

Environmental Behaviour and Climate Change Promotion Impact via Social Media Platforms: A Review

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Abstract India is facing one of the most pressing environmental issues, such as problems with deforestation, water pollution, climate change, plastic pollution, and so on. It is humanity's essential task and challenge to protect the natural environment. We're dealing with some tough changes in the environment, so we need to do what we can to help reduce our negative impact on the environment. In this context, it is essential that young generations understand and address environmental issues. Individual pro-environmental behaviors can help to create more eco-friendly standards of behavior, which in turn help to reduce environmental damage. On that note, social media has been proven to influence climate change attitudes and views, while also raising an individual's awareness of the need to act pro-environmentally. It is well known that social media is one of the most widely used communication and media channels in the world. With the increasing use of social media, especially among younger generations, and the growing importance of our climate disaster, it's worth exploring how a widely used persuasive communication tool could influence a person's pro-environment behaviors. This paper employs a qualitative study and aims to understand the level of knowledge, attitudes, and behaviors of young people in favor of environmental behavior and how social media plays a crucial role in positive change in environmental behavior and attitudes. The findings of this paper show that social media is effective in promoting pro-environmental behavior and it also helps to understand the threats of environmental issues, especially climate change.

Keywords Pro-Environmental Behavior, Climate

Change, Environmental Issues, Social Media

1. Introduction

Humans have caused significantly more harm to the planet's soil, water, and air than any other single species among millions. The technology and mobility we use today have altered the universe to suit our comfort and desires. The planet's natural resources have been exploited to the point of overexploitation. Other species have been marginalised. The by-products of all our efforts to make our lives better have been dumped all over the world in pools and pits, seas and lakes, rivers and landfills, and in the air as well. Carbon emissions, population growth, urbanisation, deforestation, and a lack of effective planning on the part of the government contribute to these environmental problems [1]. However, one of the most important factors in the face of such catastrophic situations and serious environmental problems is human apathy and lack of awareness. According to the Intergovernmental Panel on Climate Change (IPCC) report, the Earth and the human race will face catastrophe if the global temperature rises by more than 1.5 degrees Celsius [2]. Millions of people have already been displaced from their homes and much of the ecological infrastructure of the planet has been destroyed as a result of a series of increasingly severe natural disasters. Individuals who demonstrate a higher level of pro-environmental behaviours can significantly help reduce the impact of human actions on environmental

issues [2]. The world has already been desolated with severe natural catastrophes, which have resulted in the displacement of millions of people and the destruction of the planet's ecological infrastructure. In that case, individuals who demonstrate a higher level of pro-environmental behaviors can significantly help reduce the impact of human actions on environmental issues [3, 4].

There are many arguments in favour of changing human behaviour to make it less damaging to the environment. But to do this, the youngsters need to become more aware of environmental issues [5]. The environmental concerns discussed in this context have had profound implications and have presented significant difficulties and threats to both the Earth and its inhabitants. Furthermore, these issues also entail a substantial risk to society, the global economy, and natural systems [6]. In contemporary times, social media has emerged as a highly valuable tool for comprehending and accessing information. Therefore, access to and use of relevant information resources, including media, is essential. In that regard, social media plays a significant part in everyone's life in society. In contrast, social media helps promote pro-environmental attitudes among students of the younger generation [7]. The young generation's pro-environmental behaviour is a reflection and manifestation of a number of socio-consumer trends. These trends include conscious consumption, eco-consumption, and deconsumption. These trends are also related to climate change, which affects a growing part of humanity, but are also linked to media changes. Thus, this paper aims to achieve the following objectives and measures: a) to understand environmental problems and threats related to climate change, b) to understand the impact of social media in promoting pro-environmental behaviours among youngsters; c) to understand pro-environmental behaviours among the young generations.

1.1. Environmental Crisis in Importance of Pro-Environmental Behavior

The physical environment of a human being, of which they are a part and which they depend for their physical functioning, production, and consumption, is known as their environment. Natural resources such as soil, plants, animals, and ecosystems that serve as energy transmitters are included in the physical environment in addition to the elements of air, water, and land. There are many different aspects and characteristics towards the relationship between the physical environment and the well-being of people and communities including a qualitative and quantitative component [8]. India is confronted with a diverse range of environmental concerns, including but not limited to air pollution, water pollution, waste management and pollution of the natural environment, which greatly affect the state of the country. These issues have significant negative impacts on the overall health

and well-being of the country. It is crucial to address these problems in order to ensure a sustainable and clean environment for future generations. Pollution and climate change remains a major issue and threat to India's future. Environmental degradation is one of the primary contributors to sickness, health issues, and chronic economic hardship in the country [9]. It said that current ways of using resources were hurting people and damaging the natural world [10]. Everything from cars to workshops to hometowns to power plants is polluting the environment. In fact, according to a WHO report, a lot of Indian cities like New Delhi are among the world's most polluted.

