Representation of Climate Change in Contemporary Fiction and Its Influence on Students' Environmental Awareness and Activism

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ABSTRACT: This study investigates the portrayal of climate change in recent fiction and examines its influence on students' environmental awareness and activism in Pakistan. The aim of the study is to explore how climate fiction shapes students' emotions, attitudes, and behavioral intentions toward environmental issues through the lens of Narrative Transportation Theory. Climate change is one of the most pressing crises of the twenty-first century, impacting ecosystems, economies, and human societies all over the world. While there is a large number of scientific reports about the environmental problem, many of these do not generate sufficient emotional response on the side of the general public. Climate fiction (cli-fi), a term often used for this type of fiction, or "cli-fi," can consequently prove to be a valuable cultural means of conveying messages surrounding the environment. This article is an analysis of recent fiction's representation of climate change and how it affects the attitude of students towards climate change and action in Pakistan. Based on the Narrative Transportation Theory, the study examines the impact of fictional stories on the students' emotions, attitude, and environmental behavior. The article is a mix of theory and quantitative research among the students of a university in Punjab, Pakistan. The study finds that climate fiction enhances environmental awareness, emotional concern, and intentions for sustainable behavior by fostering empathy and ecological responsibility. However, it also notes that emotional awareness does not always translate to sustained activism. Moreover, climate fiction is proposed as an effective educational tool for raising environmental awareness, particularly among younger generations.

KEYWORDS: Climate Fiction (Cli-Fi), Environmental Awareness, Climate Change Communication, Student Activism, Narrative Transportation Theory, Environmental Sustainability

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Introduction

Climate change has evolved as one of the greatest problems of humankind in the present era. Climate change, including rising temperatures, melting glaciers, floods, droughts, loss of biodiversity, and extreme weather events, poses a threat to the world's natural ecosystems and human society. The Intergovernmental Panel on Climate Change (IPCC) reports that environmental degradation due to greenhouse gas emissions has continued to worsen and is anticipated to have irreversible impacts if prompt action isn't taken (IPCC, 2023). Climate change is thus a not just a scientific, but a political, cultural and social issue. Despite the high level of scientific evidence and international campaigns related to the environment, the public's engagement with climate change is inconsistent. Technical terms, statistics and predictive models used in scientific reports are often not easily accessible or understandable to a lay audience, or not emotionally charged for the public. As a result, many people feel that climate change is not something that impacts them. It has been argued that factual information alone is not enough to effect significant behavioral change and public mobilization (Moser & Dilling, 2011).

To address these constraints, fiction is now regarded as a relevant medium for conveying environmental concerns. Through the centuries, stories have affected our knowledge of social, political, and moral issues. Through imagining worlds, characters, and narratives, fiction helps readers and viewers enter in a way that engages them emotionally in complex realities. Climate fiction, or "cli-fi", is an emerging body of literature and film that depicts environmental crisis and its implications. The difference between climate fiction and scientific content is that climate fiction humanizes the environmental issues. Climate fiction, or "cli-fi," focuses on the human stories of people and communities facing the impact of floods, drought, environmental catastrophe, migration, and social injustice from climate change. Climate fiction is a way of provoking imaginations and reflections about environmental responsibilities by using emotional narratives to imagine environmental futures. Fictional works are important to environmental awareness, as they render climate change emotionally relatable. Stories can help the audience imagine possibilities and ethical duties (Trexler, 2015), which is why scholars argue that it helps shape social imagination. Climate fiction is thus a hybrid of science and emotions.

Students and youth are a particularly high priority target group for climate communication. Climate change is likely to have a greater impact on the younger generation compared to past generations. Meanwhile, students are engaged with media culture in a profound manner: a basis in movie watching, novels, streaming platforms, and digital storytelling. Narrative fiction thus has great potential to impact students' attitudes and behavior in the environment. The significance of climate awareness is even greater in Pakistan, which is highly susceptible to climate-related disasters. Floods, heatwaves, water shortages, and agricultural instability due to environmental change are frequent events in Pakistan. The devastating floods of 2022 brought to light the harsh social and economic implications of climate vulnerability. Still, however, EE and climate literacy are not widespread in many educational institutions.

