Climate Change and Role of Pakistani Media: A Survey Analysis

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Abstract

The purpose of this survey study is to investigate the effect of Pakistani media in shaping public opinions and awareness of climate change in both rural and urban areas. The project objectives were how information on climate change is communicated and received across varied groups, with a focus on understanding the influence of media outlets such as television, radio, and internet platforms. For this purpose, a survey of 800 residents of the twin cities Islamabad and Rawalpindi has been conducted in rural and urban areas to check their knowledge, attitude and practice. The KAP model has been utilized to explore and verify the assumptions of the study. The findings show that there are differences in media exposure between rural and urban people, which affects the level of climate change awareness in different places. The study emphasizes the significance of developing personalized communication techniques for different locations in order to successfully address the particular difficulties that each community faces. It also looks at the media's role in promoting sustainable practices and instilling a feeling of environmental responsibility in the public. The study emphasizes the importance of improved coordination across media outlets, government agencies, and environmental organizations in order to improve the accuracy and reach of climate change information. Understanding the impact of the media on rural and urban people is critical for establishing targeted interventions that contribute to a more informed and environmentally conscious society in Pakistan, however, the outcome of the study shows that the majority of the respondents are well aware of the environmental and climate change issues but majority of them do not practice the same precautions.

Keywords: *Climate change, Pakistani media, Role and Coverage, impact, KAP model.*

1. Introduction and Background

Aside from all of these challenges, global warming is the most concerning threat of the twenty-first century. Most governments believe that further steps are needed to protect people and the

economy from the effects of climate change. Environmental issues harm human health, lowering quality of life and, eventually, the economy. Such issues affect developing countries such as Pakistan. Concerns about environmental difficulties and problems are growing in our society since a clean environment is essential for humans and other living things.

The mass media can raise awareness about environmental issues by covering relevant news and viewpoints. As a result, it can contribute to environmental improvement because the primary purposes of the media are to inform, educate, and entertain viewers and readers. As a result, it follows that the media plays an important role in producing social reality about environmental challenges and related concepts among viewers, readers, media organizations, and policymakers. Our country is a developing country that is dealing with environmental issues. Due to low resources and these constraints, it has been classified as one of the most vulnerable locations due to its vulnerability to climate change and lack of resources to adapt. For developing countries such as Pakistan, environmental concerns/challenges represent a significant obstacle to socioeconomic growth and a healthy environment, as well as providing incentives for internal migration.

During the 1970s, the main source of concern was point sources, such as outputs from massive mechanical factories and synthetic compounds. In the 1980s, non-point sources such as diffuse discharges from numerous little workouts became more prominent.[1] Vehicle emissions are a typical model. Transport, horticulture, and the trading of commodities for use were all important topics of discussion.

[1] Galvis-Castaño, Alberto. "*Integrated pollution prevention and control for the municipal water cycle in a river basin context: validation of the three-step strategic approach"*. Wageningen University and Research, 2019.

As a result, environmental issues and the costs of human activities like as economic development, population increase, and land degradation, among others, have taken on a more political tone. This shift in trajectory could be attributed to the 1987 Brundtland Report 2 findings and advancements in environmental financial issues. Before the Brundtland Report distribution, the discussion concentrated on an issue-by-issue basis, and natural hazards were regarded as quite specific. Addressing the problems caused by climate change necessitates a worldwide effort. The UN Framework Convention on Climate Change (UNFCCC) is the major worldwide platform for addressing climate change, and the Paris Agreement, agreed in 2015, provides a comprehensive framework for international action. Governments have agreed to work under the Paris Agreement to keep global warming well below 2 degrees Celsius in the long run, with a long-term goal of reducing global warming to 1.5 degrees Celsius over industrial levels. The agreement also includes mechanisms for frequent reporting and review of progress towards these goals, as well as subsidies to assist developing countries.[2]

2. Climate change

Climate change refers to long-term changes in weather patterns such as temperature, precipitation, and the status of natural features such as seas, ice sheets, and impervious surfaces. It is influenced by a variety of natural processes, including variations in solar radiation and changes in the internal climate system. Climate change has far-reaching consequences, with rising temperatures causing health issues such as heatstroke, cardiovascular problems, and heat stress. These ailments not only worsen over time, but they also kill a significant number of people. Climate change is expected to

