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Emotional Resonance in Transnational Digital Climate Activism: Exploring the Perspectives of University Students in Darmstadt

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Abstract: ***In the face of the profound consequences of climate change, there is an increasing need to explore how emotions transcend borders in the digital realm. It is important to empahasize the central role emotions play in cultivating international solidarity. This study delves into the emotional landscape of transnational digital climate activism, focusing on the perspectives of university students in Darmstadt, Germany. Through a comprehensive survey involving 192 participants, the research seeks to understand the potential of emotional resonance in mobilizing collective action and fostering a profound sense of global interconnectedness. By capturing the thoughts and feelings of students, the study aims to enrich our understanding of the impact of emotional resonance in this context, offering valuable insights and practical recommendations for effectively harnessing its power in driving sustainable environmental transformation.***

Keywords: ***Transnational Digital Climate Activism, Emotional Resonance, Social Movements, Digital Technologies, Climate Change Communication, Mixed-Methods Approach.***

1. INTRODUCTION

Digital technologies and social media platforms have, in recent years, expanded the reach of climate activists, allowing them to transcend geographical boundaries and connect with a global audience. While existing research consistently highlights the power of emotions in shaping public opinion and steering collective action (Fiske & Taylor, 2013; Van der Linden, 2015), the specific mechanisms through which emotional resonance influences transnational digital climate activism remain relatively unexplored.

In this context, the emergent phenomenon of transnational digital climate activism has gained prominence, utilizing digital technologies to raise awareness about climate change, mobilize

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individuals toward proactive engagement, and influence governmental and corporate policies and practices (Carless & Hackworth, 2017).

The pivotal role of transnational digital climate activism lies in its ability to facilitate global networking and collaboration in the fight against the climate crisis. Additionally, it expedites the dissemination of information and ideas, thereby fueling the drive for transformative change (Brulle, 2012).

Notably, students have become increasingly instrumental within the realm of digital activism. Leveraging social media, websites, and various digital tools, students actively participate in heightening awareness, orchestrating protests, and pressuring governmental and corporate entities to instigate substantial change (O'Brien et al., 2018).

Amidst this burgeoning landscape of transnational digital climate activism, a critical aspect deserving further exploration is the role of emotional resonance. Specifically, understanding how emotional resonance influences the perceptions of students engaged in this movement remains an essential inquiry. Unraveling the impact of emotional resonance in transnational digital climate activism is vital, as it can shed light on how emotional connections within the movement shape students' perspectives on climate change and their role in addressing it (Smith & Leiserowitz, 2020).

2. RELATED WORK

Previous research on transnational digital climate activism and emotional resonance has predominantly focused on the role of emotions in social movements and the impact of digital technologies on climate activism. For instance, Fiske and Taylor (2013) explored how emotions can steer collective action, demonstrating that emotional engagement significantly influences public perceptions and participation in climate movements. Similarly, Van der Linden (2015) investigated the emotional underpinnings of climate change communication but their study was limited by its focus on theoretical frameworks without empirical validation.

In contrast, Carless and Hackworth (2017) provided insights into the practical applications of digital tools in climate activism, highlighting how these technologies enable activists to transcend geographical boundaries and mobilize global support. However, their methodology primarily relied on case studies, which may not fully capture the broader trends in digital activism. Our research builds upon these foundations by addressing the specific gap of understanding how emotional resonance impacts transnational digital climate activism from the perspective of university students. Employing a mixed-methods approach that combines qualitative interviews with quantitative surveys, we provide a more nuanced analysis of how emotional resonance can drive sustainable environmental transformation. Unlike Fiske and Taylor (2013) and Carless and Hackworth (2017), who primarily focused on either emotional engagement or digital tools, we explore the intersection of these aspects, providing a more comprehensive understanding of the dynamics at play in digital climate activism.

