Pakistan Journal of Law, Analysis and Wisdom
Volume No. 2, Issue No. 2, September 2023
e-ISSN: 2959-0825, p-ISSN: 2959-0817
http://pjlaw.com.pk

Coverage of Environmental Issues in Leading Media of Pakistan: A Survey Analysis

Adnan Bashir Cheema
PhD Scholar, Communication and Media Studies, Gomal University, DI Khan, Pakistan.
cheema12835@gmail.com

Dr. Muhammad Wasim Akbar
Associate Professor, Communication and Media Studies, Gomal University, DI Khan, Pakistan

Abstract

This study examines the coverage of environmental issues in Pakistan's top media outlets. As the world grapples with the mounting issues of climate change and environmental degradation, the role of the media in moulding public perception and influencing policy discourse becomes increasingly important. The study focuses on the perspectives and analysis of significant Pakistani media organization's reporting on environmental issues, with a special emphasis on newspapers, television channels, and online platforms. The study intends to discover patterns in media coverage and the emphasis given to various environmental issues through a survey of rural and urban residents of Rawalpindi and Islamabad using both qualitative and quantitative measurements through the KAP model. The findings of this study aim to improve our understanding of the role of the media in determining public awareness and policy responses to environmental concerns in Pakistan. The study also considers the possible impact of media coverage on public opinion, government measures, and the country's overall environmental agenda. This research provides insights that can aid media professionals, politicians, and environmental advocates in building a better educated and involved public conversation on environmental issues in Pakistan by throwing light on the strengths and limitations of present media practices. Finally, the study adds to the larger debate over the role of media in addressing environmental concerns and promoting sustainable practices in developing countries.

Keywords: *Environmental Issues, Media Coverage, Survey Analysis, KAP model, Pakistan.*

1. Introduction:

In places where media platforms serve as the dominant source of information on matters such as climate change, the media plays a crucial role in our lives through giving information and education. Despite the warnings and concerning statistics, the threat that climate change poses to Pakistan is not given prominence in the local media. Newspaper coverage of this important topic is noticeably lacking. Research has found that weather events that have been made worse by climate change have affected 85% of the world's population. The study's primary author, Max Callaghan, stressed that climate change is visible and noticeable almost everywhere globally" (Callaghan, 2021). Although the media has made significant attempts in recent years to cover climate change issues, there is still more that can be done to enhance reporting, particularly with respect to the difficulties that climate change presents. The United Nations (UN) has been promoting global peace, security, and prosperity for over seventy

years. In September 2015, the United Nations General Assembly approved the 2030 Agenda for Sustainable Development, which included 17 SDGs and 169 objectives to address the world's most pressing economic, social, and environmental concerns.

The SDGs provide a comprehensive framework for eradicating global poverty, reducing inequality, and ensuring environmental sustainability. Climate change is one of the world's most pressing challenges today, affecting both people and the environment. Goal 13 of the Sustainable Development Goals calls for immediate action to combat the impacts and implications of climate change, recognising the United Nations Framework Convention on Climate Change (UNFCCC) as the primary international platform for addressing climate change (United Nations, 2017). Goal 13 aims are ambitious and thorough, with an emphasis on lowering emissions of greenhouse gases, increasing resilience and adaptive ability, and mobilizing financial resources for climate action. Increased resilience and adaptability to climate-related risks and catastrophic events are among these objectives. National policies, programmes, and planning must include climate change mitigation solutions. Improving understanding, awareness, and organisational capacity to reduce, adapt to, and alleviate the effects of climate change, as well as establishing early warning systems. Promoting methods to strengthen LDCs' and tiny island developing nations' abilities to plan for and manage climate-related concerns, with an emphasis on women, youth, and local and marginalised groups Meeting the requirements of developed-country parties under the United Nations Framework Convention on Climate Change to raise $100 billion per year from all sources to meet developing-country needs by 2020, while also undertaking significant mitigation initiatives and accountability in their execution. The Green Climate Fund must be activated and appropriately funded right away.