[2] World Health Organization. "Climate change and health". 2018. Retrieved from https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health

worsen between 2030 and 2050, according to the World Health Organization. Climate change has various sources, both natural and caused by humans. The fundamental driver of climate change is the annual release of billions of tonnes of carbon dioxide into the atmosphere from the combustion of fossil fuels, which produces an increase in greenhouse gases. With a 30% increase since the commencement of the industrial age in about 1750, CO2 concentrations are now greater than they have ever been measured in the last 800,000 years. While natural processes such as photosynthesis contribute to the absorption of greenhouse gases in the atmosphere, these natural carbon sinks are under threat from rising pollution levels. It is worth noting that the Earth's temperature has risen by 0.14°F every ten years since 1880.[3]

Environmental challenges and problems have emerged as a serious burden for the global population.[4] According to CRI (Climate Risk Index) data for 2016, Pakistan ranks 40th in terms of capital and human capital loss. Although the environment is a major problem in modern society, media coverage of the environment is inadequate in comparison to other topics such as politics, business, celebrity, and sports news, among others. According to the Environment Protection Agency, environmental legislation in Pakistan was enacted in 1997 with the goal of ensuring the preservation, maintenance, rehabilitation, and perfection of the environment.

Economic development is the first step towards reducing poverty, but it comes with it environmental challenges that can stymie and hinder growth. Water and air pollution, inappropriate waste disposal, land degradation, and exposure to industrial byproducts and results are among the leading causes of disease and child mortality in developing countries. These dangers

[3] Ibid
[4] Yousaf, Zahid, Magdalena Radulescu, Crenguta Ileana Sinisi, Luminita Serbanescu, and Loredana Maria Paunescu. "Harmonization of green motives and green business strategies towards sustainable development of hospitality and tourism industry: Green environmental policies." *Sustainability* 13, no. 12 (2021): 6592.

to health are typically avoidable through easy and low-cost measures. Impoverished countries bear the brunt of the consequences of climate change disasters due to their vulnerability and lack of coping strategies.[5] Pakistan lags behind in terms of water use efficiency. Climate change affects all industries, but agriculture is particularly vulnerable. Agriculture accounts for 37.40% of total employment and 22.7% of Pakistan's GDP, according to the Finance Division of the Government of Pakistan. As a major issue, water shortages are made worse by a growing population and disputes with India over water flow. Climate change catastrophe makes these problems much worse.[6] The effects of climate change are not new to Pakistan; they include rising sea levels, food shortages brought on by rising temperatures, decreased rainfall, and regular droughts in various regions of the nation. A heatwave lasting 41 days (11th March – 19th April) resulted in temperatures 5°C to 11.5°C higher than normal, leading to the deaths of numerous local livestock.

Currently, Pakistan emits approximately 217 million tons of CO_2. If this rate continues, Pakistan is projected to reach 400 million tons by 2030, which will accelerate glacier thawing, leading to increased flood risks and harm to the country's economy. Media depictions of environmental change and global warming are embedded in social, political, and financial measurements that influence single-level operations, such as conventional editing practices. Media influence strategy dynamics, mentalities, points of view, goals, and behaviour change, regardless of how difficult those associations can be to pinpoint; thus, assessments of world-class news including environmental change, particularly in recent decades, have sought to increase a more grounded understanding of this intricate and dynamic snare of collaborations. According to the Pakistan

[5] Eckstein, David, Marie-Lena Hutfils, and Maik Winges. "Global climate risk index 2019." *Who suffers most from extreme weather events* (2018): 36.
[6] Shahid, F., & Adnan, M. (2021). Climate change: impacts on Pakistan and proposed solutions. Pak. Soc. Sci. Rev, 5, 223-235.

Economic Survey (2014-15), because of its geographical location and socioeconomic delicacy, Pakistan is among the countries with the lowest environmental impacts of climate change.[7] According to research, 20% of registered industries in Pakistan are highly polluting and generate extremely dangerous environmental hazards. EPA of Pakistan (2009). During the summer, Islamabad and Rawalpindi are subjected to dirty air masses from southern industrial areas, though industrial activities, electricity generation, and vehicle emissions are other sources of air pollution and environmental difficulties (Rasheed, 2014).

