EFFECTS OF SOCIAL MEDIA USE ON ANIMAL WELFARE IN PAKISTAN

By

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Thesis Title: **Effects of social media use on animal welfare in Pakistan**

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Anum Zulfiqar

Dedicated to

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ABSTRACT

Thesis Title: <u>Effects of Social media use on animal welfare in Pakistan</u>

This quantitative study explored the effects of social media use and exposure on public attitudes and perceived knowledge about animal welfare in Pakistan. It investigated two hypotheses based on the uses and gratifications theory and the social learning theory. The first hypothesis explored the correlation between exposure to animal welfare content on social media and public attitudes towards animal welfare; whereas the second hypothesis explored correlation between Social media usage patterns and perceived knowledge about animal welfare. A study was administered to 300 university students in Islamabad to analyze their social media usage patterns, exposure to animal welfare information, attitudes, and perceived knowledge. The data was analyzed using descriptive statistics, frequency analysis, correlation, and ANOVA. The study demonstrated a significant correlation between social media exposure to animal welfare content and positive public attitudes towards animal welfare. There was a statistically significant difference in perceived knowledge among social media usage groups, with heavy users reporting higher levels of knowledge. The overall social media engagement was moderately high; however, the exposure to animal welfare content was comparatively lower. Animal welfare attitudes were most influenced by religious beliefs, cultural practices, education, and personal experience. The study proposes modifying animal welfare messaging on online platforms according to Pakistan's cultural context. More research into the relationship between social media, religion, education, and cultural norms is required to establish positive human-animal associations.

Keywords

Social media, Animal welfare, Exposure, Knowledge acquisition, Attitudinal Change

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LIST OF ABBREVIATIONS

Abbreviation	Terms
ASPCA	American Society for Prevention of Animal Cruelty
PETA	People for the Ethical Treatment of Animals
PCA	Prevention of Cruelty to Animal
ACF	Ayesha Chundrigar Foundation
U&G	Uses and Gratification
GO	Gratification Obtained
GS	Gratification Sought
NUML	National University of Modern Languages
IIU	International Islamic University
CMR	Collective Moral Reflexivity
SPCA	Society for the Prevention of Cruelty to Animals
FAW	Farm Animal Welfare
PAWS	Pet Animal Welfare Society
ICTs	Information and Communication Technologies
OIE	Office International des Epizooties
NGOs	Non-Governmental Organizations
SNSs	Social Networking Sites

LIST OF APPENDICES

1. INTRODUCTION

The last few years have seen a remarkable integration of social media across the classes of people around the world. Social media Platforms such as Facebook, X, Snapchat, Instagram, and TikTok have changed the forms of communication, information dissemination, and interpersonal interaction. In fact, this digital revolution is spreading quite deeply in the developing world. In underdeveloped countries such as Pakistan, in recent years, the number of individuals accessing social media has increased substantially (Ahmad, Alvi & Ittefaq, 2019). Over the past five years, internet access and mobile coverage have skyrocketed in Pakistan (Abbasi & Huang, 2020). The Statistics show that more than 71 million users in Pakistan (Kemp, 2023) use social media platforms. These statistics reveal how firmly social media is embedded in Pakistani society. This unparalleled online connectivity has given birth to a new era of digital activism, transforming individuals and organisations into formidable agents of causes, including animals' rights (Aji, 2019). Social media platforms have become the perfect vehicle for driving awareness and gathering support for animal welfare campaigns, while at the same time serving as a forum for the exchange of information and the building of communities (Aji, 2019). Nevertheless, the multiplication of social media is accompanied by a long chain of both opportunities and complexity (Riddle & Mackey, 2020). Social media has become a medium of communication for the activist voices of animal rights that are spread throughout the world, but it is also a platform where false information is spread and the animals are exploited. The expansion of social media platforms requires an in-depth understanding of the influence on our society, norms, attitudes, and behaviours that could be associated with animal welfare.

The relationship between humans and animals has been altered by the advent of social media, particularly in a country like Pakistan that has tremendous biodiversity and abundance of wild animals (Baig & Al-Subaiee, 2009). Although the country tends to be rich in biodiversity, Pakistan is highly faced with numerous challenges, including the cruelties towards stray animals, working animals, wildlife poaching, and destruction of habitats due to a lack of a proper animal welfare system (Chagani, 2017). Social media has opened a space for advocating and raising awareness that not only grants people and organisations the power to address problems directly but also the tools for increasing people's knowledge about available solutions dealing with the mentioned challenges (Abbasi & Huang, 2020).