Human actions such as the use of petroleum and coal, deforestation, and agricultural practices, according to scientific evidence, significantly contribute to the buildup of greenhouse gases (GHGs) in the atmosphere and hence to climate change. In addition to increased temperatures, climate change produces higher sea levels, more frequent extreme weather, and increased ocean acidity. According to the 2015 United Nations Framework Convention on Climate Change, climate change has serious and widespread consequences. Significant social and economic repercussions result from these impacts, including decreased food security, increased water shortages, and detrimental effects on human health. Social disparities are also made worse by climate change, disproportionately affecting weaker groups, including women, children, and marginalised communities. Addressing the problems posed by climate change requires a concerted global effort. The United Nations Framework Convention on Climate Change (UNFCCC) is the primary global platform for tackling climate change, and the 2015 Paris Agreement provides a comprehensive framework for international action. Governments have pledged to work under the Paris Agreement to keep long-term global warming well below 2 degrees Celsius, with a long-term objective of 1.5 degrees Celsius above industrial levels. The agreement also includes provisions for frequent reporting and review of progress towards these goals, as well as funding to assist developing countries in combating climate change (World Health Organisation, 2018). The Climate Change Act of 1997 was one of the first pieces of legislation adopted in Pakistan to address the effects of climate change. The necessity to curb greenhouse gas (GHG) emissions, which fuel climate change, and to advance sustainable development was acknowledged by this statute. The Pakistan Environmental Protection Council (PEPC) was formed under the Act to monitor environmental protection measures, notably those connected to climate change. The formulation and implementation of national plans and policies to mitigate climate change were among the duties of the PEPC (Government of Pakistan, 1997). Additionally, the 1997 Climate Change Act does not declare combating climate change to be a national priority. It did not allocate a significant amount of money

or offer financial incentives to help with climate change adaptation and mitigation. As a result, many projects to combat climate change lacked sufficient financing and resources, making it difficult for them to succeed (Government of Pakistan, 2017).

Environmental challenges and problems have become a significant challenge for the global population (Yousaf 2013). According to CRI (Climate Risk Index) statistics for 2016, Pakistan is ranked 40th in terms of capital and human capital loss. Pakistan is ranked eighth, with 10,248 fatalities and $3.8 billion in economic damages, accounting for 0.5 per cent of its GDP. In the short term, Pakistan is ranked 33rd in the "climate risk index for 2017: the 10 most affected countries," having suffered 262 deaths and financial damages totalling $384.52 million, or 0.036 per cent of its GDP (Climate Risk Index, 2017). According to Pakistan's Environmental Protection Department, environmental protection legislation was formed in 1997 with the primary purpose of assuring environmental protection, preservation, restoration, and enhancement. This Act also addresses pollution prevention and management, as well as the promotion of environmentally friendly practices. The Act focuses primarily on the execution of the Environmental Protection Agency Council's directives, the transfer of responsibilities to public sector administrative bodies, and the implementation of National Environmental Quality Standards. The lack of coverage of environmental issues in Pakistani media can be linked to a variety of factors. The lack of coverage of environmental issues in Pakistani media can be linked to a variety of factors. These reasons could include the occupational norms of persons responsible for content and news development, space constraints in print media, deadlines, business rules or regulations, and the media organization’s gatekeeping role.

Some occurrences appear to be prioritized by media organizations more than others, and analysts believe that commercial media corporations prioritize their economic interests. According to Riaz (2004), a company's economic interests always take precedence, and they prioritize activities that garner the most interest from consumers in order to achieve profitability.

The media, by giving coverage, plays a vital role in enlightening the public about which topics are more important and which are less important (Riaz 2009). Hansen (2011) examines significant topics and methodologies in studies that investigate the role of media and communication in public and environmental issues in a recent essay. The Industrial Revolution was the primary cause of environmental degradation, which has rendered environmental challenges dangerous to human survival. According to Luca (2002), the Industrial Revolution was a watershed time that profoundly affected all aspects of existence and introduced new norms and perspectives to the human quality of living. The scientific and technical era has given birth to a capitalist system that blames our understanding of nature and how we use it. The Industrial Revolution had a profound impact on human civilization. The Industrial Revolution, which began in Britain in the years 1750–1850 and eventually spread throughout the world, was born there. Economic expansion has engendered a massive class system despite altering society's whole structure (Vries, 2008).

Environmental laws at the federal, state, and local levels establish responsibility for managing hazardous waste and cleaning up (i.e., remediating) polluted areas. The water that impoverished European and Indian populations drank earlier in the 18th and 18th centuries was scarce, costly, and contaminated. It used to be common for people to steal or beg for water. A proper pipeline system was introduced with the new global order; it was first established in 1652, and the system that covers the entire city was first established in 1776. (Ajeyalemi, 1998) asserts that the economy is the foundation of every nation, developed or developing.

Despite government attempts to slow and reverse deterioration, the environment has worsened and poverty has increased in many countries over the last three decades. The extent of influence, however, varies from region to area, location to location, and industry to industry. Environmental issues can be classified into three broad categories:

A. Air pollution

B. Global warming

c. Acts of Nature

Toxic particles released by companies that produce various forms of pollution are referred to as industrial pollution. Dust, masonry, scrap metal, oil, and chemicals are the most prevalent categories of industrial waste. These waste materials pollute the air, water, and soil when they get into the environment. In terms of industrial pollution, burning fossil fuels is one of the main instances. Burning fossil fuels emits carbon dioxide into the atmosphere, along with additional greenhouse gases. As a consequence of these gases accumulating in the atmosphere and being unable to escape, the planet warms. Industry and thermal power plants pollute the air in the country. Furthermore, autos on the road pollute the air by emitting smoke. As a result, the quality of breathing air in Pakistan's urban areas has significantly degraded. Pakistan falls far short of the World Health Organization's (WHO) recommended air quality standard. In Pakistan's largest cities, including Lahore, Rawalpindi, and Islamabad, the concentration of suspended particulate matter surpasses the permissible limit. Our country's thermal power plants and industry are the primary causes of air pollution. Moreover, cars on the road contribute to air pollution by releasing smoke. As a result, Pakistan's metropolitan regions now have considerably worse breathing air quality. Pakistan is well beneath the World Health Organization's (WHO) recommended threshold of air quality. The major cities of Pakistan, including Lahore, Rawalpindi, and Islamabad, have greater concentrations of suspended particulate matter than is advised.

For the past several decades, industrialization and urbanization have been the main drivers of economic progress in Asia. This area is seeing fast expansion, which has led to pollution and environmental issues. Pakistan is a developing nation that deals with severe environmental issues including pollution (Kim et al., 2006). A list of horrible chemicals made in Pakistan by local industry exists. An astonishing amount of hazardous chemicals and contaminated surroundings are produced during material processing. The Federal Environment Agency conducted a survey and found that several industrial processing facilities in Kasur, Sialkot, and Rawalpindi discharge a hazardous liquid that is high in chromium and poses a threat to the environment as well as the local population (Ahmed, 2019). A World Bank estimate from 2006 states that 24% of Pakistan's GDP comes from the industrial sector. An environment that would never support human and sustainable development is destroyed by a significant economic sector. Pakistan ranks top among the nations most vulnerable to the environmental effects of climate change because of its location and socioeconomic complexity, according to the Pakistan Economic Survey (2014–15) (p. 261). Over 22,600 fatalities in Pakistan are attributed to harmful air pollution annually, according to a World Bank analysis. Tanveer et al. (2015) found that Pakistan had five times the rate of smoke and dust pollution compared to industrialized nations. The twin cities of Pakistan are a region plagued by pollution and other serious environmental

issues, and their 15 million residents are in dire need of workable solutions (Shahid et al., 2019].

2. Problem Statement:

This study will specifically look into how the country's rural and urban residents' knowledge, attitudes, and practices (KAP) affect their level of understanding of environmental issues. It will also look into how much coverage and which mass media is most effectively used by the general public to raise awareness of environmental issues.

3. Research Questions

i. To what extent do viewers absorb environmental issues compared to other subjects covered by the media?

ii. Which media is most effective in terms of environmental issues?

iii. Do people in rural and urban areas have different levels of understanding about environmental issues?

iii. Do educated people treat differently in their knowledge, attitudes, and practices regarding environmental issues?

iv. Does gender play any different role in the issue of environment?

4. Literature Review

The steady warming of the Earth's oceans, surface, and atmosphere is referred to as global warming. This is due to human activities. The greatest damaging factor affecting Earth's average temperature is estimated to be the combustion of fossil fuels. When fossil fuels are burned, methane, carbon dioxide, and other gases are released into the atmosphere. One of the most evident effects of global warming on the biosphere is the rising temperature of the Earth. The average temperature of the Earth's surface has risen by 1.4 degrees Fahrenheit (0.8 degrees Celsius) in the previous 100 years, according to studies. Climate change affects not only temperature and water levels, but also animals and vegetation. To begin with, as temperatures rise due to global warming, many animal species are shifting to northern latitudes or higher elevations. Warmer Earth temperatures are also causing the spread of disease-causing bacteria. Originally, these illnesses were exclusively found in tropical and subtropical areas, where they devastated various plant and animal species. As a result of global warming, these illnesses are spreading.

Many animal and plant species will become extinct if infections continue to spread. Several diseases have been documented in recent years as a result of increased global warming. Global warming is also harming the society's agriculture sector. Increased hurricanes, droughts, tsunamis, and strong rains kill growing vegetation. This agricultural season has had a significant impact on several fruits and vegetables. This causes crop failure, which leads to a scarcity of food or an increase in chemically generated food The average air globe and ocean temperature, as well as the major ice melts that are creating high sea levels, provide evidence of a clear increase in global temperature. As a result, the average temperature near the Earth's surface is included in the measurement of global warming. Natural calamities are hastening the death and devastation all across the world. This assumption is not supported by any records in the world databank. The impacts are often alienating in the socioeconomic sector. Natural disasters kill about 60,000 individuals worldwide each year. Many people believe that past droughts and floods are the greatest natural disasters, yet earthquakes are becoming more lethal as

time passes. Most of the time, the poor are disproportionately affected by natural disasters. People in low-to-middle-income countries are more vulnerable because of limited infrastructure for protection and response systems, resulting in high fatality rates. Resolving these concerns may be necessary in the future to avoid disaster-related fatalities (Ritchie & Roser, 2019).