In these contexts, climate fiction can serve as an alternative form of EE. Students can engage in an emotional way with realities of the environment, and connect the international climate debate with their own local experiences, using fictional narratives. The emotional engagement and the identification with the characters may lead to possible sensitization and empathy, and eventually to a more responsible attitude towards sustainability with students. This paper examines how climate change is depicted in more recent fiction, and how that affects the environmental awareness and action of students. The article draws upon the theory of Narrative Transportation, which is based on the research of environmental communication and its function of affecting the emotional, attitudinal, and behavioral response of students. The study also explores in detail the significance of climate fiction in the context of climate vulnerability, youth media culture, and a newfound environmental awareness in Pakistan.

Research Questions

1. How does exposure to climate-themed fiction and media influence environmental awareness among undergraduate students?
2. What role do narrative engagement and media-driven perceptions play in shaping students' understanding of climate change and their willingness to participate in environmental activism?

Literature Review

The function of fiction, especially with social and political themes, has always played a significant part in the formation of public consciousness. Narratives offer meaning-making schemas as proposed by Bruner (1991). Similarly, Gottschall (2012) states that storytelling is very much part of the psychology and social behavior of humans. Beliefs, values, and ethical awareness are developed through stories, which engage them emotionally. Literature has played a significant role in bringing about great social changes in the past. Publishing provocative works like Uncle Tom's Cabin helped shape public sentiment about slavery, and The Jungle helped reveal industrial exploitation and unsafe labor conditions. The following examples illustrate the use of fiction to address otherwise abstract political issues and make them emotionally compelling.

Environmental literature is no exception and is concerned about ecological destruction and sustainability. Climate fiction, also known as "cli-fi", is a rapidly growing body of literature and film that addresses climate change and the environmental crisis. Johns-Putra (2019) states that climate fiction offers imaginative contexts that help to understand environmental disruption and ecological futures. Climate fiction is a blend of science fiction, dystopian and speculative fiction. Unlike conventional science fiction, where the main interest is the advancement of technology, in the case of cli-fi, it is ecological collapse, social instabilities, and environmental injustices that are in the foreground. Fiction like Atwood's MaddAddam trilogy and Robinson's The Ministry for the Future imagines communities coping with climate catastrophes, resource depletion, and political strife.

Film is also a key medium for communicating climate narratives. It has been an apocalyptic event that has been visualized in a dramatic fashion, as in the films The Day After Tomorrow and Snowpiercer. There is evidence that visual narratives have a major influence on the public perception of climate risk as they bring a sense of emotional immediacy (Leiserowitz, 2006). But there are also scholarly perspectives on the shortcomings of dystopian climate storylines. According to Hulme (2016), 'Too much exposure to catastrophic imagery can create eco-anxiety and hopelessness'. Scare-based communication has a tendency to "bogey" audiences, and lose the motivation to act on climate change. Likewise, O'Neill and Nicholson-Cole (2009) propose that "communication about climate change should convey both a sense of urgency and hope for solutions. Thus, many recent works of climate fiction have been about resilience, adaptation, and sustainability. Solarpunk stories are about a sustainable future in an environmentally friendly way, through renewable energy, cooperation, and harmony with the environment. It is those stories that give us hope and a sense of shared responsibility – not despair.

Narrative Transportation Theory has been shown to be helpful when it comes to assessing the persuasive effects of climate fiction. Here is where Green and Brock (2000) make reference to emotional and cognitive transportation by audiences to story worlds. Readers and viewers will be more receptive to the messages in the story when they "see" themselves in the characters and situations. The Narrative Transportation Theory is concerned with the question of why it is more effective to communicate respecting environmental attitudes through fiction than through factual communication. Fictional stories give climate change an emotional twist, while science is often offered in a very abstract fashion. Emotional Immersion creates empathy and thinking, with reference to environmental sensitivity.

Climate fiction is a factor influencing climate awareness, and the research shows this. Climate fiction has been shown to lead to a rise in ecological worry and a greater awareness of environmental risks (Schneider-Mayerson, 2018). Climate films have also been proven to have an impact on emotional reactions and risk perception. In the context of youth, the linkage between fiction and environmental awareness is especially important. Students use high amounts of film, streaming, novels, and digital storytelling. Buckingham (2007) believes that young people are actively involved in media culture and often form a sense of social values through their experiences with the media.