Many researchers have explored the motivations behind pro-environmental behaviour. According to Thøgersen [11], pro-environmental action is largely driven by personal morality, or an individual's environmental awareness and judgement of what is ethical or immoral towards the environment. There are lots of examples of people doing things that are good for the environment, like having a positive impact on others, being motivated to recycle, having eco-friendly ideas, being empathetic, and having a good understanding of and appreciation for the environment [9]. Since many ecological problems are caused by anthropological behavior, it is important to motivate people to act in a way that is good for the environment. The idea of pro-environmental behaviors is supported by numerous theories, including the theory of planned behavior, the norm-activation model, and the value-belief-norm theory [12]. These theories proved that Individuals with intrinsic values are more likely to adopt environmental behaviors when they are coupled with contextual motivation. While humans are concerned about the environment, certain situational factors correspond with ecological principles (respect for the earth and natural environment), while others obstruct pro-environmental behavior. As mentioned above, significant pro-environment behavior is defined by values. The fundamental value is that humanity has only one planet, which must be maintained as a healthy and supportive environment. Pro-environment behavior in food and personal waste management plays a vital role in personal well-being and in the future of our planet. On that note, climate change is one of the greatest ecological issues. It is crucial to understand the cause and act accordingly to abide by the environmental effects of global climate change.

1.2. The Importance of Understanding Climate Change

Climate change is one of the most significant impacts on today's ecosystems, with global and local impacts as well as modest impacts. The initial way to evaluate the environmental effects of enduring ecological changes was to examine their effects on climatic variables (the duration of repeating annual events such as the start of the planting

season, flowering times, and mating seasons) [13]. The ongoing climate changes include mainly temperature increases above past efforts, changes in the seasons and a variety of shifts in rainfall patterns, of these measures [14], and we are becoming more aware of the anthropogenic influences underlying these climate changes [15]. Climatological changes have been relatively neglected in scholarly discourse, despite their significant implications for both environmental and evolutionary processes over extended periods of time, influencing species at population, community, and ecosystem levels. There's been a lot of focus on climate variability changes, which will affect species at both ecological and evolutionary timescales, as well as at population, community, and ecosystem sizes. Climate change can cause a lot of different things, like rising temperatures, melting polar ice, and more extreme weather. We need to act fast to cut down on greenhouse gases and switch to more renewable energy sources to help reduce the effects of climate change and make sure future generations have a better future. Youngers should be a change and responsibility along with public and governmental responsibilities in mitigating climate change. It also focused on individual actions and raising awareness of climate change. The economic framework outlined the economic motivations behind sustainability, economic growth, energy conservation, carbon taxes, environmental initiatives, etc. [16]. The media is where a lot of people get their information and knowledge about the environment and climate change. It's a great way for people to learn about the world around them, and it helps make people more aware of what's going on.

1.3. Social Media in Promoting Environmental Behavior

According to the Digital and Social Media Landscape, the active social media user base in India had a significant increase, reaching 330 million in 2019. Projections suggest that this figure is anticipated to further expand to 448 million by the year 2023. The advent of social media as a means of communication has rendered it plausible for individuals throughout the globe to experience increased connection. According to some, the media is crucial in spreading awareness of "the environment." According to numerous message-centered or micro-audience studies, social media may be crucial in educating the public about the difficulties and characteristics of the environmental disaster that they are unable to directly experience because of its global and long-term effects [17]. According to Hansen [18], the media shape public attitudes towards climate change and influence pro-environment behaviour. The way environmental issues are presented in the media, including climate change, influences an individual's choice to act on environmental issues or engage in activities that promote the environment. As non-traditional forms of media

become more popular, social media plays an increasingly important role in understanding how individuals' attitudes and behaviours change. In this context, it is essential to include social media in the scope of inquiry. Numerous studies have shown that social media has influenced behaviour over time [19]. The media also gives people important systematic information about environmental issues and problems, like climate change and how to protect the environment, and helps people change their views and beliefs about this industry.