5. UN Sustainable Development Goal 13 and the Climate Act

For over seventy years, the United Nations (UN) has been in the vanguard of promoting global peace, security, and prosperity. The United Nations General Assembly adopted the 2030 Agenda for Sustainable Development in September 2015, which includes 17 SDGs and 169 objectives to solve the world's most pressing economic, social, and environmental issues. The Sustainable Development Goals (SDGs) give a comprehensive framework for eradicating global poverty, decreasing inequality, and ensuring environmental sustainability. Climate change is currently one of the world's most pressing challenges, with negative consequences for both mankind and the environment. Goal 13 of the Sustainable Development Goals calls for immediate action to prevent climate change and its consequences.

6. Pakistan Climate Change Act 1997

The Climate Change Act of 1997 was one of the first pieces of legislation adopted in Pakistan to address the effects of climate change. The necessity to curb greenhouse gas (GHG) emissions, which fuel climate change, and to advance sustainable development was acknowledged by this statute. The Pakistan Environmental Protection Council (PEPC) was formed under the Act to monitor environmental protection measures, notably those connected to climate change. The formulation and implementation of national plans and policies to mitigate climate change were among the duties of the PEPC (Government of Pakistan, 1997). Currently, Pakistan had a population of 223 million in Jan 2021, in which 48.5 per cent of the population is female and 51.5 per cent is male. The rural population consists of 62.7 per cent of the total population and the rest of the 37.3 per cent population lives in urban areas. Pakistan is one of the emerging nations that is digitalizing it very rapidly. It can be assessed that there are 61.34 million internet users in Pakistan and the internet penetration rate in Pakistan is 27.5% this year. Likewise, there are 46 million social media users in Pakistan and this figure is equivalent to 20.6 percent of the total population of Pakistan. So, it has the potential to reach most of the population directly and indirectly through social media users and increasing internet users day by day. There is a dire need to address the masses about climate change and such content that may be accessible all the time for the users. Social media is the only option that can have maximum reach to the audience and remain available for all users to access such content according to their convenience.

7. Environment and Media Coverage:

Changes are happening quickly in today's dynamic and ever-changing world since time and geography are no longer boundaries. Due to technological innovation, the globe has become a little global village. According to research, environmental problems are growing and having an impact on the entire planet (Kronsell 1997). Environmental problems are varied and intricate. Similar to other nations, Pakistan's climate is changing due to factors such as resource degradation, ozone depletion, air and ocean pollution, and global climate change. News items on the environment have been described differently by various academics. According to Maceviciute (2000), environmental concerns are broadly defined as any sort of human activity that negatively affects the environment, either directly or indirectly.

The role that the media plays in raising public awareness of environmental concerns is crucial. People take action to protect their environment as a result. Concerning the availability of electronic media platforms and channels According to Tengbers (1995:132–1488), there are more than 2600 global media outlets that serve 1.5 billion people globally through the use of 3000 satellites. Social media is playing a significant role in helping humans to communicate, including spreading information about the hazards of climate change. Social media provides content about climate movements and suggests actions that can bring more awareness and access policymakers to take steps to overcome the issue. 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 regulation is especially addressed in this regard. NEAP demonstrates fresh environmental efforts in order to accomplish some discernible changes (Khwaja & Khan, 2005).

Pakistan is a land abounding in natural resources. Land, sea, mountains, deserts, plants, and rivers are all present. This means that Pakistan has a diverse natural terrain, which contributes to its beauty. Mother Nature has also gifted Pakistan with all four seasons: summer, autumn, winter, and spring. Nature has been abundant in providing all natural blessings on this land, and this claim is not wrong (Ahmed & Mashkoor, 2016). Individuals have a responsibility to safeguard the environment, regardless of the benefits of nature, in order to make life easier and more sustainable. Pakistan has its fair share of environmental issues, some of which are severe enough to jeopardize the health and well-being of its residents as well as the health and welfare of other living creatures (Wahga, Blundel, & Shaefer, 2018). Pakistan is associated to significant climate shifts, air, water, and deforestation pollution, as well as other environmental issues. Furthermore, Pakistan's physical structure differs from that of many other countries, and the country is endowed with a multitude of natural resources, many of which are regrettably on the verge of depletion. Air and water pollution are two of the most serious environmental issues in Pakistan (Wahga et al., 2018).

