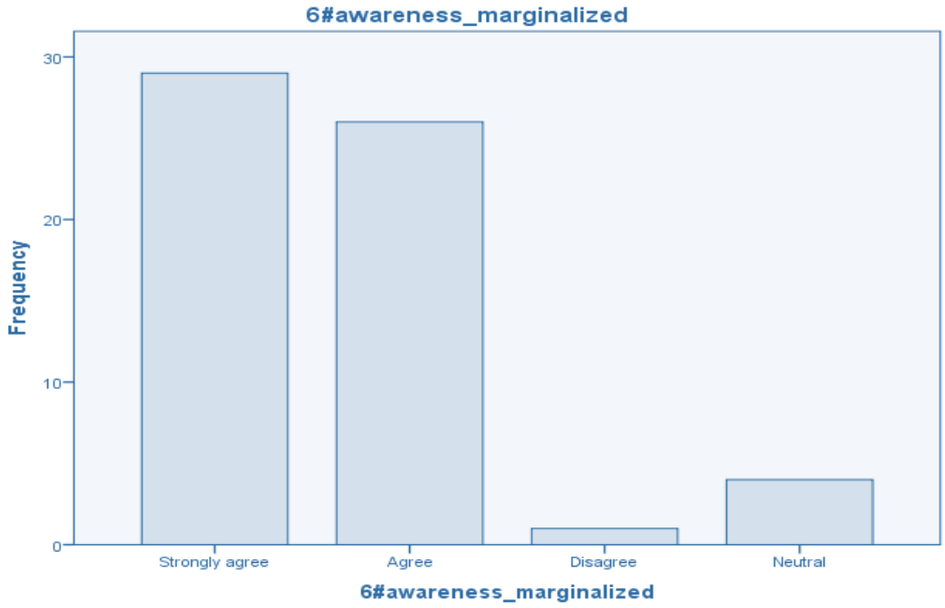

Visibility of Grassroots Climate Activists through Social Media

A large group of participants recognized social media increases visibility for grassroots climate activists because 58.3% agreed and 21.7% strongly agreed with this statement in the study. Among the respondents a minority expressed disagreement at 6.7% but 13.3% showed no clear opinion. Results demonstrate widespread perception of social media as a fundamental tool for enhancing the public visibility of local climate activists based on the depicted bar chart data.

7# Visibility_Grassroots

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	13	21.7	21.7	21.7
	Agree	35	58.3	58.3	80.0
	Disagree	4	6.7	6.7	86.7
	Neutral	8	13.3	13.3	100.0
	Total	60	100.0	100.0	

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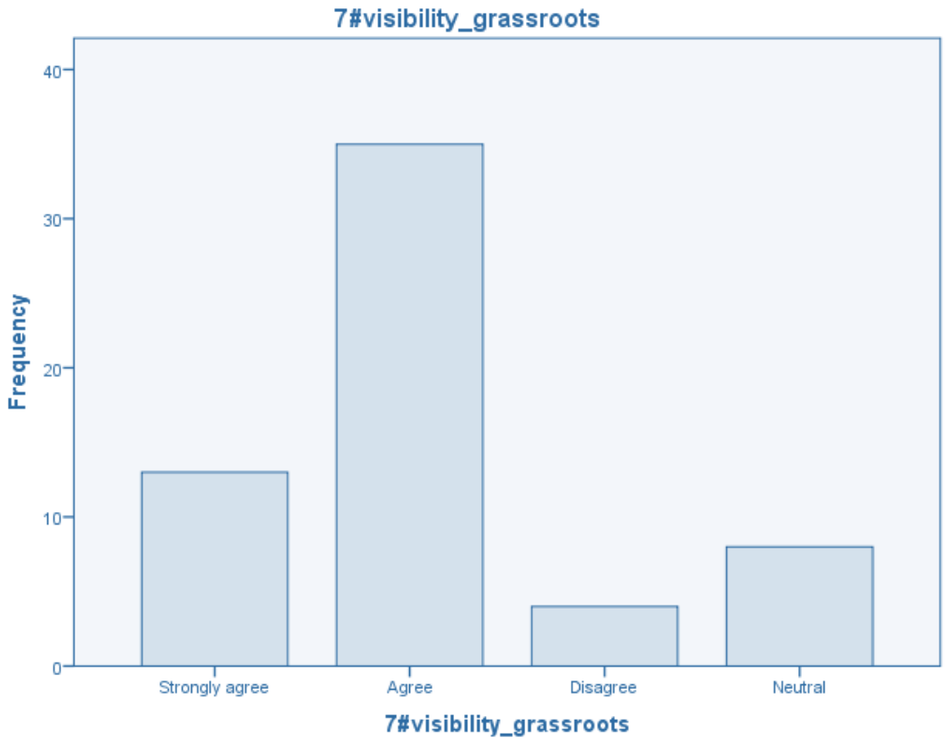

Perception of Climate Urgency Shaped by Social Media

The acquired data demonstrates that most individuals think social media shapes their views on climate change urgency since 58.3% agreed and 20% strongly agreed. Only 5% disagreed, while 16.7% remained neutral. This data reveals social media functions as a persuasive tool that strengthens the recognition of both immediacy and seriousness of climate emergency as shown in the bar chart.