The media has been getting more and more interested in covering environmental issues and problems over the last few years [20]. Social media platforms like WhatsApp, Facebook, Twitter and, Instagram messages typically focus on the threats, difficulties, and consequences of environmental issues on the environment, humans, and animals. Environmental reporting in the media assists readers in comprehending the concepts that influence their opinions and beliefs. These issues have the power to influence public opinion and drive change. Through their reporting, journalists can bring attention to pressing environmental concerns, provide in-depth analysis, and hold individuals and organizations accountable for their actions. Additionally, media professionals can also help educate the public about potential solutions and inspire individuals to take action towards a more sustainable future. They are often unaware of the numerous issues associated with the environment, which leads to muddled writing. Factors such as advertising pressure, editorial policy and ownership, journalistic culture, and temporal and spatial constraints all influence environmental reporting. As a result, people, especially young generations are increasingly reliant on social media in order to form their opinions and act on environmental matters [20].

2. Literature Review: Environmental Behaviors and Climate Change Impact on Social Media

Many researchers and educators gave insights into how the use of social media can influence environmental behaviour. Qayyoom & Hameed [21], conducted a survey study to assess the level of adolescent attitudes, actions, and concern for the environment, which concerns part of social media's role. A quantitative survey methodology was employed to gather data from a sample of 476 male and female undergraduate students in Islamabad, Pakistan. The findings of the study indicated that young individuals with higher levels of education possessed a thorough understanding of the environment through their use of social media platforms. Gómez & Gómez [22], in the 2017 survey study, analysed the effect of using social media to bring awareness of climate change with three contributions, such as socioeconomic determinants of climate change. The second is the effect of media usage,

such as YouTube, Facebook, Instagram, Twitter, WhatsApp, Snapchat, etc. The third multi-platform and its effect. The study's findings show that social media has played a role in raising environmental awareness. Wan & Du [23], specified that the significance of social capital in promoting environmentally responsible behaviour cannot be overemphasised, irrespective of the form in which environmental knowledge is disseminated to the public. The study looks at four aspects of social capital Chinese General Social Survey 2013 of social trust; social norms; social networks, and social engagement, in order to understand how social capital influences individual and public environmental behaviour. The study findings suggest, policy suggestions on institutional issues include expanding funding for informal environmental organisations, implementing differentiated sustainable development education, and enhancing the environmental information transmission mechanism. Jaska et al. [24] conducted a study to determine environmentally and socially responsible behaviour and to evaluate the impact of mobile applications on the motivation of young people in Poland. A survey of 772 young people was conducted to determine the role of the mobile app in pro-environmental activities. The result of the survey shows that apps like Vinted, Veturilo, and GdzieWyrucic. Their environmental performance was significantly higher in almost all domains encompassing socially and environmentally responsible practices.

Shah et al. [25] discuss how climate change is a pressing issue. The researchers employed social networks (SNS) in understanding human-environmental interactions and altered the public's understanding of climate variability and its implications. The study explored the parallel process (EPP) to identify the impact of climate change-relevant information on social networks on individuals' pro-environment behaviours. These findings have suggestions for media and government policymakers who should broadcast or communicate environmental data in the most trusted environment, with trusted sources, in a timely and effective manner, and without excessive negative impacts. Li & Fang [26], in their study, say that the decreasing supply of natural resources, the swiftly increasing destruction of the planet, and the looming threat of global climate change have prompted an increase in environmental education. They conducted a study on the role of social networking sites (SNS) in encouraging pro-environmental behaviour (PEB). The study results show that SNS adds value and impacts behavioral change towards PEB. Thirumalaiah, & Aram [16], analysed the importance of media in bringing awareness through media like newspapers. They analysed and identified the Tamil and English newspapers in India to find the major environmental crisis. The results suggest that newspapers, particularly Tamil-language newspapers, should focus more on the current environmental issues, which are likely to be related to climate change. Providing sensitive coverage of environmental issues may aid readers in