These climate concerns are not only wreaking havoc on the ecology, but they are also generating health problems for Pakistanis (Abro et al., 2017). Pakistan's economic integration with other countries, such as the China-Pakistan Economic Corridor (CPEC), includes investment projects worth US$62 billion. This money will be used to fund infrastructure, energy, and other development initiatives in Pakistan. On the other side, all of these development activities may have an impact on the environment. Pakistan's growing economy is accompanied by three main environmental challenges. The first source of pollution is traditional coal-fired power plants, which release CO2 and smog and hence contribute to global warming and climate change. Second, enormous tree-cutting is required to build roadways from China to Pakistan. The third issue is car trafficking. Every day, about 7000 trucks go along the Karakoram Highway, emitting 36.5 million tons of CO2. Considering all of these concerns, our key focus is on infrastructure development and the rest. As a result, Pakistan is accused of contributing to global warming by emitting CO2. Scientists from both countries should develop strategies to manage the environmental impacts of CPEC projects (Kouser et al., 2019).

8. Plastic bags' contribution to climate change

One of the biggest causes of trash contamination in Pakistan is the widespread use of polythene bags. Despite being prohibited in some areas, polythene bags are nonetheless widely used for packaging and transporting goods. The usage of polythene bags, on the other hand, has major environmental

consequences, including trash, drainage system obstruction, and soil pollution. Furthermore, the manufacture of polythene bags uses resources that are not renewable such as fossil fuels and adds to greenhouse gas emissions (The Express Tribune, 2021). According to the Pakistan Environmental Protection Agency, the country creates more than 55 million tons of garbage each year, with plastic waste accounting for 33 per cent of the total. With an estimated 350,000 tons of plastic waste generated each year,

These difficulties might involve diminishing resources, inadequate infrastructure, low-productive animals, and, most importantly, erratic weather patterns and natural calamities. With the Himalayan range, this is the case. adjustments are necessary to ensure sustainability and progress, and two essential adjustments are the involvement of women and the legalization of access to natural resources. The public must make investments in areas such as health, education, transportation, biodiversity conservation, and related research, among other policy possibilities (Wani & Wani, 2019).

Addressing the issues posed by climate change requires a global effort. The United Nations Framework Convention on Climate Change (UNFCCC) is the primary global platform for tackling climate change, and the 2015 Paris Agreement provides a comprehensive framework for international action. Governments have pledged to work under the Paris Agreement to keep long-term global warming well below 2 degrees Celsius, with a long-term objective of 1.5 degrees Celsius above industrial levels. The accord also calls for regular reporting and evaluation of progress towards these targets, as well as financing to assist developing nations in tackling climate change. 2018 World Health Organization.

9. Media's Mediating Effect

The climate change debate is sparked by scientific websites and social media remarks. In addition to traditional media, it is believed that social media and digital platforms should be used to educate people about environmental issues and how they can help the earth become more sustainable. Furthermore, social media is seen as a significant and relevant tool for bridging the gap between specialists who recognise the challenges of changing environments and instability and members of society who are affected by these changes and issues (Lam et al., 2019). There are few climate reporters in Pakistan, and those that do exist typically lack sufficient representation within journalistic groups and official organizational frameworks. Unfortunately, the media usually ignores non-political issues, making it harder for climate journalists to cover climate change crisis subjects (Sharif & Medvecky, 2018). Concerns about climate change have been highlighted by Pakistani politicians, who have called for action.

The media is often regarded as one of the most efficient means of increasing global awareness. This is owing to its ability to reach a large number of people. The primary reason for this is that mass media is accessible to a large population all over the world. Furthermore, mass media such as television, newspapers, radio, and the internet are used to promote awareness about environmental issues (Saikia, 2017). By analysing the frequency of specific subjects or terms cited in media coverage, statistical research can detect popular discussions (Raza et al., 2023). Although the media discusses the complexities of science, political obstacles, and societal ramifications, the mounting challenges of climate change and environmental calamities are always given a back seat in all forms of media. This is because environmental communication is rarely taken seriously and has never received much attention. Most of the time, the news media reflects the administration's policies, which have double the power of the opposition parties. This explains why environmental challenges are commonly

presented in economic terms; it may also explain why the general public is uninterested in economic arguments and strategic talks on environmental hazards. In Pakistan, influential media groups such as Jang Group, HUM TV, ARY, Dunya TV, Express, and the Dawn group control a substantial portion of the audience and advertising money. Pakistan had 124 TV stations, 67 broadcasting units, and around 707 newspapers as of 2019. The Pakistani media, like a few others around the world, has been involved in this trend, shifting from being informational to agenda setters and influencing public perceptions and discussions by selectively promoting specific topics (Demorest, 2009).

10. Theoretical Framework

The Knowledge, Attitude, and Practice model (KAP model) is a paradigm used in social and behavioural sciences to explore and explain how information and ideas influence behaviour. Here's a quick rundown of each component:

Knowledge:

This refers to what people are aware of about a specific subject. Understanding the causes and consequences of climate change, for example, as well as possible mitigation and adaptation techniques may be included.