Climate fiction also helps to mobilize around climate issues. Key elements of environmental resistance, protest movements, and collective action in narratives help audiences envision themselves in environmental movements. The role of cultural storytelling in building collective identity and citizen engagement is illustrated in youth climate activism movements like Fridays for Future. But awareness doesn't always translate into ongoing action. Kollmuss and Agyeman (2002) speak of a “knowledge-action gap” as the phenomenon of knowing that something is wrong with the environment without acting in a long-term environmental manner. Limited opportunities, structural barriers, and powerlessness can decrease engagement with activism. The Global South is an important context in the research of climate communication. There is a problem with Western perspectives dominating the climate discourse, and developing countries are extremely vulnerable to the environmental challenges faced by these countries, which has been criticized by scholars like Ghosh et al. (2018)

Climate change is directly linked to floods, droughts, heat waves, and instability in agriculture in Pakistan. Imagine, therefore, fictionalized depictions of environmental crisis could be emotionally powerful for viewers whose everyday experiences are similar to those of the climate vulnerable. Research in South Asia has indicated that the narratives of climate change can bridge the gap between the international climate change discourse and the local climate change realities (Goel et al., 2023). Overall, the literature analyzed in the project signals the transformative power of climate fiction and, in this sense, the importance of literature as a cultural tool for raising environmental awareness, emotion, and ecological imagination. However, further research is needed to comprehend its effects on the students' climate action in climate-vulnerable countries such as Pakistan.

Methodology

The study employed a quantitative approach for investigating the correlation between students' exposure to fiction on climate change (novels and films) and their awareness and involvement in environmental activism. Some previous studies led to the development of a questionnaire (in English) which served as a survey instrument for collecting the necessary information. The questionnaire consisted of closed-ended and multiple-choice questions, allowing for easy coding and statistical analysis.

The sampling method was convenience sampling, and a sample size was determined to provide sufficient statistical power with the help of G*Power software. Participants included various academic institutions so as to reflect a diverse student population. Data analysis was carried out using IBM SPSS Statistics 20. Socio-demographic characteristics and general trends were summarized using descriptive statistics such as frequencies, percentages, and means. Using multinomial logistic regression, the effects of important independent variables (including emotional tone, exposure frequency, and character identification) on students' environmental awareness and their participation in environmental activism were evaluated. During the last part of the research, data were gathered from 220 undergraduate students of ten universities in Punjab, Pakistan. The finalized dataset had sufficient statistical power to carry out the regression analysis and reflected the institutional and disciplinary differences of the participants.

Data Collection Method

An online self-administered questionnaire through Google Forms was used to gather data. The final target group consisted of students with a variety of academic backgrounds (undergraduates). The group was chosen for two reasons: Firstly, because they are a mature school-age group, and secondly because they have the ability to understand and critically evaluate fictional texts relating to climate change. The pilot study's initial responses were gathered from a larger sample of students: undergraduate students, post-graduate students, and intermediate & high school students. The pilot results, however, were compared and analyzed, and, considering the relevance of the academic content, the study was adapted to the study of undergraduate students, as they were the least variable in terms of understanding of the concepts and content of climate fiction.

Heads of Departments (HODs) in certain Universities were first sent an email with the link to the questionnaire. The academic leaders were formally requested to distribute this survey among their students through official communication means, such as departmental email, WhatsApp groups, academic portals, etc. Having a Google Form makes it easy to enter data, collect the data quickly, and submit it easily to be used in statistical analysis.

The researcher visited four of the 10 universities to collect data face-to-face, and the remaining six universities were contacted online via formal e-mail correspondence with the Heads of Departments and academic supervisors. This combination of methods enabled more participants to be engaged, without sacrificing institutional authenticity. The participants were clearly informed about the purpose of the study and some major concepts, including climate fiction and environmental activism. The key concepts and the purpose of the study were explained to the participants in detail before the start of the questionnaire. This briefing was carried out in order to make sure that there are informed responses and that there is no misunderstanding on any of the items in the questionnaire.