Social media potentially boosts the awareness regarding animal welfare, but on the other hand, this role is still unclear. It may lead to misconceptions when disseminating information. It can stimulate proper practice, for instance, when educating and creating awareness. Nonetheless, however, sparked by the internet, the advent of social media has created a platform that has aided in both awareness and action, as individuals and organisations have directly engaged in this cause. In essence, the first step in delving into the complex way social media influences animal welfare in Pakistan should entail a thorough investigation of the disadvantages and problems caused by the phenomenon.

In the present context, the issue of animal well-being in Pakistan implies multifaceted aspects and asks for a careful assessment of the extent of the impact of social media influences as well as other factors. To properly navigate this medium, people participating must recognise the benefits of social media while also being aware of its possible drawbacks. Bringing to light existing difficulties and injustices can help society develop the understanding and compassion required for

the establishment of an ethical society that advocates the rights and welfare of all living beings, both human and animal.

In this research, social media is defined as internet applications and services through which users can create, share and exchange content created by other users (Obar & Wildman, 2015). Social media content promoting animal rights means all the published post, video, picture, or any other information related to the proper treatment, health, and living conditions of domestic animals or wildlife species.

The extended use of social media platforms demands analysis of the effect that it has on our society, its norms, attitudes, and behaviors and consequently its relation with the welfare of animals. In this situation, animal welfare is defined in terms of the animals' health and psychological well-being, as well as improving their ability to experience minimal or no discomfort, hunger, thirst, or sickness while showing usual behaviour (Li et al., 2023).

This research work is based on Social learning theory (Bandura, 1977) and also employs the Use and Gratification theory (Katz, Blumler, & Gurevitch, 1973). Social learning theory postulates that people are able to learn new behaviors and attitudes through watching the social media users and the results they obtain from their activities. In the context of animal welfare, this means that an individual may come with positive or negative attitudes towards animals depending on what he or she is exposed to or maybe involved in through the social media platforms. Similarly, the uses and gratification theory suggested that users intentionally consume media to satisfy various needs that include search for information, entertainment or companionship (Whiting & Williams, 2013). In connection to this study, the theory suggests that people may communicate with and receive animal welfare posts and content with purposes such as to obtain information, and to assert or affirm values, or to become part of like-minded communities.

Although the influence of social media on buying behaviors has received attention from academic scholars, little focus has been directed to how social media affects animal welfare by altering perception, awareness, and behavioral trend towards animals especially in the context of Pakistan. This research seeks to address this gap through an extensive exploration of the details of the relationship between the use of social media and perceptions and actions concerning the well-being of animals among Pakistanis.

1.1 Problem Statement

In Pakistan, there is a lack of empirical understanding about how the increasing usage of social media platforms is influencing public attitudes, awareness, and behaviours towards animal welfare issues in the country. Despite the widespread adoption of social media, especially among the youth, the specific ways in which it is shaping the discourse, knowledge, and actions related to animal welfare remain largely unexplored.

Although social media has the potential to raise awareness, pass information, and encourage the development of support for animal welfare organisations and other causes they work for, the role and effectiveness of this social tool in the context of Pakistani culture are rather uncertain. Research needs to be conducted on trends in the use of social media networks regarding animal welfare, the correlation of this usage with shifts in public attitudes and behaviour, and factors that contribute to the formation of such views.

It is imperative to address this problem for stakeholders, policymakers, and animal welfare organizations to make optimal use of social media capacity as a tool to advance and promote the welfare of animals in Pakistan.

1.2 Research Objectives

The research objectives guiding this study are as follows:

1. To explore the usage patterns of social media regarding animal welfare.

2. To explore the relationship between social media, usage and changes in attitudes and behaviours towards animal welfare.

3. To determine the underlying factors that impact attitudes towards animal welfare among the public in Pakistan.

1.3 Research Questions

1. What are the usage patterns of social media in Pakistan about animal welfare?

2. How do social media influence the attitudes and behaviours of the public towards animal welfare in Pakistan?

3. What factors influence the attitudes of the public towards animal welfare in Pakistan?

1.4 Scope and Delimitations

The focus of this study in terms of scope is to outline the categories of social media use towards animal welfare concerns, especially within the Pakistani setting, and analyse its impacts on public mindsets and conducts pertaining to animal welfare.