Attitude:

Attitude refers to an individual's feelings or evaluations about a specific topic. Concern is a term of indifference, or skepticism may characterize views towards climate change. In general, positive attitudes are related to a greater likelihood of taking action. Knowledge is essential in all fields since it aids in the transmission of reliable information. Since the media affects and discusses almost every subject, this inquiry focuses on how the media approaches environmental challenges. To begin with, the factual and theoretical basis upon which environmental critiques are built is inadequate. Hall's dominant ideology thesis of mass media and the elitist-conflict framework for society are used in this approach. The conclusion is that people in positions of power in society have influence over environmental issues. This is how the media maintains and supports the status quo so that it may effectively function in favour of these so-called godfathers or dominant groups (Parlour, 1980). Journalists are often busy and eager to investigate any topic that offers both reward and demand. Interaction between journalists, scientists, the general public, and others is becoming increasingly important in raising awareness. According to studies (Ertz et al., 2016), people's attitudes towards nature and the environment vary. They may be aware of environmental challenges, yet their responses to environmental stability and environmental preservation may differ. This is due to a variety of circumstances. It could be due to their understanding of the concerns or the geographical region in which they live (Saikia, 2017).

Practice

Individuals' actual behaviours, activities, or decisions in response to their knowledge and attitudes are referred to as practice. It displays how people apply their knowledge and attitudes in everyday settings. Adopting good habits (e.g., practising safe sex, exercising frequently) to making educated choices (e.g., immunization) or avoiding harmful behaviours (e.g., smoking cessation) are examples of practice. The KAP approach is based on the assumption that increasing knowledge about a given subject can lead to changes in attitudes, which can then lead to changes in behaviour or practices. However, it is crucial

to highlight that the relationship between these three components is not always clear, and external factors such as societal norms, resource availability, and limitations of the environment can all have an impact.

11. Methodology

In this study, the researcher tries to assess the impact of knowledge, attitudes, and practises on the residents of Pakistan's two twin cities. The researcher used survey methodology and sent closed-ended questions to the respondents. In-depth interviews will also be conducted to ensure complete understanding. To fulfil the study task, the survey approach was used. The survey topic "Media and Environmental Issues in Pakistan" as well as the urban and rural twin city areas have been chosen. When selecting the twin cities, the following considerations were considered.

• The residents of the twin cities come from all throughout Pakistan. Islamabad, the country's federal capital, has a population that encompasses the entire country.

• Policymakers live in cities, as do inhabitants, who are also well-aware and educated.

• The researcher also had access to the respondents.

12. Population and Sample of the Study

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. The sample was divided in half to ensure equal representation of males and females, however, cross-gender representation was also present. In this study, purpose sampling was used by distributing questionnaires and conducting interviews.

It has a varied population and people from many cities throughout the country live in this area. In terms of facilities, these cities almost all have enough infrastructure and communications services such as cable television, internet access, and schools, colleges, and institutions. As a result, the twin city is home to people from various walks of life. Apart from the cantonment zone, there are many sectors and housing complexes. The survey had 800 responses in total. Individuals filled up questions. The total number of data collection responders is 800. For data collection, a questionnaire was sent out to 800 respondents.

Following a review of the literature, a detailed structured closed-ended questionnaire was constructed and delivered to the respondents. As part of the data-gathering tool, an in-depth interview was conducted. The data was collected during face-to-face meetings to avoid any confusion or irrelevancy. The reliability of the questionnaire has been checked by surveying 55 respondents. The overall Cronbach Alpha score was .94 which is within the desirable state.

Table 1. Reliability Statistics of the Survey

Reliability Statistics

Cronbach's Alpha	No of Items
.940	55

13. Results and Analysis

Education is crucial in modern civilizations for identifying environmental concerns. The questionnaire included four levels to determine the respondents' level of education: Bachelor, Master, PhD/MPhil, and other degrees, as well as primary, middle, intermediate, and higher secondary education.

Table 2 Education of the Respondents

Education	Frequency /Percentage	
Bachelors	358	44.8%
Masters	253	31.6%
PhD/Mphil	91	11.4%
Other	98	12.3 %
Total	800	100%

The distribution of respondents based on their qualifications is shown in the table above. Bachelor's degree holders were found to be the most common, accounting for 44.8% of the overall sample size. Employees with a Master's degree made up 31.6% of the whole sample size, while those with a PhD and other degrees or diplomas made up only 11.4% and 12.3% of the total sample size, respectively..

Table 3 Correlation between Education and Practice of Polythene Bags

Correlations		Qualification of Respondents	Practice about use of Polythene Bags
Qualification of Respondents	Pearson Correlation	1	.157**
	Sig. (2-tailed)		.000

	N	800	800
Practic about use of Polythene Bags	Pearson Correlation	.157**	1
	Sig. (2-tailed)	.000	
	N	800	800

**. Correlation is significant at the 0.01 level (2-tailed).

The statistical significance of the association is shown by this value (0.000). The double asterisks (**) signify a significance level of 0.01 (1%). This means that the observed correlation is statistically significant at the 0.01 level, indicating that the association between respondents' credentials and their use of polythene bags is unlikely to be coincidental. In other words, there is substantial evidence that supports the notion that these two factors have a meaningful association.