The media has played a major role in reporting and reflecting public issues on a large screen in recent years. The role of the media in environmental issues is equally critical. Environmental changes that have a detrimental impact on public health can be highlighted by the media, and the climate can affect the government and everyone involved in practical action for sustainable development. In Pakistan, influential media organisations include Jang Group, *HUM TV*, *ARY*, *Dunya TV*, *Express*, and the *Dawn group*, controlling a significant portion of the audience and advertising revenue. Pakistan has 124 TV channels, 67 broadcasting units, and approximately 707 newspapers as of 2019.

3. Statement of the Problem

The role of media in our lives is becoming increasingly important. People use the media for a number of reasons, such as acquiring information, gaining knowledge, and eventually adopting or practising that knowledge. This research will look specifically at the function of the media in raising awareness and comprehension of environmental issues across rural and urban populations.

[7] Abbas, Sohail, Shazia Kousar, and Mahr Sahibzad Khan. "The role of climate change in food security; empirical evidence over Punjab regions, Pakistan." *Environmental Science and Pollution Research* 29, no. 35 (2022): 53718-53736. doi:10.1007/s11356-022-19315-7.

4. Research Questions

i. To what extent does the media cover the issue of climate change in comparison to other topics presented by the media?

ii. Is there a disparity in the level of knowledge regarding environmental issues between urban and rural residents?

iii. Which medium proves to be more efficient in generating awareness and understanding about climate change?

iv. How would people perceive the risks associated with climate change?

5. Literature Review

People are an essential component of nature, and whatever occurs to nature frequently happens to people in an immediate manner that isn't caught in the emergency of an unnatural weather change or sea contamination. In fact, common catastrophes in numerous examples have not remained completely 'characteristic' either in their occurrence or the devastation they cause; they have, in reality, been supplemented by, and in some cases even created by human activities. Floods, landslides, twisters, starvations, and seismic tremors are known to energies or catalyze a portion of the 'formative' ventures, for example, desalting, deforestation, and soil disintegration; recovering terrains from shorelines; bungle and over-abuse of water assets; and so on. There are several examples of such incidents and their distorted outcomes (Gandhi, 2019).

Water is one of the most crucial components that Mother Nature has abundantly provided for the globe. Even with so much water accessible on the earth, consumable and drinkable water is in short supply. The cause for this is that natural water reservoirs containing consumable and drinking

water are being polluted, resulting in a drinking water deficit. Water contamination has varied causes in different places of the world. However, some of the most common causes of water pollution include home discharge, which is frequently tossed into pure water, and industrial trash, which frequently contains toxic waste. These are some of the causes of water pollution, and water pollution is one of the most serious challenges of environmental deterioration. Water pollution is one of the leading causes of scarcity of consumable and drinking water not only in Pakistan but throughout the world. All life on Earth requires water to thrive, therefore humans require particular ways to deal with water scarcity, such as excessive heat or cold. This condition has reinforced the widely held belief that water is required for life in the universe, with significant implications for predictions about the possibility of habitable habitats. However, we cannot evaluate that assertion until we have a complete grasp of the role that water plays in the survival of terrestrial life. The study considers water to be a dynamic, adaptable component of the cell that engages in a wide range of bimolecular interactions: For example, promoting proton transport, driving hydrophobic interactions and their sensitivity to tiny solutes, functioning as a reagent in biological activities, and influencing electronic excitation energies.

According to researchers, one of the most fundamental elements contributing to environmental instability is the global industrial revolution and expansion. One of the reasons that the industrial sector is responsible for environmental instability is that it is the sector that consumes natural resources on a huge scale. For example, driving hydrophobic interactions and their sensitivity to small solutes, acting as a reagent in biological activities, and regulating electronic excitation energies. The worldwide industrial revolution and development, according to academics, is one of the most important variables contributing to environmental instability. One of the reasons that the industrial sector is to blame for climate change is that it utilizes natural resources on a massive

scale. All of these challenges may exacerbate the scarcity of cultivable lands, clean water, food, and fuel that sustain life on Earth.[8] Normal occurrences such as earthquakes, floods, tropical storms, and torrents have occurred from the beginning of time. These are caused by naturally occurring forms and are regarded as frequent threats and disasters since they negatively impact people and annihilate occupations.