This study exclusively examines animal welfare and does not examine the broader issues of environmental attitudes. This study specifically focuses on domestic animal and wildlife welfare issues within the boundaries of Pakistan.

The study sample comprised 300 selective university cohorts who were constantly using social networks. This target group was selected because young educated social media users

represent an important cohort for grasping the social implications of these nascent technologies. However, the generalizability of the findings to the broader Pakistani population remains limited due to the specific sample.

This study is based on a quantitative methodology, collecting structured self-reported data using online questionnaires. Among the important variables quantified are social media usage patterns, exposure to animal welfare material, learning outcomes, attitude changes, and drivers of change. Within the limits of the available time and resources in this study, a choice for a survey questionnaire enabled reaching a national representative sample quickly.

Qualitative methods could generate a richer understanding of perceptions and practises, but the chosen deductive method focussed on quantitative data to test hypotheses. The analysis is limited to descriptive and inferential statistical methods rather than qualitative detailed inquiry.

This study does not imply a comparative analysis between different cultural or demographic groups. However, it offers preliminary results that could guide future studies to identify the role of social media in animal welfare situations within different developing country contexts.

The focus of the study is limited to examining usage trends and attitudinal effects on animal welfare, not extended into environmental attitudes in general. It mainly concentrates on domestic animal and wildlife welfare issues within the Pakistani framework. This study excludes cross-cultural comparative analysis. However, the results may provide some ideas for other developing countries with similar dynamics surrounding social media and animal welfare.

1.5 Rational of the study

As social media usage increases at an alarming rate in Pakistan, it is vital to understand how this affects public perspectives and behaviours related to animal welfare. Social media affects the perspectives of social media users on animal welfare as they are exposed to persuasive information, social norms, and networking (Obar & Wildman 2015; Kruse et al., 2021). The phenomenon has not been empirically examined in Pakistan's context, previous literature mostly examined only positive and negative outcomes of social media usage regarding animal welfare. The current study focused on suggesting ways of using social media usage to raise public awareness, implement animal protection laws, and conduct humane education in accordance with Pakistan's circumstances.

The logical premise for undertaking this study is that social media influences views and behaviours related to the welfare of animals, however this relationship has not been substantially researched in Pakistan. While some research has examined the impact of social media on consumer purchasing intentions, little emphasis has been made to how social media influences animal welfare through shaping attitudes, knowledge, and actions towards animals.

The justification for this study is based on the insufficient empirical understanding of the impact of social media on animal welfare engagement, particularly within Pakistan, despite the increased use of digital platforms. However, marketers have so far researched social media's effects on marketing but less on the relations between humans and animals (Venkatesh,2020; Contina et al., 2021). As social media usage continues to rise in Pakistan, it is valuable to understand its effects on animal welfare in the country. Social media exposes users to information, perspectives, and norms that may influence how they view and treat animals. This study

comprehensively examines the interactions between social media use and animal welfare awareness, attitudes, and behaviours among Pakistanis.

The unique focus on animal welfare, rather than consumer purchase intentions, is an important contribution of this research. Examining the mediating effects of social media on animal welfare can provide novel insights into how technology shapes human- animal relations in Pakistan. Given the limited literature on this topic in the Pakistani context, this study intends to produce new findings that have both theoretical and applied significance. The results can inform efforts by animal welfare organisations and policymakers to effectively utilise social media for public education and engagement on animal issues in the country.

1.6 Significance of the study

This research has theoretical and practical benefits in exploring how social media influences the knowledge, perceptions, and practices of the community regarding animal rights in Pakistan. In addition, it provides theoretical contributions to the impact of digital media on human-animal relations drawing on social learning theory and uses and gratification theory.

In fact, the study's implications may be of significance to animal welfare organizations, policymakers, and other stakeholders of animal welfare in Pakistan to adopt the right strategies with regards to utilizing social media channels and applications to enhance public awareness, engagement, and advocacy on matters of animal welfare. Usage-patterns, attitudes, and contributing factors are key indicators that can help outline policy prescriptions or interventions.

Furthermore, the study fills a gap by examining the relationship between social media and animal welfare within a developing country context, shifting the literature focus away from merely examining consumer intentions and marketing.