Table 4 Gender-wise Most Effective Medium for Environmental Issues Cross-tabulation

		Most Effective Medium for Environmental Issues				Total
		TV	Social Media	Radio	Newspaper	
Male	Count	136	160	48	24	368
	% within the Gender of the respondent	37.0%	43.5%	13.0%	6.5%	100.0%
Female	Count	168	200	0	32	400
	% within the Gender of the respondent	42.0%	50.0%	0.0%	8.0%	100.0%
Transgender	Count	16	16	0	0	32
	% within the Gender of the respondent	50.0%	50.0%	0.0%	0.0%	100.0%
Total	Count	320	376	48	56	800
	% within the Gender of the respondent	40.0%	47.0%	6.0%	7.0%	100.0%

The vast majority of respondents stated that they watch television to learn about local, national, and global concerns. However, it has been shown that television is less popular as a source of environmental information than social media, which is 47%. Television is watched by 40% of those polled, while newspapers provide benefits and information on the topic to 7% of readers. Only 6% listened to the radio for climate change information.

Table 5 Chi-Square of Most Effective Medium for Environmental Issues

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	63.130[a]	6	.000
Likelihood Ratio	83.511	6	.000
Linear-by-Linear Association	10.286	1	.001
N of Valid Cases	800		

a. 2 cells (16.7%) have an expected count of less than 5. The minimum expected count is 1.92.

The value here is 63.130, and with 6 degrees of freedom, the associated p-value is very small (".000" indicates less than 0.001), suggesting that there is a significant association. The value is 83.511, and, like the Pearson Chi-Square, the p-value is very small (".000"), indicating a significant association.

Table 6 Most Hazardous Environmental Issues

Environmental issues	Frequency / Percentage	
Disastrous	154	19.25 %
Global warming	256	32 %
Carbon Emission	49	6.13 %
Smog	131	16.38 %
Air Pollution	147	18.37 %
Others	63	7.87 %
Total	800	100%

Global warming is the most significant threat to human life on the planet, according to the majority of respondents (32%). It was deemed devastating. Many people were concerned about the state of the environment. Some respondents also believed that environmental issues such as carbon emissions are a sort of pollution, while others claimed that smog is also a type of pollution. Some respondents referred to it as a big problem that needed to be addressed. According to the responders, an environmental issue is any action that is harmful to the environment or humans.

Table 7

Residents	Frequency / Percentage	
Urban	508	63.50 %
Rural	240	30.0 %
Both	52	6.50 %
Total	800	100%

Environment Problems faced by which type of residents

The table above indicates that the urban population (64%) faces more environmental problems than the rural residents (30%.

Table 8 Type of Environmental Issues

Environmental Issues	Frequency / Percentage	
Air pollution	299	37.37%
water pollution	189	23.62%
Noise Pollution	234	29.25%
Rise in temperature	78	9.75%
Total	800	100%

According to the research, "air pollution" is the most prominent environmental issue among urban inhabitants, with 37.37% considering it as a threat to people' health. "Noise pollution" ranks second with 29.25% of respondents. Furthermore, when mixed with air pollution and noise pollution, "water pollution" is less damaging. Only 5.12% believe that a "rise in temperature" can cause health problems, but 23.62% support water pollution.

Table 9 Knowledge - Causes of water pollution

Reasons	Frequency	Percentage
Pesticides and Insecticides	133	16.6%
Industrial Effluents	284	35.5%
Deforestation	311	38.9%
Any Other	72	9%
Total	800	100%

The study's participants were asked to identify the most common source of water contamination in their localities. Pesticides and insecticides were indicated by 133 research participants as the predominant source of water contamination in their area. According to 284 participants, industrial wastewater generated by industry and manufacturers is the leading cause of elevated levels of water contamination.

This response represents the opinions of 36% of the participants in the entire sample size. Deforestation, according to 311 participants, is the leading cause of water contamination in their area. This represents around 39% of the overall sample size.

Table 10 ***Difference between Urban and Rural Sewerage Systems***

One-Sample Test

	Test Value = 0					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Sewerage System Used in Rural Areas	14.249	40	.000	1.683	1.44	1.92
Sewerage System Used in Urban Areas	22.120	40	.000	1.659	1.51	1.81

The test values (t-values) for both rural and urban areas are quite high, indicating a significant difference between the sample mean and the hypothesized population mean (test value of 0). The p-values are very low ($p < 0.001$. The mean differences are positive for both rural and urban areas, indicating that the sample means are significantly greater than the test value of 0. The 95% confidence intervals do not include 0, further supporting the significance of the differences.