Table 1

Universities and Response Distribution

S. No	University	Responses	Mode of Data Collection
1	COMSATS University, Islamabad (Vehari Campus)	22	Physical
2	University of Education, Vehari Campus	22	Physical
3	Bahauddin Zakariya University, Vehari Campus	22	Physical
4	Government Postgraduate College, Vehari	22	Physical
5	Punjab University, Lahore	22	Online
6	University of Sargodha	22	Online
7	Government College University, Faisalabad	22	Online
8	University of Management & Technology, Lahore	22	Online
9	Lahore College for Women University	22	Online
10	University of Gujranwala	22	Online
	Total	220	

Data were analyzed and interpreted using IBM SPSS Statistics 20 for descriptive and inferential data. Socio-demographic data (age, level of education, field of study, residential background) were presented as descriptive data (frequencies, percentages, and means). These statistics allowed for a clearer picture of the student participants and provided an overview of trends in their exposure to fictional narratives about climate change and their engagement with the environment.

Theoretical Framework

The theoretical basis for the research is Narrative Transportation Theory (Green & Brock, 2000). The theory states that people who deeply immerse themselves in stories tend to adapt their beliefs and attitudes toward what they read. This aspect is important for climate fiction studies because it impacts students' awareness and engagement with climate change and environmental initiatives. The mind-immersive reading experience in climate fiction helps students gain deeper environmental knowledge and fosters environmental activism tendencies in line with Narrative Transportation Theory. This theory suggests that emotional mode and fictional character identification are important factors to consider when thinking about values concerning climate emergency and environmentally responsible behaviors. Narrative Transportation Theory therefore offers a lens to explore the mediation between the experience of climate fiction and students' pro-environmental attitudes and behaviors.

Discussion and Analysis

Demographic

Table 1

Demographic Profile of Respondents

Variable	Category	Frequency	Percent
Age Group	Under 18	4	1.8
	18–21	130	59.4
	22–25	76	34.7
	Over 25	9	4.1
Gender	Male	62	28.3
	Female	157	71.7
Education Level	High School	1	0.5
	Undergraduate	190	86.8
	Postgraduate	28	12.8
Field of Study	Science/Environment	21	9.6
	Arts/Humanities	191	87.2
	Business/Economics	7	3.2
Country of Residence	Urban	118	53.9
	Suburban	35	16.0
	Rural	66	30.1

The given table features the demographics of the respondents (N = 219). The sample was made up mostly of young adults, with the highest proportion in the 18-21 age group (59.4 percent), followed by the 22-25 age group (34.7 percent). Such age distribution suggests that the majority of the respondents belong to the early adulthood stage of development, as university students, and usually it is at this stage of life when a person is generally open to influence by ideologies and stories.

There is more gender representation of female (71.7) than male (28.3) respondents. This imbalance is in line with other studies presented earlier, with the issue of environmental attitudes, as more often than not they present stronger participation of female students in the surveys focused on social and environmental issues. With regard to their school or university level, the majority of the respondents were undergraduates (86.8%), followed by a few postgraduates (12.8%). The preponderance of undergraduate respondents is consistent with the purpose of the study, which aimed at revealing the awareness of climate and the media impact on higher education.

Students in Arts and Humanities made up the majority (87.2%), and the representation of science and environment-related disciplines was underrepresented (9.6%). This is especially topical since the distribution is given an opportunity to investigate the points of whether environmental consciousness and activism can be impacted by fictional accounts and not by scientific training. Lastly, the majority of the respondents lived in the cities (53.9 percent), then in the countryside (30.1 percent), and the suburbs (16 percent). This variety gives an understanding of the functioning of climate awareness through media in various residences.

Table 2

Environmental Awareness, Knowledge, and Attitudes

Survey Question	Response Category	Frequency	Percent
How would you rate your understanding of climate change and its causes?	I don't know much about it	30	13.7
	I know the basics	120	54.8
	I have a good understanding	55	25.1
	I follow developments and research actively	14	6.4
Which of the following is a major contributor to global warming?	Deforestation	190	86.8
	Ocean tides	6	2.7
	Acid rain	14	6.4
	Volcanic activity	9	4.1
What does the term "carbon footprint" refer to?	The amount of water used daily	29	13.2
	The number of trees cut down per person	76	34.7
	The total greenhouse gases an individual or group emits	89	40.6
	Pollution in urban rivers	25	11.4
Which human activity contributes the most to climate change?	Agriculture	107	48.9
	Manufacturing toys	48	21.9
	Domestic tourism	42	19.2
	Internet use	22	10.0
How often do you learn or read about environmental issues (e.g., climate change, biodiversity, pollution)?	Never	29	13.2
	Occasionally	148	67.6
	Monthly	19	8.7
	Weekly or more	23	10.5
Do you believe climate change is a serious threat to human society?	No, it's exaggerated	9	4.1
	Maybe, I'm not sure	30	13.7
	Yes, it is a concern	91	41.6
	Yes, it is an urgent global crisis	89	40.6