understanding their complexity. Thaker et al. [27] article discusses how the media is covering global warming and how people in India feel about it. The subsequent discourse delved into the significance of the media in disseminating knowledge to the general populace regarding environmental hazards. Climate change is a matter of global significance, with developing nations such as India frequently experiencing heightened vulnerability to its consequences as a result of educational gaps, which in turn leads to a lack of public awareness. Ragini et al. [1] in their article, briefs that when dealing with a natural disaster, it's important to be aware of the ever-changing environment. One of the primary obstacles encountered in the endeavour to increase awareness is the limited availability of various information sources and resources. Social media plays a significant role in facilitating a comprehensive understanding of the situation at the catastrophe site, as it directly disseminates information from individuals directly impacted by the event. By appropriately utilising the available knowledge, it is possible to effectively manage a crisis situation and mitigate the potential hazards posed to individuals or locations impacted by the calamity. Social media and the news media have a significant impact on how people perceive climate change, how they feel about it, and how they behave in response to it. It's also important to note that only a few studies have been done on how the media covers climate change in poor and developing countries like India, which is the world's third biggest polluter and a major player in global climate change regulations. It is noteworthy that social media covers the knowledge about climate change and environmental crisis, awareness effectively [28].

Dutta [29] examines the functioning of social media marketing (SMMA) for Indian handicraft products. This study examines the impact of brand awareness, brand image, and brand equity. Additionally, this study examines the potential of social media marketing activities (SMMA) in promoting handicraft products, focusing on their ability to generate awareness and establish brand recognition among competitors in the industrial sector. Consequently, this increased visibility is expected to drive greater demand for these products. This study represents the inaugural examination of the marketing potential of handmade products across various social media channels. [30] Verma & Grover's [30] research examines the utilisation of social media platforms to facilitate the promotion of environmentally sustainable educational institutions, commonly referred to as green schools, within the Indian context, with a specific focus on the state of Gujarat. This study is grounded in qualitative data obtained through interviews conducted with 35 principals of green schools who were actively engaged in observing and participating in the utilisation of social media platforms for the purpose of raising awareness and advocating for sustainable education. This research investigates the usage of several social media

platforms, including Facebook and YouTube, as well as email and text messaging, in promoting the spread of information and improving public awareness of environmentally friendly schools. Extensive scholarly investigations have been conducted to examine the utilisation of social media as a means to advance the notion of green schools. However, there remains a dearth of research pertaining to its application within educational institutions. It is crucial to recognise the significance of environmental consciousness. Rodrigues & Niemann [31] examine the utilisation of social media platforms as a means of maintaining communication with individuals in India, and explore its implications for the news media industry. This analysis employs the theoretical framework of agenda creation to demonstrate the efficacy of social media within the contemporary digital landscape. Additionally, an examination is conducted on a study that utilises social network data to ascertain the identities of the objective of this study is to analyse the Twitter followers of Prime Minister Modi and determine the most prominent persons involved in the Clean India campaign. In addition, the study also analysed year-end Twitter data from Clean India to investigate the subjects and trends of discourse, the dynamics of interpersonal communication on Twitter, the influence of social media on the Indian mainstream media, and the reaction of news organisations to the changing political environment.

Climate change is one of the global issues in the 21st century. Falkenberg et al. [32] discuss how climate change has emerged as a prominent and consequential social and political concern in the contemporary era. They conducted a study aimed at examining the discourse surrounding the subject matter by conducting an analysis of Twitter interactions spanning the years 2014 to 2021. The findings of our study indicate that there is a clear ideological divide, as evidenced by the bimodal distribution of climate scepticism, which suggests that the year 2019 played a significant role in the escalation of climate scepticism on the Twitter platform. The surge in question may have been influenced by political posturing and a potential backlash against direct action by climate advocates, as indicated by our statistics. Thomas et al. [33] say that the implications of recent extreme weather occurrences worldwide illustrate the inequitable impacts of climate change on different populations, including those residing in geographically isolated regions. The development of differential vulnerability to environmental risks is a result of a multitude of socio-economic, historical, and political elements that interact in various levels of analysis. They conducted a case study, and the synthesis is organised based on four fundamental topics: cultural factors and knowledge. These themes are explored from the perspectives of four distinct social science disciplines, namely cultural anthropology, archaeology, human geography, and sociology. The examination of human vulnerability using social science methodologies offers valuable perspectives on the origins

of climate change hazards and the necessary coping mechanisms that individuals must employ to address these risks. The study finds that adopting a dynamic perspective on vulnerability is likely to optimise the effectiveness of mitigation and adaptation techniques. Pearce et al. [34] paper presents a comprehensive and analytical evaluation of the existing body of research on the intersection of social media and climate change, which is a unique contribution in the field. The analysis underscores three primary observations from the existing body of literature. Firstly, there is a notable inclination towards studies conducted on the Twitter platform. Secondly, the conventional methodologies employed to investigate climate change via social media are examined, encompassing the examination of various publics, topics, and professional communication. Lastly, substantial empirical findings are identified, including the utilisation of mainstream information sources, discussions pertaining to the concept of “settled science,” the presence of polarisation, and reactions towards temperature anomalies. Consequently, this study suggests some areas of the existing literature that require attention in future research endeavours. These areas include qualitative investigations, visual communication, and alternate platforms to Twitter. Ultimately, this paper advocates for additional investigation that goes beyond the narrow scope of scientific communication and instead delves into a comprehensive examination of the public’s perception of climate change and its potential impact on society.