In conclusion, the importance of this study is to contribute to theoretical knowledge and guidelines for the effective use of social media for enhancing positive perceptions, increasing knowledge, and encouraging appropriate behavior toward animals in Pakistan and provide a basis for subsequent research, policy, and state plans.

2. LITERATURE REVIEW

The advancement of social media has significantly changed how people relate to animals and nature worldwide, presenting both positive and negative implications for animal welfare (Bosslet, 2011). The importance of critically analyzing multiple dimensions of the influence of these technologies on human-animal relationships intensifies as these technologies deeply permeate current lifestyles, specifically among youth, across countries. This literature review explores the complicated function of social media in molding perceptions and behaviour about animal welfare, which has been overlooked in the past in Pakistan.

Moreover, in 2019, more than four billion social media users were recorded globally. According to kemp (2023), more than 71 million Pakistanis daily use platforms such as Facebook and Twitter for information and communication. Studies reveal that most Pakistani youth are turning to social media for news. This indicates the importance of social media in that demographic group (Abbasi & Huang, 2020).

Social media's double-edged sword and its effect on animal welfare: a multidisciplinary literature review. First, there is enhanced awareness of these welfare groups. Second, it brings all other welfare organisations together. Third, it engages empathically with each group. Nevertheless, these include propagating negative stereotypes, enabling illegal wildlife trade, and promoting impulsive pet acquisition (Bergman et al., 2022; Contina et al., 2021).

To holistically examine this phenomenon, the review is structured to analyse the following: first, the role of media in shaping animal welfare attitudes; second, animal welfare in Pakistan; third, the general impacts of social media on animal welfare; forth, specific positive applications; sixth, concerns and challenges; sixth, effect on wildlife conservation and tourism; seventh, social

media's influence on tourist practises; eighth, diversity within the modern animal rights movement; and finally, conclusions and future research directions.

The purpose of this review is thus to provide even more context for how social media affects animal welfare engagement, particularly in Pakistan. In examining the impact of social media on Pakistani views on animal rights, existing scholarship provides a framework for analysis of what further study and policymaking should address.

2.1 Media in shaping evolving perspectives on animal welfare

Scholars acknowledge that traditional forms of media, such as print, radio, and television, have played a complicated but significant role in shaping people's perceptions of animals (Ascione 2008; Carr 2016; Vukovic 2003). Because of positive depictions and exposure to advocacy, advancement continues to occur, but negative practises and attitudes still exist.

Investigative coverage exposes systematic cruelty to animal industry-driven reform demands (Carr, 2016). However, large-scale issues affecting animal welfare and incorporating animal interests into policy frameworks remain a challenge (Appleby et al., 2018; Bekoff, 2009). While a lot has been done through traditional media exposure and even a crusade, many people are still involved in abuse and have even adopted a bad attitude (Ascione, 2008; Vukovic, 2003).

Positive examples of media representation exist. Lassie builds a good reputation for dogs (Frigiola, 2009). Nevertheless, biased representation in advertising and entertainment sometimes occurs, and there is a need for proper practice (Braunwart, 2015; Robb, 2021). Empirical studies of the complex relationships between traditional media and changing societal views about animals Rice et al. (2020) revealed that negative media coverage of live export treatment in Australia turned

public opinion against transport conditions and the wider industry's attitude without prolonged message delivery. This shows that some media events might affect particular views; however, they do not dramatically change overall attitudes.

Other studies have shown the impact of traditional media on people's views of animal ownership and welfare. Exposure to primate entertainment advertising increased the perception of chimpanzees as appropriate companions (Schroepfer et al., 2011). Ross et al. (2011) also demonstrated that such pictures enhanced the receptivity to retaining them as pets in proximity to human beings. In addition, Leighty et al. (2015) indicated that media contexts affected opinions on the abuse of primates. Reform demands stem from increased investigative reporting on systemic industry cruelty, yet major welfare issues remain large on immense scales (Carr, 2016; Honthaner, 2010). In general, studies show that traditional media has educated but also demonstrated the complex nature of improving human treatment of animals. However, sustained evidence-based advocacy is crucial in a constantly changing media landscape. This analysis will serve to explore new media effects on animal welfare involvement in Pakistan's unique cultural arena.