2.1 The Emergence and Evolution of Digital Climate Activism

The advent of digital technologies has brought about a revolutionary transformation in the landscape of communication, organization, and mobilization, leaving an indelible mark on the climate change movement. Digital activism has not only connected activists globally but has

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also facilitated the seamless sharing of information and resources, orchestrating campaigns that have elevated awareness of the climate crisis and exerted pressure on governments and businesses to take decisive action (Chadwick, 2015).

Digital climate change activism found its early roots in the 1990s. The 1992 Earth Summit in Rio de Janeiro, a milestone in international environmental conferences, led to the establishment of the United Nations Framework Convention on Climate Change (UNFCCC). The UNFCCC website emerged as a pivotal online hub for climate change information, setting the stage for the digital era (Schiermeier, 2012).

In 1997, the Kyoto Protocol, a groundbreaking international treaty with binding targets for reducing greenhouse gas emissions, was adopted at the UNFCCC COP3 meeting in Kyoto, Japan. The protocol's website became another vital online resource for disseminating knowledge about climate change (Almer & Winkler, 2017).

The landscape of climate change activism underwent a significant shift with the proliferation of social media platforms in the early 2000s. Platforms such as Facebook, Twitter, and Instagram simplified communication and information sharing, raising climate change awareness and mobilizing individuals for collective action (Askanius & Uldam, 2011).

A standout example of this social media-driven activism is the #FridaysForFuture movement, initiated by Swedish teenager Greta Thunberg in 2018. Thunberg's decision to protest government inaction on climate change by skipping school every Friday and her adept use of social media to amplify her message ignited a global movement, drawing millions into strikes and protests (Han & Ahn, 2020).

Central to digital climate activism is the transformative role played by digital technologies, particularly social media. These platforms have become powerful tools for mobilization and organization, allowing activists and organizations to disseminate information, interact with supporters, and coordinate actions on a global scale (Bimber et al., 2012). Hashtags like #FridaysForFuture and #ClimateStrike have emerged as rallying points, showcasing the potential of digital networks to unite people across borders (Trottier & Fuchs, 2014).

Moreover, digital technologies facilitate the rapid dissemination of information and ideas, crucial for building momentum within the movement (Wapner & Elver, 2016). Online forums, blogs, multimedia content, and data visualization tools provide platforms for activists to share knowledge, strategies, and success stories (Bennett & Segerberg, 2012).

Digital activism for climate change has taken various forms beyond social media, including online petitions to pressure governments and businesses, crowdfunding platforms to raise funds for initiatives, and online platforms for sharing information and connecting activists (Hart & Nisbet, 2012; von Ritter & Black-Layne, 2013).

As digital technology continues to evolve, new horizons are constantly being explored. Emerging technologies like virtual reality and artificial intelligence are now being harnessed to develop innovative approaches for raising climate change awareness and mobilizing action (Askanius & Uldam, 2011). The trajectory of climate change activism is being shaped by these technological advancements, offering new avenues for impactful engagement.

2.2 Emotional Resonance in Climate Change Activism

Emotional resonance emerges as a crucial dimension within the realm of climate change activism, holding the potential to profoundly influence individuals' perceptions, engagement,

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and actions. This potency lies in the capacity of messages, stories, and actions to evoke emotional responses, motivating audiences to take meaningful steps in addressing the climate crisis (Nisbet & Kotcher, 2009). Messages that tap into a spectrum of emotions, including fear, empathy, hope, and anger, prove to be particularly effective in conveying the urgency and gravity of climate change (Leiserowitz et al., 2013).

In the dynamic landscape of climate change activism, emotional resonance serves as a dynamic force, enhancing message receptivity and encouraging individuals to translate their concerns into concrete actions. Climate change narratives that evoke empathy towards vulnerable communities affected by climate-related disasters have the potential to galvanize support for mitigation and adaptation efforts (Feldman & Hart, 2018). Similarly, stories that instill hope and optimism about the potential for positive change can serve as powerful catalysts for inspiring both individual and collective action (Gillard et al., 2015).