3. Findings

The principal finding of the study suggests the influence of individuals’ pre-existing value systems and the effectiveness of fostering pro-environmental views inside virtual communities on the expansion of popular social media platforms, including Instagram, Twitter, WhatsApp, and other similar platforms in India and other countries. The use of social media platforms among youngsters has the potential to exert a positive influence on individuals, encouraging them to engage in environmentally responsible behaviours. Numerous prior studies have consistently indicated that there exists a positive correlation between location attachment and pro-environment behaviours. This research has contributed to the comprehension of the significance of human-land connections in fostering pro-social behaviour using social media. Additionally, the significance of emotions in pro-social behaviours has been demonstrated. Nevertheless, an aspect that remains unexplored is the functioning of place attachment within the context of the social media era. The advent of the network society has led to the restructuring of local geographic organisations. According to our research findings, it is essential to take into account the significance of social media when examining the impact of place attachment on pro-social

behaviour within the contemporary media environment. Without a comprehensive understanding of the influence of social media on shaping individuals' sense of place attachment, it becomes challenging to effectively foster pro-social attitudes towards climate change and the environmental catastrophe among young generations in India. Based on the findings of the research, the use of social networking platforms by young individuals proved advantageous, as it facilitated their comprehension of the complexities surrounding environmental and climate change. The utilisation of social media research can provide significant insights into the development and spread of environmental movements. A primary constraint within this domain pertains to the predominant focus of study on the platform of Twitter.

4. Discussion

There's a lot more research that needs to be done on how social networks can be used in educational settings, and it looks like new studies might look at how social media communication can affect educational outcomes. The argument retains significant validity in the context of emerging educational difficulties and ideas like education for personal or social change, which is the ideal educational process that has both transformational and transmissive aspects. In India, many campaigns undertaken by governments and non-governmental organisations (NGOs) to promote environmental protection and awareness-raising activities are a regular occurrence. Nevertheless, the extent to which social media influences behaviour change has yet to be thoroughly investigated. Social networking applications such as Facebook, YouTube, Instagram, and Twitter are widely used and popular in India. The government and NGOs can utilise these social media platforms to serve as effective tools for disseminating knowledge about environmental issues and risks associated with climate change and awareness about environmental issues. These platforms have the ability to effectively raise awareness and motivate many people towards environmentally friendly practices by making use of social media's broad popularity and impact. Social media use may also promote engaged discussion and involvement, enabling people to take an active role in environmental initiatives that can bring about actual change. The significance of this phenomenon lies in its contribution to our comprehension of the transformation of social behaviour within the context of environmental campaigns in the era of social media. The results indicate that young individuals with higher levels of education possess a strong comprehension of environmental matters. However, there appears to be a notable disparity between this knowledge and the actual implementation of environmentally friendly behaviours, as the observed level of pro-environment conduct is considerably lower. This

study has the potential to provide valuable insights for individuals seeking to enhance their understanding of strategies for promoting pro-environmental behaviour within the framework of contemporary climate change issues.

5. Conclusions

This paper implies the importance of promoting sustainable individual behaviour, which is equally important as encouraging political and the objective of implementing economic reforms which is to reduce the negative impacts of anthropocentric climate change. and accomplishing a more sustainable future. The paper suggests that the overall quality of social media content may influence the subsequent adoption of environmentally friendly behaviors. By encouraging more eco-friendly social norms, individual actions may help to lessen our overall environmental impact. Understanding how these initiatives could be strengthened is crucial for lowering the likelihood that upcoming environmental problems will contribute to climate change. Social media platforms have proven to be effective in conveying information and creating awareness regarding environmental concerns, hence facilitating understanding and identification of environmental hazards and challenges. The findings of the study revealed the significant impact made by social media. It can play in teaching and motivating youngsters to take a more pro-environmental viewpoint.

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