This table outlines the awareness and general attitude of respondents on climate change. The majority of the respondents gave a basic to moderate level of understanding, with 54.8% saying they are aware of the basics and 25.1% of participants expressing a good level of understanding on the same. Nevertheless, the percentage of people

who are involved in active research and interested in climate is very low (6.4%), which implies insufficient exposure to scientific discussion. Mixed accuracy is found in knowledge-based questions. Although, as a proportion of those who correctly cited the role of deforestation as a cause of global warming, a vast majority (86.8%) was correct, the level of awareness of technical aspects like the concept of a carbon footprint was not uniform. It was able to mention the definition correctly (40.6 percent), which suggests the partiality of the conceptual clarity, instead of knowledge altogether. The notification of environmental information was mainly uneven, with 67.6% indicating that they had only received information about environmental issues on an occasional basis. Nevertheless, the severity of climate change was perceived to be high. Greater affective awareness is demonstrated by the fact that more than 82 out of 100 people have expressed that climate change is either a serious concern or an urgent crisis in the world, yet informational engagement is still low.

Table 3

Environmental Action and Civic Engagement

Survey Question	Response Category	Frequency	Percent
Have you ever participated in any environmental campaign, protest, or awareness event?	Never	103	47.0
	Once or twice	77	35.2
	A few times	36	16.4
	Regularly	3	1.4
Do you actively make environmentally conscious lifestyle choices (e.g., reduce plastic use, save energy)?	Not at all	27	12.3
	Rarely	79	36.1
	Often	95	43.4
	Consistently	18	8.2
Have you joined any environmental clubs, organizations, or online communities?	No, never	89	40.6
	Not yet, but interested	82	37.4
	Yes, passively (follow but don't engage)	39	17.8
	Yes, actively participate	9	4.1
How often do you share or post content related to environmental issues on social media?	Never	77	35.2
	Rarely	67	30.6
	Sometimes	63	28.8
	Frequently	12	5.5
Have you ever donated to or volunteered for an environmental cause?	No	72	32.9
	Thought about it but didn't	51	23.3
	Yes, once	69	31.5
	Yes, more than once	27	12.3
Do you encourage others (family, friends, peers) to adopt environmentally friendly practices?	No	23	10.5
	Rarely	64	29.2
	Occasionally	87	39.7
	Frequently	45	20.5

Table 3 depicts their environmental action and civic engagement levels. Almost half (47.0) had never attended any environmental campaign or environmental awareness program, and only 1.4% said they attended them regularly. This brings out a huge disparity between the level of awareness and group activism. The behaviors in terms of lifestyle were comparatively more engaging. More than half (51.6) of the respondents said that they frequently or always make environmentally friendly lifestyle decisions. This implies that one would resort to personal low-stakes behavior as opposed to collective or institutionalized activism. They had low involvement in organizing, as 40.6% never participated in an environmental group and only 4.1 took active participation. It was also the same with social media involvement, even though the vast majority of respondents posted once or even twice. Nevertheless, interpersonal influence was stronger, with 60.2 likely to empower others to become eco-friendly every now and then or regularly, suggesting the relevance of informal advocacy.