We mean the application of remote sensing and integrated innovation to monitor the elements of the world's surface via earth perception frameworks.[9] Water is becoming scarce because people are consuming it, rather than squandering it, without realizing that future generations will have to struggle for this essential natural resource. This calls into question whether state governments are doing enough to protect the environment. Governments frequently put their own interests first, whether or whether they are concerned about the health of the environment around them. This necessitates the correct execution of environmental regulations in order to protect the natural world around us.[10] Pakistan's problems are distinct from those of the rest of the globe. This is because Pakistan's geographical and socioeconomic conditions differ from those of many other countries around the world.[11] Pakistan's environmental challenges include significant weather changes, water pollution, air pollution, and deforestation. Furthermore, Pakistan's physical structure differs

[8] Hussain, Kramat, Zhen He, Naveed Ahmad, and Muzaffar Iqbal. "Green, lean, six sigma barriers at a glance: a case from the construction sector of Pakistan." *Building and Environment* 161 (2019): 106225.
[9] Anand, Anupam, and Jyotheshwar Nagol. "Disaster mitigation and management and importance of earth observation." In *Environmental Geography of South Asia: Contributions Toward a Future Earth Initiative*, pp. 3-20. Springer Japan, 2016.
[10] Vogler, Jan P. "The political economy of public bureaucracy: the emergence of modern administrative organizations." PhD diss., Duke University, 2019.
[11] Ali, Hazrat, Ezzat Khan, and Ikram Ilahi. "Environmental chemistry and ecotoxicology of hazardous heavy metals: environmental persistence, toxicity, and bioaccumulation." *Journal of chemistry* 2019 (2019)., doi:10.1155/2019/6730305.

from that of many other countries throughout the world, and Pakistan has been endowed with several natural resources that are, sadly, on the verge of depletion.

6. Environmental Issues in Pakistan

Pakistan is a land that has been lavishly gifted by nature. Land, sea, mountains, deserts, woods, and rivers are all present. This means that Pakistan has a diverse natural terrain, making it a lovely country. In addition, Mother Nature has bestowed upon Pakistan all four seasons: summer, autumn, winter, and spring. It would be incorrect to state that nature has been more than kind in bestowing all natural blessings on this country.[12] Pakistan has its fair share of environmental challenges, and these difficulties constitute a major threat to the health and well-being of the people and other living beings who live in this country.[13]

This is true of the Himalayan range. Changes are required for development and sustainability, and the key to those changes is the involvement of women and access to natural resources under some established legislation. The government must spend in areas such as education, health, transportation, biodiversity conservation, research in this field, and other policy alternatives.[14] That is why it is critical for facility management to address environmental challenges in order to reach sustainability standards. For a sustainable environment in Pakistan, properly defined strategies are required, particularly in areas where growth is urgently required. This practice is regarded as a vital farm input in the twenty-first century in order to achieve the aims and demand of targeted

[12] Ahmed, Mohsina, Fouzia Mashkoor, and Abu Nasar. "Development, Characterization, and Utilization of Magnetized Orange Peel Waste as a Novel Adsorbent for the Confiscation of Crystal Violet Dye from Aqueous Solution." *Groundwater for Sustainable Development* 10 (2020): 100322. doi:10.1016/j.gsd.2019.100322

[13] Wahga, Aqueel I., and Richard K. Blundel. "18. Case study: human capital and environmental engagement of SMEs in." *Research Handbook on Small Business Social Responsibility: Global Perspectives* (2018): 401.

[14] Wani, M. U. H., & Wani, S. M. (2019). Sustainability of Himalayan Environment: Issues and Policies. Natural Resource Management: Ecological Perspectives, 31-45.

yields. There is an undeniable fact that the use of artificial fertilizers is wreaking havoc on our environment. To address this issue, there is a need for fertilizer use efficiency, which can result in a safer environment and higher economic production.[15]

In Pakistan, environmental challenges are harming not just crops but also human health. Geographically, asthma is prevalent in Karachi, as the population is at greater risk of respiratory illnesses, according to the study. The estimated population affected by the danger is 40%, which is very concerning. Summers in Pakistan are becoming increasingly hot, as are winters. For a few years, the country has been dealing with extreme heat waves during the summer season, which has caused significant harm to both individuals and crops. When a heat wave comes, many people die.[16] Even with all of the essential conveniences, individuals are unable to survive the heat wave. The rise in pollution and deforestation is one of the primary seasons connected with this significant climatic change.[17]