Beyond its impact on individuals, emotional resonance plays a significant role in fostering a sense of collective identity among climate activists. It contributes to the creation of a shared emotional experience, forming a bond that unites individuals in their unwavering commitment to addressing climate change (Gustafson, 2020). This sense of collective identity serves as a vital element in strengthening solidarity within the climate change movement and ensuring long-term engagement.

Human stories, often more emotionally resonant than cold, abstract statistics or technical data, offer a powerful means to make the climate change issue more relatable and to ignite empathy (Leiserowitz et al., 2013). These stories humanize the impacts of climate change, compelling people to take action to prevent further suffering.

While fear and anger can be effective in motivating action, it is equally crucial to leverage positive emotions like hope and optimism. Narratives that highlight successful climate initiatives, innovative solutions, or inspiring movements can instill a belief in the possibility of positive change, fostering increased engagement and support for climate action (Capstick et al., 2015).

An understanding of emotional diversity is crucial within climate change activism. Recognizing that what resonates emotionally in one culture or community may not have the same effect in another allows for tailoring messages to the specific emotional triggers of various audiences, thereby broadening the reach and impact of climate change activism (Harth, 2013). Respect for and recognition of these diverse emotional responses are essential in creating a more inclusive and effective climate change movement.

3. METHOD

The research employs an exploratory approach, utilizing a survey method to gather insights from students in the city of Darmstadt, Germany. Specifically, the survey targets students attending two prominent universities: Hochschule Darmstadt and TU Darmstadt. The primary objective of the survey is to delve into students' perceptions concerning the impact of emotional resonance in transnational digital Climate activism.

The survey samples have been selected for convenience, to obtain perspectives from a diverse group of students. In total, 192 students participated in the surveys, comprising 105 females (54.68%) and 87 males (44.32%), with ages ranging from 18 to 30 years.

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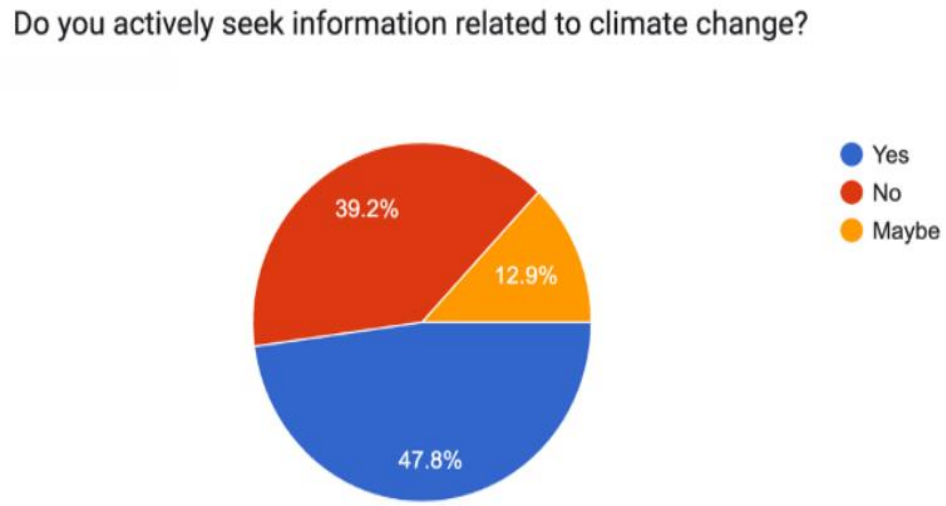
It's crucial to highlight that the study does not seek to make sweeping generalizations but rather aims to offer an approximation of the perceptions held by students within this specific context. The choice of Hochschule Darmstadt and TU Darmstadt was based on convenience, providing the researcher with ready access to a representative sample of students from both institutions. This focused approach allows for an in-depth exploration of the topic within the chosen demographic, recognizing the limitations inherent in the specific context. The findings, therefore, offer valuable insights into the perspectives of students in Darmstadt regarding the influence of emotional resonance in the realm of transnational digital climate activism.