A study by Wolch, Gullo, and Lassiter (1997) about how people's views towards California's cougars are changing The scholars conducted surveys and interviews to study how public and media presentations affect people's feelings about the cougar population in California. The findings showed that people's attitudes towards cougars have improved over time because of the media. Many people now understand better and value the role a cougar plays in nature in the state. The study also highlighted how important it is for people to learn about animal welfare and how media representation can change public attitudes and behaviours towards animal welfare. It also showed that these factors can play a role in promoting conservation efforts and animal welfare.

Ultimately, although it casts light on animal welfare concerns, traditional media has also indicated that a complete human reformation of animal treatment cannot be fully summarised. Evidence-based advocacy and compassionate communication are still relevant and worth engaging in. The analysis of traditional media influences acts as a backdrop to the emerging platforms of digital media, which are reshaping the animal welfare space in Pakistan.

2.2 Overview of the Animal Welfare Landscape in Pakistan

It is not that long ago, that animal welfare became a priority at the policy and strategy level for Pakistan only for the past few years through educating people about the issue (Ali, 2021). Even though the question of animal rights is still one of the pressing issues, increasing awareness and activism despite major challenges that the future holds is important (Khan, 2023; Chagani, 2017).

Many Islamic values that connect animal welfare to holistic wellbeing and spiritual fulfilment play an essential role in shaping public attitudes, which are closely related to cultural and religious beliefs. In Pakistan, cultural practices and Islamic values are important in developing perceptions about animal welfare. Research indicates that an increased level of education is related to a greater perception of animal issues among Pakistani Muslims (Szűcs et al., 2012). On the other hand, religious beliefs based on mercy and amity with animals also strongly shape attitudes (Kalantari, 2023). It has been observed that culture plays a very significant role in countries' attitudes towards animal welfare (Sinclair et al., 2022). On the other hand, religious values may have a stronger influence on peoples' perspectives, as observed in Muslim-dominated countries such as Pakistan (Szűcs et al., 2012; Kalantari, 2023).

As of now, the country has no national legislation specifically aimed at animal welfare. The critical government bodies engaged in the process from 2020 onwards include the federal Ministry of Climate Change and provincial wildlife departments responsible for enforcing particular laws of animal protection (Koreshi, 2020). On the other hand, there are also several key national regulations that have been implemented, including the PCA Act of 1890 and the Animal Welfare Act of 2020 (Ilyas & Qazilbash, 2021).

It is estimated that there are up to 5 million stray dogs, mainly in urban cities such as Karachi, which represent major animal welfare challenges (Murawat, 2022). Surveys show little awareness of the Pakistani public towards animal rights, reflecting a lack of education (Balouch et al., 2022). Local NGOs such as ACF Animal Rescue, SPCA, and PAWS seek to promote awareness of the issue; provide veterinary care to strays, and; address cases of abuse while advocating for stronger legal protection measures regarding animals (Chagani, 2017). Others have used social media to raise awareness of animal welfare issues and work with animal charity such as Chagani (2017). However, nationwide improvements in animal welfare are slow as a whole. This requires bringing many stakeholders together in a unified action. This setting, however, directly illuminates the critical animal welfare issues in Pakistan and the impact of socio-cultural phenomena on comprehending emerging social media and animating animal rights discourse.

2.3 Role of Social Media in Influencing Animal Welfare

Social media is complex because it influences public perspectives on animal welfare through discourse. There are several ways in which social media has been seen to impact animal welfare through mechanisms that include information dissemination, the creation of a group

identity, and the provision of different avenues for interaction. However, it also illustrates the associated difficulties, such as, divided actions, non-cooperation in substance solutions, and the distribution of unreliable information that requires an ethical approach while using social media. Finally, the review underscores the importance of developing media literacy among users, as an equal balance needs to be struck between the benefits and risks involved in the use of social networking tools for animal welfare campaigns.

Varga's (2020) dissertation "The Role of Social Media in the Promotion of Animal Rights and Welfare" on how social media helps protect animals is useful for understanding Pakistan. The research shows that social media is a key way for these groups to communicate with each other. The main advantages mentioned are making it easy to share information, giving tips, and teaching about animal rights. Varga's study used mix of quantitative and qualitative methods to examine what animal welfare groups are doing on Facebook and their ideas. Her findings are similar to what is happening in Pakistan. Facebook has become critical for animal rights problems as well. However, some scholars say that the spread of misinformation is still a problem when people use social media more for caring about animal rights in Pakistan (Khan, 2023). In short, Varga's paper is a big help in studying social media and animal rights fighting. It adds value to what we already know. Her findings provide a helpful start and point of reference for looking at the same forces happening with animal care groups. Further study can add to Varga's work by looking at details in the Pakistani context.