Media Consumption

Table 4

Media Consumption Variables

Survey Question	Response Category	Frequency	Percent
How often do you read novels?	Frequently	72	32.9
	Occasionally	49	22.4
	Rarely	57	26.0
	Never	41	18.7
How often do you watch films/series?	Daily	38	17.4
	Weekly	64	29.2
	Monthly	53	24.2
	Rarely	64	29.2
Have you read any novel with a climate or environmental theme?	Yes	71	32.4
	No	148	67.6
Have you watched any film that addresses climate change?	Yes	142	64.8
	No	77	35.2
What is your preferred medium for fiction?	Novels	47	21.5
	Films	61	27.9
	Both	96	43.8
	Neither	15	6.8

This is a table that depicts general media consumption patterns. Consumption of films and television was higher than reading novels, with almost half of the respondents watching films every week and some every day. Conversely, 18.7 percent said they never read novels. Differences in exposure to content about climate conditions based on the media became particularly noticeable. Although one out of six had watched climate-related movies, one out of every four had read climate-based novels. This trend is shored up by preference data, where novels are preferred over films, and media formats that are hybrid (between films and novels). The research findings imply that the role of visual media in spreading climate narratives among students is higher.

Media Driven Awareness

Table 5

Media-Driven Awareness and Worldview

Survey Question	Response Category	Frequency	Percent
Has a novel changed your view of climate issues?	Yes	87	39.7
	No	59	26.9
	Never read any	73	33.3
Has a film changed your perception of environmental responsibility?	Yes	110	50.2
	No	68	31.1
	Not applicable	41	18.7
Do you recall specific climate messages from fiction?	Yes	67	30.6
	Somewhat	85	38.8
	No	67	30.6
Have you discussed environmental topics with others after watching/reading fiction?	Yes	151	68.9
	No	68	31.1
Have you looked up scientific/environmental topics because of media?	Yes	179	81.7
	No	40	18.3

This table shows general trends in media consumption. The ratio of consumption of films and television was also greater compared to reading novels, as half of the respondents observed films weekly and a few others on a daily basis. On the other hand, 18.7 percent responded that they never read novels. The disparities in exposure to content on climate conditions depending on the media became especially significant. Though a single in 6 have seen climate-related films, one in 4 had read climate-based novels. This trend is supported by preference data; novels are preferred over films and media genres that are hybrid (between films and novels). The implications of the research findings are that the role played by visual media in propagating climate messages among students is greater.

Climate Themes in Media

Table 6

Awareness and Knowledge of Climate Change

Survey Question	Response Category	Frequency	Percent
How would you rate your current understanding of climate change?	Low	31	14.2
	Moderate	165	75.3
	High	23	10.5
How concerned are you about climate change?	Not concerned	28	12.8
	Somewhat concerned	125	57.1
	Very concerned	66	30.1
Can you identify key causes of climate change?	No	32	14.6
	Somewhat	112	51.1
	Yes	75	34.2
Do you follow news or updates on climate change?	Yes	77	35.2
	Occasionally	119	54.3
	Never	23	10.5
Are you familiar with terms like “carbon footprint” or “climate justice”?	Not at all	53	24.2
	A little	134	61.2
	Very familiar	32	14.6

Table 6 demonstrates the general tendencies in media consumption. Consumption of films and television was also higher in relation to reading novels, since half of the respondents viewed films every week and very few watched movies daily. Conversely, 18.7 percent of the respondents said that they never read novels. The differences in exposure to content on climate conditions, based on the media, became particularly important. But even when one in 6 have watched films on climatic issues, one in 4 have read novels on a climatic basis. This is based on preference data, where preference is in favor of the films and media genres that are hybrid (between films and novels). The research implications are that the effects of visual media in delivering climate messages among students are more significant.

Table 7

Climate-Themed Imaginative Media

Survey Question	Response Category	Frequency	Percent
Which genres best portray climate change?	Sci-fi	76	34.7
	Dystopian	36	16.4
	Realistic drama	87	39.7
	Comedy/Satire	20	9.1
Do fictional portrayals make climate change feel more real or urgent?	Yes	94	42.9
	No	41	18.7
	Sometimes	84	38.4
What tone in fiction affected you the most?	Hopeful	62	28.3
	Fearful	54	24.7
	Neutral	75	34.2
	Sad	28	12.8
Do you relate emotionally to characters facing climate impacts?	Yes	122	55.7
	No	47	21.5
	Not sure	50	22.8
Which media left the strongest impression?	Climate novel	48	21.9
	Climate-themed film	108	49.3
	Non-fiction documentary	44	20.1
	None	19	8.7

This table highlights respondents' perceptions of different narrative genres. Realistic drama (39.7%) and science fiction (34.7%) were perceived as the most effective genres for portraying climate change. Emotional engagement was evident, as over half of the respondents (**55.7%**) related emotionally to fictional characters experiencing climate impacts. Climate-themed films emerged as the most impactful medium (49.3**%**), reinforcing the centrality of visual storytelling in shaping environmental perceptions.