8# Urgency_Climate_Change

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	12	20.0	20.0	20.0
	Agree	35	58.3	58.3	78.3
	Disagree	3	5.0	5.0	83.3
	Neutral	10	16.7	16.7	100.0
	Total	60	100.0	100.0	

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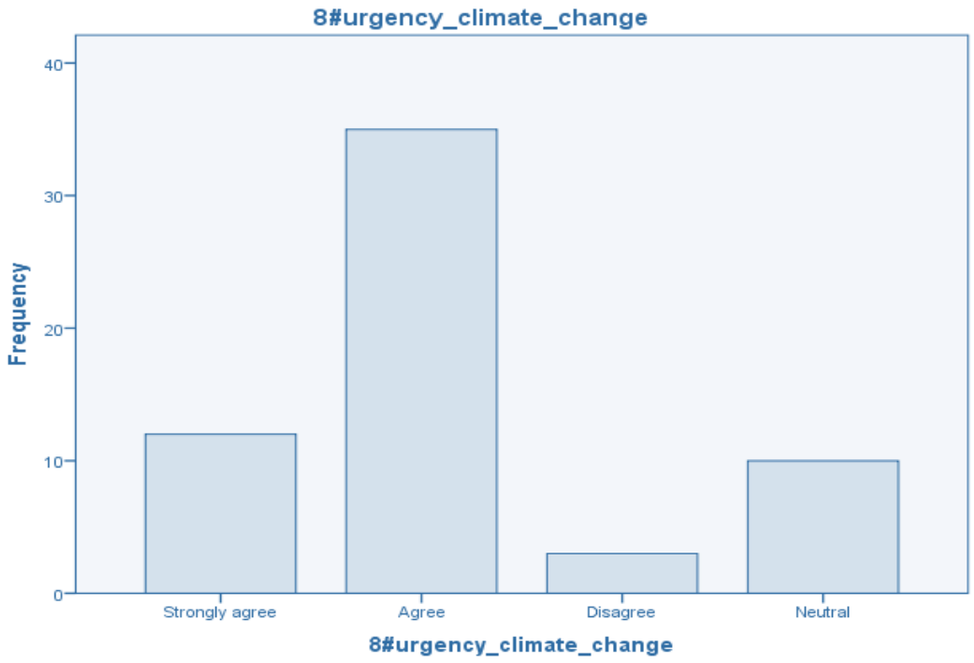

Influence of Social Media on Taking Climate Action

For climate issues, participants displayed a split reaction to social media motivation because 40% showed agreement while 10% demonstrated strong agreement indicating half the participants received the drive to act. A large number of participants adopted a neutral position while only 5% actually disagreed with the influence of social media on climate behavior. The data shows this pattern through the bar graph visualization.

9# Action_Taken

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	6	10.0	10.0	10.0
	Agree	24	40.0	40.0	50.0
	Disagree	3	5.0	5.0	55.0
	Neutral	27	45.0	45.0	100.0
	Total	60	100.0	100.0	

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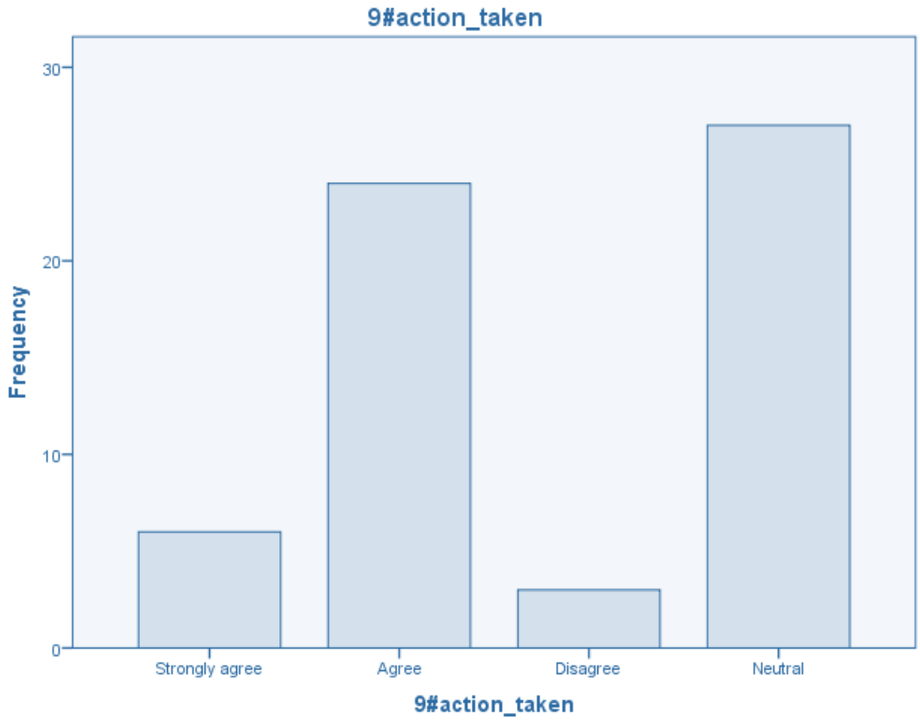