Table 11 ***Difference between Individual Passion & Learning Through Social Media***

One-Sample Test

	Test Value = 0					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper

Individuals passion about type of environmental issues	17.189	60	.000	1.820	1.61	2.03
Learning Through Social Media Sources	16.772	60	.000	1.770	1.56	1.98

The t-values are high, indicating a significant difference between the sample mean and the test value. The p-values are very low ($p < 0.001$), suggesting strong evidence against the null hypothesis. Both mean differences are positive, indicating that individuals are significantly more passionate about environmental issues and learn significantly more through social media sources than the test value of 0. The 95% confidence intervals do not include 0, further supporting the significance of the differences. In summary, these results suggest a statistically significant difference in both passions about environmental issues and learning through social media sources, with both groups showing mean differences significantly greater than zero.

Table 12 TV Provides More Information Regarding Cleanliness

		TV Provides More Information Regarding Cleanliness					Total
		Strongly Disagreed	Disagreed	Neutral	Agreed	Strongly Agreed	
Area of Residents	Urban	64	88	32	160	72	416
	Rural	40	32	40	176	96	384
Total		104	120	72	336	168	800

Respondents were asked to indicate their degree of agreement on how far TV contributes to the distribution of information about a cleaner and safer environment in order to validate the credibility of television in the current technological era in terms of cleanliness.

Table 13 Difference Between Social Media Use and Practice of Tree Plantation

Test Value = 0

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Social Media is More Effective to Solve Environment Issues	18.145	60	.000	2.033	1.81	2.26
Practice Tree Plantation	12.240	60	.000	1.836	1.54	2.14

The t-values are high, indicating a significant difference between the sample mean and the test value of 18.145. The p-values are very low ($p < 0.001$), suggesting strong evidence against the null hypothesis. Both mean differences are positive, indicating that both groups find social media more effective in solving environmental issues and practice tree plantation more than the test value of 0. The 95% confidence intervals do not include 0, further supporting the significance of the differences.

14. Discussion

The respondents were also found to be largely from the country's twin cities of Rawalpindi and Islamabad. When analyzing which media channels were most commonly used by respondents, it was discovered that television was the most commonly used source of information. Television has the ability to provide information that may be utilized to educate people in both rural and urban sections of the country. This is because the information broadcast on television will be easily accessible and understood by people in both urban and rural areas of the country. Pollution and global warming dominate the general public's opinion of the country's environmental concerns. As a result, the media has an easier time covering these facets of environmental challenges and raising awareness about what causes contamination and climate change. Furthermore, the media may play a significant role in educating people about how they can help reduce pollution and global warming as individuals (Zulfiqar et al., 2018). The vast majority of those polled indicated they watch TV to learn about local, national, and worldwide issues. However, it has been shown that television is less popular as a source of environmental information than social media, which is 47%. The overall percentage of individuals polled who watch television is 40%, while newspapers provide advantages and information on the topic to 7% of readers. Only 6% listened to the radio for information on the climate change topic.

Furthermore, the current study's findings reveal that the media is an excellent tool for raising awareness about a variety of environmental challenges that are sweeping the country and inflicting significant harm and destruction to the country's air, water, and oil. With the majority of people understanding that their activities have an impact on environmental changes and harm, it will be very simple to educate them on how to reduce the damage (Riaz, 2018). People become more conscious of environmental happenings around them as a result of this activity. Furthermore, influential individuals, celebrities, and social media influencers can advise others on how they might contribute to

environmental preservation. The t-values are high, indicating a significant difference between the sample mean and the test value. The p-values are very low ($p < 0.001$), suggesting strong evidence against the null hypothesis. Both mean differences are positive, indicating that individuals are significantly more passionate about environmental issues and learn significantly more through social media sources than the test value of 0. The 95% confidence intervals do not include 0, further supporting the significance of the differences. In summary, these results suggest a statistically significant difference in both passions about environmental issues and learning through social media sources, with both groups showing mean differences significantly greater than zero.

Furthermore, the study's findings revealed that climate change, pollution, deforestation, and nuclear energy are the most discussed environmental topics on social media. People in the country are also becoming more concerned about climate change and pollution. Furthermore, in terms of regional concentration, all the traditional and non-traditional media prioritized reporting on national climate change problems. This emphasis acknowledges the regional effects of climate change while emphasizing the need for comprehensive national-level initiatives and solutions. International stories, on the other hand, received significantly less coverage, showing that the Pakistani media places a higher emphasis on domestic climate change concerns rather than international perspectives. As a result, the complete analysis demonstrates the Pakistani media's grasp of the urgency and relevance of the climate change challenge and creating awareness and knowledge among the people of Pakistan.

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