4. RESULTS

4.1 Students' Awareness of Digital Climate Change Activism

The initial phase of the research focused on assessing students' awareness of digital climate change activism and their involvement with online platforms dedicated to this issue. The results indicate that a noteworthy percentage of participants, approximately 47.8%, confirmed actively seeking information about climate change through diverse digital sources.

Fig 1.



Nevertheless, when questioned about their favored sources of information in the domain of digital climate change activism, an intriguing pattern unfolded (fig 1). A significant 88% indicated a preference for social media, whereas 9% accessed climate change-related information through dedicated climate change websites and platforms. Surprisingly, 24% disclosed that they primarily relied on mainstream news outlets, encompassing television, radio, and websites, for updates on climate-related issues. This implies that, despite the widespread availability of information through mainstream news outlets, students place considerable value on sources within the realm of social media.

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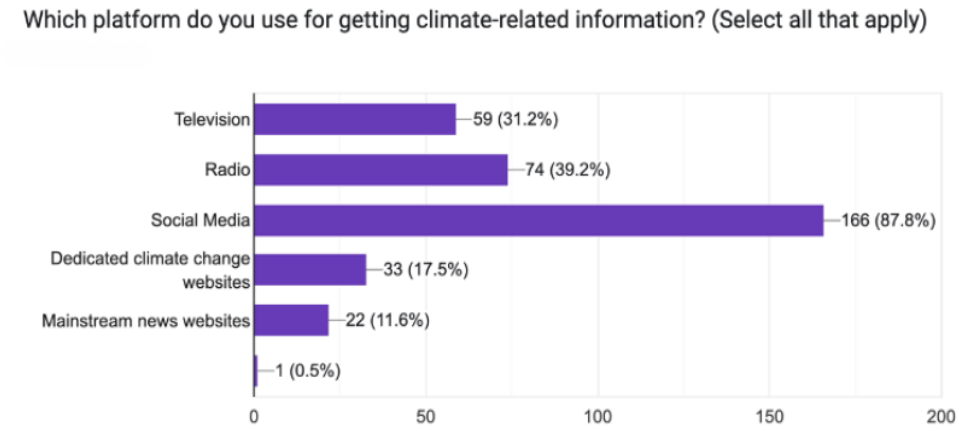
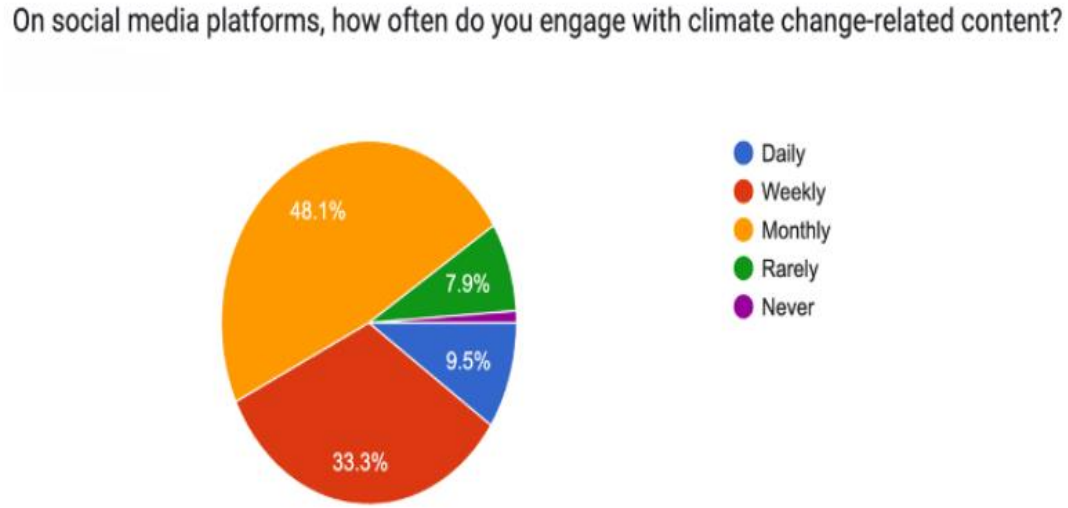
Fig 2.