This study shows that social media can impact how animals are treated in different situations. Some vets and people who work with animals have started using sites such as Twitter and Facebook to talk better with those who look after the animals. They want to make animal care even better (Saileela & Kalaivani, 2023). However, when looking at how social media affects

things and the rules in place for studying animals, they do not often think carefully about animal well-being (Smith et al., 2022). It appears that animal care ideas are not being talked about enough in studies of social media use and rules for online animal research activities.

2.3.1 Analyzing public perceptions

Fidino et al. (2018) demonstrated the possibility of estimating public opinions concerning wildlife by studying social media data. This study divided comments on extremely viewed YouTube videos involving coyotes, opossums, and raccoons. The results showed different views of society regarding animals. People were positive about killing coyotes, while raccoons and opossums were "cute". Research conducted on social media comments shows that many people have different attitudes towards wild animals, which can be used in the study of animals.

Existing research confirms that media depictions as well as imagery and messaging significantly shape the way people perceive and feel towards animals as portrayed either within the traditional media or through the internet. Further research would focus on the ways in which the cultures of social media and their content types shape attitudes and behaviours towards animals, making cross-comparisons between distinct geographies, such as the USA and Pakistan, for a broader comprehension of the power of social media to influence perceptions.

Kruse et al. (2001) did not specifically discuss issues of animal welfare but instead showed how positive coverage for research is likely to be generated on social media and may also influence public perceptions of animal research. The results highlight the significance of understanding how social media impacts public perceptions and informing individuals about ethical animal-related matters.

Indeed, social media is instrumental in mobilising opinion on animal welfare and rights (Nghiem et al., 2012). Sharing viral content and online campaigns enables users to voice their opinions, raise issues, and lobby for conservation improvement measures. In addition, social media has contributed much towards responsible wildlife tourism through increased awareness of practises that are unacceptable, such as taking series with wildlife and promoting ethical interactions with wildlife (World Animal Protection, 2018; Daly, 2017). Social media has also contributed to the shift in public perceptions towards the demand for more sustainability in tourism that benefits both animals and people. In fact, social media greatly impacts animal welfare through sensitisation about the plight, lobbying for action, and encouraging responsibly oriented travel (Schuetz et al., 2015; Nghiem et al., 2012).

Social media can change what people think and help improve life for animals on farms. A study was conducted to check how social media affects farm animal welfare (FAW) opinion. The study showed a small positive connection between watching more posts and wanting to improve FAW, with most people seeing more bad posts (Treasure & Tedd, 2019). However, a line-by-line link often shows little strong relationship between getting information through social media and having an inclination towards FAW. More research could examine specific social media platforms or other issues related to animal welfare.

Shorter's study (2012) examined how animal rights groups use things like print, radio, and TV to raise money. This includes mailing materials and using the internet. This study, while mainly about raising money, gives great ideas on using media and social media to help animals in Pakistan, where people's support is key regarding preventing cruelty (Shorter, 2012). Looking at methods used by groups such the ASPCA and PETA can help us write a review about how much social media could improve awareness, gather support, and collect donations.

2.3.2 Influence of social media on pet ownership and conservation advocacy

Research shows that social media has brought about changes in pet ownership trends and animal advocacy (Szpargala 2021). The ubiquity of cute animal videos and photos on the internet is yet another illustration of how animals affect the culture of the web. The popularity of social media has been successfully employed by activists to inform users about concerns regarding animal rights and welfare. The above studies show that a link exists between social media use and the need for pet ownership. The use of social media platforms allows pet lovers to communicate with each other to obtain social support and develop strong relationships with animals. Studies indicate that pet-related posts, especially those relating to dogs, caused sales to increase by 20% three years ago (Ney, 2018). In fact, Twitter has constantly seen an increase in dog images every year. Approximately 28% of dog owners buy their pets just to have a subject for social media postings. Gen Zers have the highest percentage at 47% (LendingTree, 2021). More than half of dog's owners update their social media accounts with pictures about them at least twice a week, while one-third follow other celebrities' pages. As a result, pets, especially dogs and cats, have become very digital. This includes feeds specifically for pets and popular celebrity animal accounts (Mars Pet Care, 2016). This literature review emphasises the wide impact of social media on pet ownership trends, conservation activism, and growing online pet adoration. Such platforms are the driving force behind the transformation of digital culture and communication, which incorporates animals.