Pakistan's economic cooperation with other countries, especially the China-Pakistan Economic Corridor (CPEC), includes US$62 billion in investment projects. This investment is being made in Pakistan for infrastructure, energy, and other development projects. All of these development initiatives, on the other hand, may pose environmental problems. Pakistan's enticing economy comes with three potential environmental risks. The first is typical coal-fired power plants, which would release CO2 and smog, causing global warming and climate change. Second, enormous tree chopping is required for the development of roadways from China to Pakistan. The third concern is car trafficking. Every day, about 7000 trucks go along the Karakoram Highway, emitting 36.5

[15] Hussain et al. "Green, lean, six sigma barriers at a glance: a case from the construction sector of Pakistan." *Pp.* 161.
[16] Gorst, Ashley, Ali Dehlavi, and Ben Groom. "Crop productivity and adaptation to climate change in Pakistan." *Environment and development economics* 23, no. 6 (2018): 679-701.
[17] Suleri, Abid Qaiyum. "Pakistan Environment Barometer 2018 Environment-an issue, not a priority." (2018).

million tons of CO2. Taking all of these risks into account, our primary focus is on infrastructure development and the rest. As a result, Pakistan is claimed to be a CO2 contributor to global warming. Scientists from both countries should develop measures to mitigate the environmental consequences of CPEC projects.[18] One of the reasons for climate change in Pakistan is greenhouse gas emissions. These gases have had a severe impact on the country's rain pattern, have become a cause of extreme temperatures, and have also had a bad impact on the country's water and land resources. Furthermore, greenhouse gases play an important and dramatic influence in the occurrence of floods and droughts, which have begun to strike the country more frequently than in previous years.[19]

Extreme weather is never beneficial for crops since it damages them and reduces their productivity. Wheat is one of the most important crops farmed in Pakistan.[20] According to the current situation in Pakistan, approximately 20% of the population has access to clean drinking water; the remaining 80% of the population must drink polluted water that is unfit for human consumption (Nabi et al., 2019). All of the aforementioned factors contribute to the worsening of air quality. The amount of health consequences in areas such as Peshawar, Rawalpindi, Lahore, and Karachi is comparatively worse than the World Health Organization's acceptable threshold. PEPA-97, or the Pakistan Environmental Protection Act of 1997, covers all sorts of pollution, including air, water, soil, and noise pollution, as well as hazardous substances and vehicular pollution. The motor vehicle

[18] Kouser, Shahzad, Abdul Subhan, and Abedullah. "Uncovering Pakistan's environmental risks and remedies under the China-Pakistan economic corridor." *Environmental Science and Pollution Research* 27 (2020): 4661-4663.
[19] Hazrat Ali, Ezzat Khan, and Ikram Ilahi, "Environmental Chemistry and Ecotoxicology of Hazardous Heavy Metals: Environmental Persistence, Toxicity, and Bioaccumulation," *Journal of Chemistry* 2019 (February 5, 2019): 1–14, doi:10.1155/2019/6730305.
[20] Gorst et al. "Crop productivity and adaptation to climate change in Pakistan." Pp. 679-701.

regulation is especially addressed in this regard. NEAP demonstrates fresh environmental commitments in order to achieve some discernible changes (Khwaja & Khan, 2005).

The air is one of nature's most crucial elements. This is because air is the element that humans breathe, hence it is critical that the air we breathe be free of pollution.[21] However, in Pakistan, the freedom to breathe clean air is limited. Smog is one of the causes. It is a combination of smoke and mist that fills the air and has some of the most damaging impacts on the environment and the health of humans, animals, and plants. Smog is caused by a variety of sources, including motor vehicles, industries, and the electricity sector. The reason Pakistan has such severe smog is that the country's population is growing by the day, and there is no emphasis on increasing or sustaining the natural resources that are consumed on a daily basis. Furthermore, this has resulted in significant deforestation, and many are unaware of the need for tree planting. As a result, the impacts of such destruction have begun to manifest, and pollution has begun to rise.

It has been observed that there is a requirement for explaining environmental issues. The need to promote awareness about environmental issues is critical nowadays. Environmental consciousness is not a new concept. However, given the constraints of age and time, it is critical that the appropriate media be used to raise awareness about environmental challenges. Furthermore, it is critical that the medium utilized is also appropriate to the audience to whom the message is being conveyed.[22] The media is regarded as one of the most effective vehicles for raising global awareness. This is because to its ability to reach a vast number of people. The fundamental reason for this is that mass media is available to a vast populace all over the world. In addition, television,

[21] Ibid.