Furthermore, the survey explored the frequency and depth of engagement with climate change content on social media (fig 3). Around 48.1% of respondents indicated their involvement with climate change posts on social media monthly, while 33.3% engage with climate related post weekly, which represent a significant number.

Fig 3.



Transitioning from passive consumption to active engagement with climate change topics, the survey delved into students' interests (fig. 4). The findings revealed that climate-related events and news held the highest appeal, with 69.8% of respondents expressing a keen interest in these subjects. Climate change science and policy captured the attention of 43.4% of participants, while environmental activism and sustainability issues attracted interest from 38.2% of respondents.

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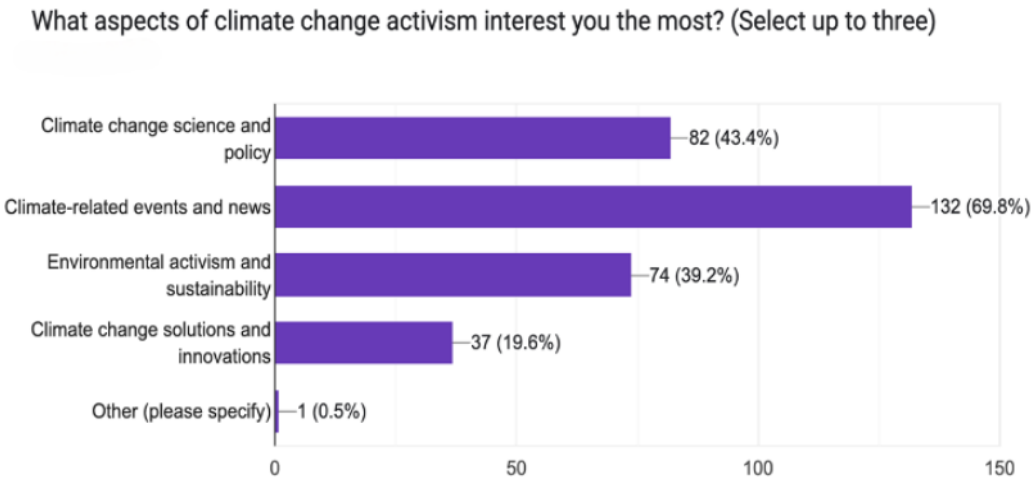
Fig 4



The study extended its exploration to the practice of critically evaluating climate change information. Fig 5 and 6 show that a notable 51.1% of students confirmed that they regularly cross-reference information from multiple sources to ensure its accuracy and reliability. Within this cohort, 43.1% indicated that they engaged in this practice specifically to validate the initial information received, while 52.7% sought additional data to enhance their understanding. A minority, comprising 4%, cited alternative motivations for fact-checking.