Animal welfare organisations and activists are utilising social media platforms such as Instagram, TikTok, X, Facebook, and YouTube to create awareness, report instances of maltreatment, and market adoption of pets (Chagani, 2017). Bergman et al. (2022) argued that

social media has facilitated interactions among activists and groups, which in turn led to the sharing of knowledge and resources related to welfare. Social media has also been used by wildlife organisations to pass conservation messages to the public. In summary, social media is an effective educational tool for animal welfare and rights. Thus, popular platforms provide great opportunities to promote understanding, win public opinion, and increase ethical policy in animal welfare.

2.3.3 Influence of Social Media on Public Opinion

Aji (2019) conducted a study on animal welfare as a research topic, discussing the effect of social media in forming public opinions. Social media proved itself useful in changing the popular outlook on animal cruelty and neglect cases. In addition, it was observed that the effect of social media, in essence, is to create a relatively good temperament towards animal welfare and make people want to do something. In their assessment of animal rights and welfare in Pakistan, they noted the revolutionary power of social media and described how activists such as Fareeha Altaf and Anusha Ashraf have taken to Facebook to draw attention to problems related to animal rights.

Howard et al. (2017) explored the extent to which the use of social media by young university students affects their views of the beef industry. Although directed towards the beef industry, the findings indicate the impact of social media on the attitudes of Pakistanis towards animal welfare. Social media sources, namely Facebook and Twitter, emerged as credible information sources in university students. This implies that industry communicators should seek to pre-empt the dissemination of appropriate information via social media platforms.

2.3.4 Influence of social media on attitude change

Several studies have examined how social media impacts animal welfare attitudes and how people view animals. These studies show that such online exposure to animal welfare changes attitudes, thus creating deeper levels of empathy for animals and involvement in pro-animal welfare behaviour. For instance, Riddle & Mackay's (2020) study revealed that those who are exposed to social media content concerning animals' welfare feel compassionate about them and are likely to make donations or sign pro-animal welfare petitions.

Although social media has many positive attributes, it leads to the normalisation of wild animals as pets, the promotion of wrong welfare opinions, and the encouragement of irresponsible wildlife tourism, which threatens conservation efforts (Vail, 2018; Nekaris et al., 2013; World Animal Protection, 2018). Such concerns need to be addressed through specialised educational programmes, raising awareness, and establishing ethical guidelines on how to use social media for better protection and welfare of animals.

The study showed that Facebook helped share information about animal rights and welfare. It made more people learn about these topics. Important points mentioned are talking to people who matter and giving out information about animal care (Varga, 2021). Varga's study also looked at people's online actions. It found that showing likes, encouraging others to help, and expressing feelings about animal situations were the most usual things that do. These findings have relevance for Pakistan, making them a good marker for studying how Pakistani Facebook users engage with stuff about caring for animals. In the end, this study is a big help in learning how social media can get people involved in animal welfare.

2.3.5 Influence of Social Media on Public Agendas

Wang, Chen, Shi, and Tang (2021) examined the evolving relationship among social media, wildlife news, and public agendas during the COVID-19 crisis. Through their analysis of nearly 110,000 Chinese social media posts, the authors identified a mutually iterative, multi-step agenda-setting mechanism in which one cycle was continually followed closely by another. This illustrates the interwoven nature of social media, news, and public opinion. Social media offers more intricate agendas beyond the one-directional influence of news (Wang, Qian, & Yang, 2021).

The literature has acknowledged that several animal rights activist groups use different tactics, starting with the provocation approach used by PETA or the business partnership strategy preferred by the Humane Society (Munro, 2012). Social media has made it easier for people to be selective about mobilisation for causes such as being vegan and linking geographically dispersed activists (Wrenn, 2019). Movement fragmentation and an individualistic approach are some dangers of social media proliferation that need to be considered for more effective collective action.

To analyse how online media shape public discourse, Mkhono and Holder (2019) introduced Collective Moral Reflexivity(CMR), Employing Critical Animal Studies. They revealed evolving socio-economic views on animal treatment in tourism, emphasising a growing demand for a compassionate ethical framework, because of social media movements and, spotlighting social media's role in shaping public perceptions and ethical expectations in recreational settings.