[22] Keinonen, Tuula, Irmeli Palmberg, Jari Kukkonen, Eija Yli-Panula, Christel Persson, and Rytis Vilkonis. "Higher education students' perceptions of environmental issues and media coverage." *Discourse and communication for sustainable education* 7, no. 1 (2016): 5-22.

newspapers, radio, and the internet are employed as mass media to raise awareness about environmental issues.[23] Since the beginning of cinema in the 1920s, the media effect has been a source of worry among social scientists. In terms of the impact of modern media, the magic bullet hypothesis and the concept of mass society were examined in ethnic studies. However, the premise of the magic bullet theory was later disputed by Lowery & DeFleure 1995 via the Payne Fund investigations.[24] Contemporary research, such as the Payne Fund, does not completely contradict the prior beliefs.

7. Theoretical Framework

The Knowledge, Attitudes, and Practices (KAP) model is a widely used theoretical framework in survey research to understand and assess people's perceptions and behaviors' related to a particular topic, such as climate change. The KAP model assumes that knowledge about a subject influences attitude toward it, which in turn shape individuals' practices or behaviours. Here's a theoretical framework for using the KAP model in survey research on climate change:

7.1.Knowledge (K):

Definition: Knowledge refers to the understanding and awareness that individuals have about climate change, its causes, consequences, and potential solutions.

7.2.Attitudes (A):

[23] Saikia, Ruksana. "Role of mass media in creating environmental awareness." *Natl J Multidiscip Res Dev* 1, no. 2 (2017): 1-4.
[24] Shearon Lowery and Melvin L. DeFleur, *Milestones in Mass Communication Research: Media Effects* (White Plains, NY: Longman Publishers USA, 1995).

Definition: Attitudes involve individuals' feelings, opinions, and emotional responses toward climate change. Positive attitudes may lead to pro-environmental behaviours, while negative attitudes may hinder them.

7.3.Practices (P):

Definition: Practices represent the actual behaviours or actions that individuals engage in concerning climate change, including mitigation and adaptation efforts. The following four elements are the foundations of the KAP model.

1. Demographic and Socioeconomic Factors:
2. Media and Information Sources
3. Psychological Factors:
4. Cultural and Social Norms:

8. Methodology:

The researcher in this study seeks to evaluate the effect of knowledge, attitudes, and practice on people of Pakistan's two twin cities. The survey methodologies will be used by the researcher, who will distribute closed-ended questionnaires to the respondents. In-depth interviews will also be undertaken to ensure comprehensive comprehension.

8.1.Population:

The population for this research study is drawn from Islamabad and Rawalpindi. These two cities are generally referred to be Pakistan's twin cities. According to the Pakistan Bureau of Statistics Census 2017, the twin cities have a total population of 6.3 million people. This encompasses both urban and rural locations.

8.2.Sampling Method

The sample was divided in half to ensure equal representation of males and females; however cross-gender representation was also present. In this study, the purposeful sampling strategy was used to distribute questionnaires and conduct interviews. The division of urban and rural clusters was done using pertinent data from the administrative offices of both cities, the Capital Development Authority (CDA) and the Local Government Office Rawalpindi.

8.3.Sample Size

The survey has 800 respondents in total. Individuals completed questionnaires. The total number of respondents for data collection is 800. Questioner distrust among 800 respondents was used for data gathering.

9. Results and Analysis

Table 1: Most Effective Medium * Area of Residents Cross-tabulation

		Area of Residents		Total	Per cent
		Urban	Rural		
Most Effective Medium	Television	160	160	320	40.0%
	Internet (Social Media)	184	192	376	47.0%
	Radio (FM&AM)	40	8	48	6.0%
	Print (English &Urdu)	32	24	56	7.0%
Total		416	384	800	100%

As indicated in the above table, the majority (47%) considered social media as an effective medium as far as the environmental issue is concerned in rural and urban areas. The second most effective medium was Television while Radio and Newspapers were the least effective mediums. There is no significant difference in the priorities of urban and rural residents except for the Radio.