Fig 5

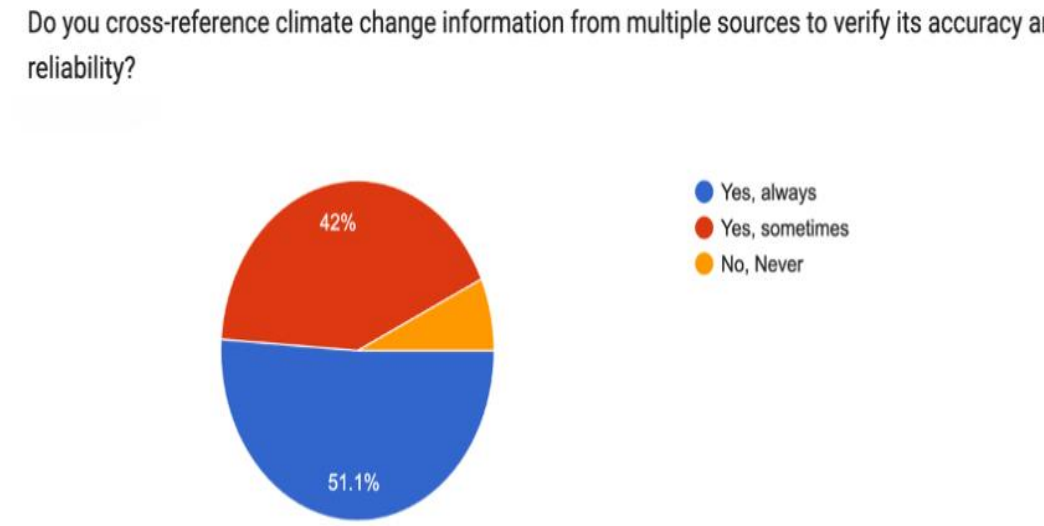


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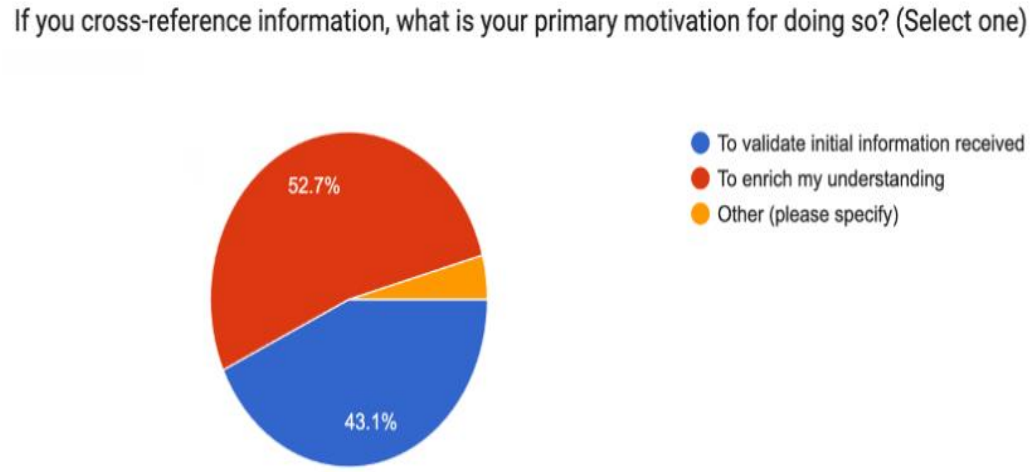
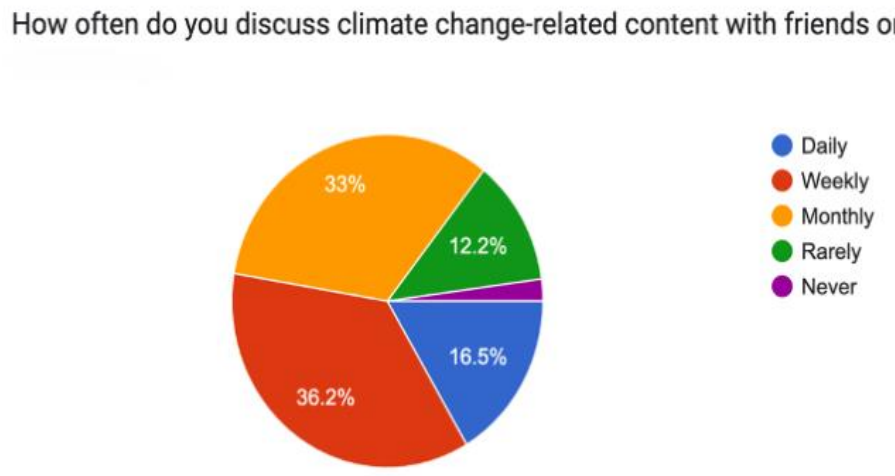
Fig 6



Furthermore, the study delved into the extent to which students engage in discussions about climate change with their networks (fig. 7). A noteworthy 36.2% of respondents reported discussing climate change-related content with friends and family weekly. While, 16.5% disclosed that they engage in such discussions daily, underscoring the salience of this issue in their social interactions.