Perceived Empowerment of Grassroots Activism via Social Media

Most participants understood social media actively contributes to the empowerment of climate activists at the grassroots level. The data revealed 56.7% strong agreement combined with 28.3% agreement equating to 85% total agreement. Around 1.7% of participants disagreed with social media's role in helping grassroots voices gain visibility while 13.3% chose to remain neutral but the remaining 85% showed strong support. The visual presentation of data through bars in the associated chart demonstrates this major occurrence.

10# Empower_Grassroots

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	34	56.7	56.7	56.7
	Agree	17	28.3	28.3	85.0
	Disagree	1	1.7	1.7	86.7
	Neutral	8	13.3	13.3	100.0
	Total	60	100.0	100.0	

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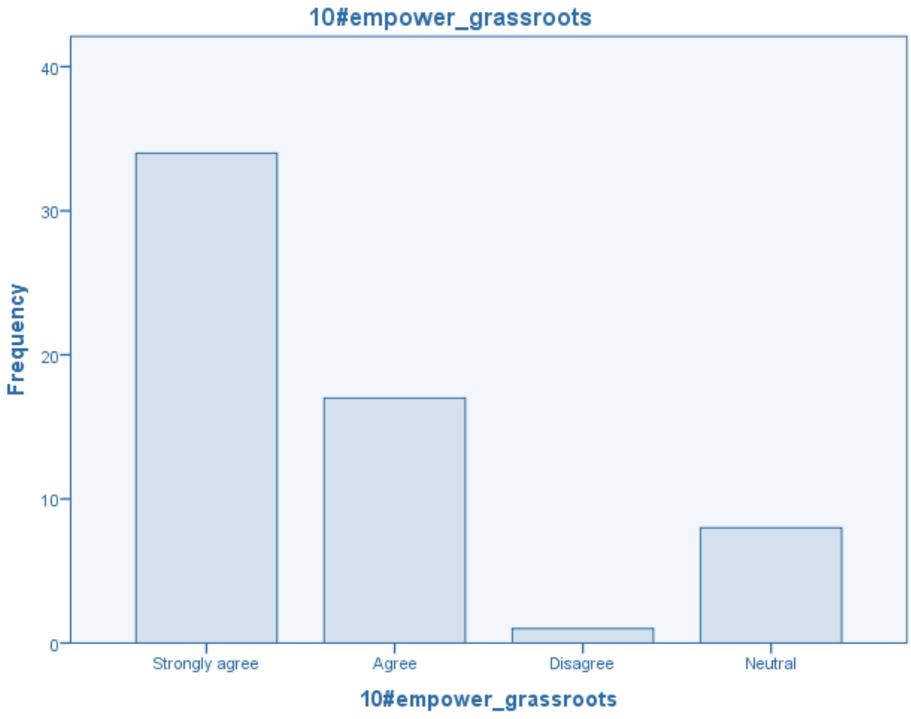

Conclusion

Through the aid of social media the climate activism movement is gradually shifting from a centralized movement with a few big organizations and international institutions. Climate change, as with other issues, is covered by Media, especially social media which are vital sources of information in the population. Individuals seek ideas and attitudes on the problem from both conventional and social media which sets their agenda about the issue. Lack of access to quality information is a key issue in many topics, but especially so with climate change because many of the sources and discussions present the issue as highly scientific and seemingly distant from the lives of individuals. Over the course of couple of decades, enormous variety of media-enabling technologies has emerged and has revolutionized the way the public communicates. Social media has become a powerful tool to communicate; however, it can in no way replace mainstream media but it can give voice to individual activists and movements across the globe that will not be heard and cannot access traditional main media. This allows for a form of decentralized and citizen led activism that is targeted at specific communities where citizens reside. It means that empowering these groups and individuals can enhance the understanding of the climate change problem and make change and develop better adaptive capacity in these communities. As social media becomes a major phenomenon and a strong tool in the new arsenal of activists, the present research aimed at exploring how people employ social media to create a community related to climate change.

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