Media Examples

Table 8

Media Exposure to Climate Content

Survey Question	Response Category	Frequency	Percent
Have you read *The Overstory*, *Flight Behavior*, or similar novels?	Yes	68	31.1
	No	151	68.9
Have you watched *Don't Look Up*, *The Day After Tomorrow*, or similar films?	Yes	76	34.7
	No	143	65.3
Do you follow environmental influencers, vloggers, or podcasts?	Yes	117	53.4
	No	102	46.6
Do you actively seek out climate-themed media?	Yes	50	22.8
	Sometimes	116	53.0
	No	53	24.2
Do you recommend climate fiction to others?	Yes	144	65.8
	No	75	34.2

According to this table, there is moderate though asymmetrical exposure to certain texts about climate in particular. Direct contact with popular novels and films was absent, but more than half of the respondents (53.4%) were fans of environmental influencers or podcasts. Also, 65.8% said they shared climate fiction with others, which indicates that narrative media tends to spread by peer networks even when the exposure is more indirect.

Table 9

Action and Behavioral Change

Survey Question	Response Category	Frequency	Percent
Have you changed personal habits due to fiction/media (e.g., recycling)?	Yes	164	74.9
	No	55	25.1
Have you participated in eco-friendly events after exposure to media?	Yes	107	48.9
	No	112	51.1
Have you shared environmental content on social media?	Yes	119	54.3
	No	100	45.7
Have you joined a climate or sustainability club or group?	Yes	73	33.3
	No	146	66.7
Do you consider yourself an environmental activist?	Yes	82	37.4
	No	48	21.9
	Not sure	89	40.6

This table reveals that narrative media is strongly associated with personal behavior change, as **74.9%** reported altering habits due to media exposure. However, participation in organized activities remained lower, with fewer than half engaging in eco-friendly events. Self-identification as an environmental activist was uncertain, with **40.6%**

unsure. This ambiguity reflects the transitional nature of student engagement, situated between awareness and sustained activism.

Table 10

Respondents' Perceptions on Fiction, Media, and Climate Action

PAM(IV) Statement	Response	Frequency	Percent
Fiction is more effective than school lessons in making me care.	Agree	113	51.6
	Disagree	38	17.4
	Neutral	68	31.1
I feel inspired to act after watching/reading about climate in fiction.	Yes	168	76.7
	No	51	23.3
The media made me feel empowered to help the environment.	Yes	120	54.8
	No	35	16.0
	Neutral	64	29.2
The emotional tone of a story influences my motivation to act.	Yes	179	81.7
	No	40	18.3
I trust the climate information shown in fictional media.	Strongly agree	37	16.9
	Agree	143	65.3
	Disagree	37	16.9
	Strongly disagree	2	0.9

This table shows largely positive perceptions of fiction as a motivational tool. Over half of the respondents agreed that fiction is more effective than formal education in fostering concern, and **81.7%** acknowledged the influence of emotional tone on motivation. Trust in climate information presented in fiction was relatively high, with over **82%** expressing agreement, indicating credibility of narrative media among students.

Barriers and Limits

Table 11

Respondents' Perceptions on Climate Fiction and Media Effects

BAL(IV) Statement	Response	Frequency	Percent
Fiction sometimes exaggerates climate threats.	Agree	108	49.3
	Disagree	44	20.1
	Not sure	67	30.6
Climate fiction can feel overwhelming or anxiety-inducing.	Yes	91	41.6
	No	44	20.1
	Sometimes	84	38.4
Media makes climate change feel like a distant issue.	Yes	155	70.8
	No	64	29.2
My academic workload limits how much I engage with climate content.	Agree	103	47.0
	Disagree	42	19.2
	Neutral	74	33.8
Climate fiction alone is not enough to cause real change.	Agree	142	64.8
	Disagree	29	13.2
	Not sure	48	21.9

The given table brings about significant limitations. Almost fifty percent of the interviewees perceived that fiction overrates the threat of climate, and forty-one point six percent of the interviewees felt that climate fiction was emotionally devastating. Academic workload was found to be a practical obstacle, and 64.8 percent considered that fiction was not enough to make a real change. These views can be used to understand why greater awareness does not necessarily lead to long-term activism.