Fig 7



In summary, the results of this segment provide insights into students' awareness, engagement, and critical evaluation of digital climate change activism content. The findings underscore the multifaceted nature of their interactions with climate-related information in the digital landscape, shedding light on their information-seeking behaviors and communication patterns in this context.

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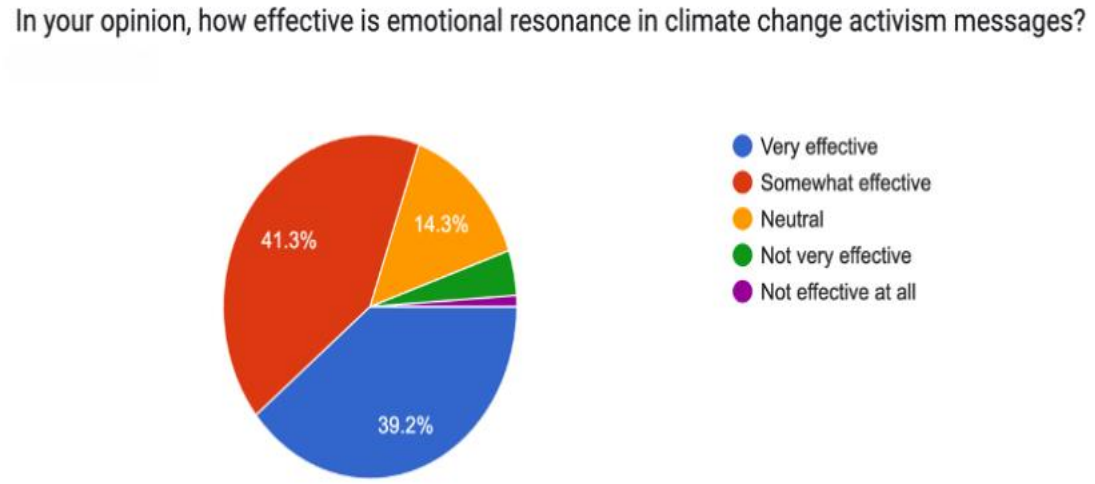
4.2 Students' Perceptions of Emotional Resonance and Climate Change Messaging

The research also assesses students' opinions on the effectiveness of emotional resonance in climate change activism messages. Emotional resonance, in this context, refers to the capacity of a message to elicit strong emotional reactions, such as empathy, concern, or urgency, to establish a personal connection with the audience and inspire them to take action.

Figure 8 visually represents students' perceptions of the effectiveness of emotional resonance in climate change messages. It reveals that 39.2% of participants consider it very effective, 41.3% find it somewhat effective, 14.3% hold a neutral stance, and only 5.3% perceive it as not very effective or not effective at all.

Fig 8



To gain deeper insights, students were invited to share their personal experiences with climate change messages that had emotionally resonated with them. Participants provided brief descriptions of their encounters:

"The emotional resonance in certain climate change messages drove me to take concrete steps. For instance, I shared a video about the impact of climate change on wildlife with my social network. It sparked conversations and prompted some of my friends to get involved too." (Student 1)

"When I came across a deeply emotional climate change documentary, it had a profound impact on me. I was moved to join a local environmental group that organizes clean-up events. It made me realize the urgency of the situation and inspired me to do something about it." (Student 2)

"I often encounter emotional climate-related posts on social media. While they do raise my awareness and concern, I must admit that they haven't directly motivated me to participate in events or initiatives. I prefer contributing in other ways, like donating to environmental organizations." (Student 3)

"One emotional message, in particular, struck a chord with me. It was about the impact of climate change on vulnerable communities. It inspired me to support a local climate charity by volunteering my time at their awareness campaigns. Emotional resonance was a catalyst for my involvement." (Student 4)

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5. DISCUSSION

The emphasis on social media as a primary source of climate change information signifies a significant shift in information consumption patterns among students (Bimber et al., 2012). This preference for traditional news outlets underscores the influential role of digital platforms in shaping climate consciousness. The high engagement frequency and keen interest in climate-related events highlight the active involvement of students in the digital climate activism sphere, pointing towards the potential of these platforms for fostering awareness and engagement.