Table 2: Understanding About Use of Renewable Energy Technology

		Frequency	Percent	Valid Percent
Valid	Renewable Energy is very good	336	42.0	42.0
	Renewable Energy is good	342	42.8	42.8
	Renewable Energy is good to some extent	68	8.5	8.5
	Renewable Energy is not good	54	6.8	6.8
	Total	800	100.0	100.0

Regarding the question about the understanding and usefulness of renewable energy technology, a majority (85%) of the respondents are well aware of the understanding and use of the same. A very few (7%) went against it.

Table 3: Degree of Satisfaction with the Current State of Transportation

		Frequency	Percent	Percent
Valid	Very Dissatisfied	220	27.5	27.5
	Dissatisfied	326	40.8	40.8
	Neutral	62	7.8	7.8
	Satisfied	88	11.0	11.0

	Very Satisfied	104	13.0	13.0
	Total	800	100.0	100.0

On the query of satisfaction with the current state of transportation in the cities, the majority (70%) were dissatisfied with the quality of transportation. 24% of respondents were satisfied and said the transportation is environmentally friendly.

Table 4: Most Effectivities Medium

Medium		Frequency	Percentage
Television	PTV	154	19.75 %
	Others	160	20 %
Social Media	FB	270	33.25%
	Twitter	40	5 %
	Instagram	35	4.375 %
	Others	50	6.25 %
Radio	F M	32	4 %
	AM	10	1.25 %
News Papers	English	11	1.625 %
	Urdu	31	4.5 %
Total	800		100%

According to the table above, the most watched media is social media and about 50% of the respondents considered it as the most effective medium. About 40% of audiences say that TV is an effective medium for getting news and information about climate change.

Table 5: Most Common Environmental Problem Faced

Environmental Problem	Urban		Rural	
	Frequency	Percentage	Frequency	Percentage
Air Pollution	299	37.37%	256	32%
Water Pollution	189	23.62%	451	56.37%
Noise Pollution	234	29.25%	52	6.50%
Rise in Temperature	78	9.75%	41	5.12%
	800	100%	800	100%

The majority of urban and rural residents considered that air pollution is a common problem. They also said that water pollution and rise in temperature are significant problems except the issue of noise pollution.

Table 6: Industries are sources of Environmental pollution

Degree	Frequency /Percentage	
Strongly disagree	52	6.50%
Disagree	97	12.13%
Neutral	189	23.63%
Agree	254	31.75%
Strongly Agree	208	26.00%
Total	800	100%

The table above shows that the majority (32%) of respondents are well aware of the role and sources of environmental pollution. They think the industries are the main source of environmental pollution.

Table 7: Role of Social Media to Overcome Environment Hazards

Degree	Frequency /Percentage	
Strongly disagree	202	25.25%
Disagree	198	24.75%
Neutral	94	11.75%
Agree	185	23.13%
Strongly Agree	121	15.13%
Total	800	100%

The majority of respondents (50%) were of the view that social media was not playing a good role. 39% say against this, according to them social media was playing a significant role in getting people aware of the issue of climate change and the environment.

Table 8: Role of Social Media and Environmental Discussions

Correlations

		Social Media Provides more Information Regarding Enviornmet	Type of enviornemnt Issues discussed throuhg social Media
	Pearson Correlation	1	.021
	Sig. (2-tailed)		.558

Social Media Provides more Information Regarding Environment	N	800	800
Type of enviornemnt Issues discussed throuhg social Media	Pearson Correlation	.021	1
	Sig. (2-tailed)	.558	
	N	800	800

Table 8 says there is no significant relationship found between the provision of information by social media and issues discussed regarding the environment.

Table 9: Opinion About the Rule of 3 Rs to Improve Environment

To determine the respondents' understanding of garbage disposal utilizing the 3 Rs (Reduce, Recycle, and Reuse), it was questioned to what extent the 3Rs rule is effective in improving the environment.

Degree	Frequency /Percentage	
Never	67	8.37 %
Very Rarely	79	9.88%
Occasionally	182	22.75%
Frequently	276	34.50%
Very Frequently	196	24.50%
Total	800	100%

Regarding the 3 Rules to improve the environment, about 70% of the respondents say that they know and apply the 3 rules formula in their daily routine while 18% did not.

Table 10: Usage of Reusable bags" for shopping

Degree	Frequency /Percentage	
Never	243	30.38%
Very Rarely	290	36.25%
Occasionally	92	11.50%
Frequently	97	12.12%
Very Frequently	78	9.75%
Total	800	100%

In order to know to what extent respondents practice "reusable shopping bags" for shopping (grocery, vegetables and fruits). Respondents were asked to give their own practice. The majority (67%) of the respondents were of the view that they did not use shopping bags again while (22%) said they did reuse the bags.