Respondents' Perceptions Impact on Fiction Environmental Awareness

Table 12

Respondents' Perceptions on the Impact of Fiction on Environmental Awareness and Behavior

S(DV) Statement	Response	Frequency	Percent
Overall, fiction has influenced my environmental awareness.	Not at all	55	25.1
	Somewhat	130	59.4
	Significantly	34	15.5
Overall, fiction has influenced my environmental behavior.	Not at all	28	12.8
	A little	134	61.2
	A lot	57	26.0
I see myself as an informed environmental citizen.	Yes	127	58.0
	No	43	19.6
	Unsure	49	22.4
I am more likely to act on climate issues in the future.	Yes	111	50.7
	No	41	18.7
	Maybe	67	30.6
Fictional portrayals of climate issues are:	Inspiring	81	37.0
	Depressing	37	16.9
	Informative	88	40.2
	Unimpactful	13	5.9

These table results in serious constraints. Almost half of the interviewees believed that fiction exaggerates the danger of climate, and forty-one point six percent of interviewees thought climate fiction to be emotionally crushing. The amount of academic work was identified to be a feasible impediment, and 64.8 percent believed that fiction was not sufficient to cause a tangible change.

Such opinions may be employed to comprehend the lack of long-term activism even in case larger awareness is achieved.

Findings and Conclusion

The purpose of this study was to explore the depiction of climate change in fiction and its effect on environmental awareness and action among university students in Pakistan. The research was based on Narrative Transportation Theory and examined if immersive experiences with climate-related novels, movies, and other narrative media affect students' perceptions of climate issues, emotions, and pro-environmental action. The results show climate fiction as a very suitable means to convey environmental issues and raise awareness in the target group of young viewers. The findings indicate that most respondents had knowledge of climate change at a basic to moderate level, and that they

saw it as a significant global issue. Active research and gain of information about the environment was relatively small, but students' awareness of and understanding of environmental issues was greatly enhanced by their exposure to fiction and media related to climate. Films proved to be the most powerful medium, having a higher share of respondents than the climate-themed novels. The results of this study reflect the significance of visual storytelling in modern students' perception of the environment.

The investigation also shows that the core of climate fiction has a significant emotional and cognitive effect on the audience. Poll respondents indicated that fictional depictions of climate change heightened the sense of personal relevance, urgency, and reality of environmental issues. Many participants identified with characters faced with climate issues and remembered environmental messages from fictional stories. Against the backdrop of Narrative Transportation Theory, the present study results point to the potential of stories to shape beliefs, attitudes, and values through emotional involvement and identification with fictional characters. As far as behavioral outcomes, the study concludes that climate fiction has a positive impact on personal environmental responsibility. The majority of respondents reported changing personal behaviors, including reducing waste and implementing eco-friendly practices, after consuming climate-related media. Many participants also talked to others about environmental issues, shared information on social media about climate change, and felt more inclined to take action on their environmental concerns in the future. The results suggest that climate fiction has the potential to influence individual-level behavior change and raise environmental awareness.

However, the findings also show some significant gaps between awareness and activism. Students were very concerned about the environment, but not many were taking part in organized environmental actions, clubs, and activist organizations. A number of respondents felt that climate fiction isn't enough to make a difference in society, and outlined a number of factors that make it harder to sustain engagement with climate change, such as academic workload, emotional fatigue, and the sense of climate change being a distant issue. This implies that narrative media can effectively raise awareness and induce concern, but further education, institutional and community-based interventions are needed to make people commit to the environment in the long term. Overall, the study concludes that climate fiction is a valuable educational and communicative tool for enhancing environmental awareness among university students. Fiction can make scientific information more accessible and present climate problems in engaging stories, making the knowledge more emotional. However, its effects are greatest in raising awareness, empathy, and individual behavior change, rather than sustained collective action. Incorporating climate fiction into school curricula, environmental communication practices and public information campaigns could be an effective approach to educating young people about environmental responsibility and complement other forms of environmental advocacy and engagement.

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