A noteworthy aspect is the discerning approach adopted by students in critically evaluating climate change information (Wapner, 2016). The practice of cross-referencing from multiple sources showcases a commitment to ensuring the reliability of consumed information. This digital literacy is crucial in an era where misinformation can proliferate rapidly, emphasizing the need for diverse and credible sources within the digital climate activism landscape.

Exploring emotional resonance in climate change messaging reveals a varied spectrum of responses among students (Leiserowitz et al., 2013). While a majority perceives emotional resonance as effective, individual narratives highlight diverse impacts, from inspiring concrete actions to alternative forms of contribution. This diversity suggests the multifaceted nature of emotional triggers, urging a meaningful approach to crafting emotionally resonant climate change messages to cater to various perspectives and motivations.

Practical implications for transnational digital climate activism emerge from these insights. Strategically leveraging emotional resonance in messages can prove instrumental in mobilizing collective action (Nisbet & Kotcher, 2009). Tailoring messages to resonate with diverse emotional triggers, such as empathy, concern, or hope, may enhance the impact of climate change activism efforts, particularly on social media platforms where students actively engage.

Acknowledging the study's limitations, primarily its focused sample from two universities in Darmstadt, calls for caution in generalizing findings. Future research endeavors could explore variations across regions and demographics for a more comprehensive understanding. Longitudinal studies could also provide insights into the evolving nature of emotional resonance and its sustained impact on student's attitudes and behaviors over time.

6. CONCLUSION

In the face of the profound consequences of climate change, the significance of emotions in mobilizing international solidarity and driving meaningful change becomes increasingly apparent. This study has delved into an extensive body of scholarly research and real-world examples to underscore the critical role emotions play in the realm of climate activism.

The transformative impact of digital technologies and social media platforms on the reach of climate activists cannot be overstated. This paradigm shift has empowered activists to transcend geographical boundaries, connect with a global audience, and leverage the influential power of emotional resonance. However, until now, the specific mechanisms through which emotional resonance shapes transnational digital climate activism have remained largely unexplored, making this study a significant contribution to the field.

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Transnational digital climate activism, with its ability to heighten climate change awareness, mobilize individuals, and influence policies and practices, has emerged as a formidable force in the battle against the climate crisis. The role of digital tools and social media in facilitating global networking and collaboration is pivotal, and as this form of activism continues to evolve, its potential for transformative change remains a driving force.

In this dynamic landscape, students have assumed central roles in digital climate activism, actively participating in raising awareness, organizing protests, and exerting pressure on governments and corporations to take meaningful action. Their adept use of social media, websites, and digital tools reflects the influential role this demographic plays in advancing the climate activism agenda.

The research findings reveal that students perceive emotional resonance as an effective tool in climate change messaging. A significant percentage of students find it to be either very effective or somewhat effective in inspiring engagement and action. The personal experiences shared by students further affirm that emotionally resonant climate change messages can prompt concrete steps, ignite conversations, inspire involvement, and raise awareness.

The outcome of this study illuminates the multifaceted landscape of transnational digital climate activism and underscores the indispensable role of emotional resonance in this context. The insights derived from this research not only contribute to a deeper understanding of emotional resonance but also offer practical recommendations for harnessing its potential to drive sustainable environmental transformation. As we confront the challenges of a changing climate, the emotional resonance within digital activism remains a powerful catalyst for global change.

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