Table 11: Participation in Plantation Drive

Degree	**Frequency /Percentage**	
Never	495	61.87%
Very Rarely	189	23.63%
Occasionally	55	6.88%
Frequently	34	4.25%
Very Frequently	27	3.33%

Total	800	100%

62% of the respondents say that they do not participate in tree plantation. 24% were of the view that they participate rarely. Only 8% say they participate in the plantation drive.

energy"

10. Discussion:

The majority (47%) considered social media as an effective medium as far as the environmental issue is concerned in rural and urban areas while the TV is considered as the second most effective medium in rural and urban areas. Since the penetration of internet journalism and access to free information, people are more likely to get political, economic, social and entertainment informational needs from social media networks. Social media have become the main tool to be aware of the climate and environmental issues. The other reasons for social media use might be the low literacy, instant access and cost-effectiveness of the medium (Table 1). In response to the question on the understanding and utility of renewable energy technology, the majority (85%) of respondents are fully aware of the same. Only a small percentage (7%) opposed it. The results look like healthy signs for an environment-friendly mind and practice. Since the world is adopting less fuel-consuming methods to run energy plants, the need and understanding of the patterns and use have been shifted towards renewable methods. There is little difference in understanding between the rural and urban residents on conventional and renewable methods of energy resources (Table 2).

When asked about their satisfaction with the current state of transport in cities, the majority of respondents were dissatisfied with the quality of transport. A few respondents are delighted with

the transportation and believe it is environmentally friendly (Table 3). When asked about the most watched medium, the majority of respondents said that social media has played an important role in distributing knowledge about social issues. The changing patterns of traditional media and technology set the way for a quick expansion in social media subscribers; nonetheless, 40% of audiences think that TV still meets their informational needs about climate change. This distinction may also be seen in the overall use of social media habits and patterns, indicating that a huge proportion of people remain loyal to television (Table 4). In terms of environmental understanding, the majority of urban and rural respondents thought air pollution was a common problem. They also indicated that with a few exceptions of noise pollution, water pollution and rising temperatures are serious worries. Because Pakistan is one of the top ten most affected countries by climate change, the media has begun to prioritize the subject, making it a priority for the public (Table 5).

The vast majority of responders are aware of the purpose and causes of environmental contamination. They believe that industries are the principal source of environmental contamination. It suggests that not only are people of urban regions concerned about the primary source of pollution, but residents of rural areas are also talking about and comprehending the phenomenon (Table 6). Many people believe that social media is underutilized in terms of providing knowledge and guiding people to practice environmentally beneficial practices. There is an insignificant correlation (.021) identified between the provision of information via social media and the environmental issues highlighted (Table 8). The majority of study participants stated that they do not follow Rule 3 Rs (Reduce, Recycle, and Reuse) in their daily lives. 'Yes' was answered by only a few urban participants. In the case of Rule 3 Rs, there is a lack of comprehension and practice. The mainstream media does not advocate for this precise terminology in order to improve comprehension and implementation of the rule (Table 9).

To determine the extent to which respondents use "reusable shopping bags" for grocery, vegetable, and fruit shopping. Respondents were invited to provide examples of their own practice. The majority of respondents stated that they did not reuse shopping bags. Very few asked if they are using reusable bags for shopping. This is again a matter of practice of environment-friendly habits in daily life, however, urban residents are more frequently reusing plastic bags (Table 10). On the query of plantation drive, the majority of respondents said they do not participate in tree planting. This is again a matter of knowledge and practice. They do not know about the tree's importance for a healthy environment (Table 11).

11. Conclusion

The study looked into the residents of Islamabad and Rawalpindi's urban and rural areas' knowledge, attitudes, and practices about climate change, as well as the role of the media. The KAP model was used to assess the efficacy and role of mainstream media, which included print, electronic, and social media. It has come to our attention that most people are aware of most environmental risks and their causes and implications; yet, the results demonstrate that people comprehend and are aware of the issue, but they do not practice environmentally friendly methods in their daily lives. According to the respondents, the media has made a significant contribution, but metropolitan regions have more environmental challenges and are taking steps to offset the impact.

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