Garrett (2004) categorizes information and communication technologies' (ICTs) impact on social movements into three levels: involvement, disagreement activity, and problems with

organisation. This study is mainly about getting involved, showing how social media connects people and makes them participate in different activities (Garrett, 2004).

Apart from behavioural shifts and new funding provisions, social media can link people globally for activism and conservation reasons (Valenzuela, 2013). Many social media platforms have been used effectively to raise awareness of such ecological impacts and involve people in conservation actions (Vijay et al., 2016). For example, Greenpeace's campaign against the unsustainable palm oil sourcing of Nestlé gained popularity on social platforms and became the subject of mass media and public pressure, leading to changes in the policies and source practises of Nestlé (Matharu-Daley & Hopp). Social media has the capacity to rally support and trigger transformation, as the literature emphasizes.

In conclusion, this literature review-highlights the dynamics of animal right activism and the role played by social media in mobilizing and diversifying similar movements throughout the world. This article discusses the heterogeneity among the animal right movement, the impact of social movements on various causes, and how social media can help unify activists. The review also focuses on the tactics and strategies of animal right movements, as well as their potential to change the situation. For successful animal advocacy based on policy development, it is crucial to understand this intricate terrain.

2.3.6 Social Media's Influence on Animal Welfare in Pakistan

However, it is vital to acknowledge the dark side of media influence. These social media platforms allow illegal trade that results in the depletion of wildlife populations and animal abuse, including illegal animal fights (Bergman et al., 2022; Szpargala, 2021). Most importantly, rumours

about questionable integrity and disinformation risks remain. Second, instances of social media celebrities abusing pets and wildlife in videos have been reported, highlighting the possible danger of such abuse ("Animal abuse by Pakistani social media celebrities," 2021). Social media, without question, contributes to animal advocacy, but one must appreciate its weaknesses and danger of being used against animals.

In summary, the literature shows that social media sites have a great impact on the views and opinions of animals. The society is using social media as one of the main sources of information, discussions, and recommendations. Therefore, social media plays an important role in spreading content concerning animal welfare, including among youth (American Press Institute, 2015). Social media creates a platform for raising public awareness of animal rights (Aji, 2019). At the same time, however, it contributes to the spread of false stereotypes, species exploitation, and people's impulsive purchase of pets.

There are both negative and positive aspects of social media's influence on animal welfare in Pakistan. It increases awareness and develops a feeling of sympathy for animals, although it creates stereotypes and promotes unhealthy practises. The research should be further expanded to obtain a complete idea of how animal welfare is impacted by social media and how to develop successful strategies to bring about positive impacts for animals online.

Additionally, social media's visual aspect can play a significant role in mobilising people to feel sympathy and empathy for animals. Animal welfare advocates can help change people's attitudes towards animals by sharing heartwarming stories, photos, and videos of rescued and recuperated animals (Riddle & Mackay, 2020). Socially responsible and empathetic social media users can be generated by creating emotionally meaningful content.

Given these dynamics, it becomes necessary for people, organisations, and social sites to work together to encourage appropriate and moral content. Using social media for advocacy, awareness, and education to improve animal welfare contributes to a more compassionate Pakistani society. Definitely, such exploration will add to our knowledge and facilitate better ways of harnessing the positive impacts of social media without compromising animal welfare.

2.4 Positive Impacts of Social Media Use on Animal Welfare

In this case, the researcher will discuss the evident positive effects on animal welfare of social media usage. The review highlights that social media is a powerful platform through which youth can have access to information about animal welfare, interact with role models, and change their attitudes. Finally, it illustrates the importance of animal welfare groups using social media to chronicle instances of animal cruelty, solicit support, and promote animal adoption (Chagani, 2017). In addition, and importantly, the role played by social media in developing positive attitudes and behaviours about animal welfare has been subjected to critical review (Aji 2019).

Participation through actions refers to signing petitions or sending donations and knowledge sharing between individuals that occur along with these activities. Social media has also helped in raising empathy and concern for all living things, and increasing knowledge and awareness of such problems (Riddle & Mackay, 2020). On the other hand, social media platforms may help foster optimistic attitudes towards animals. Awareness raising and educational content sharing are important (Bergman et al, 2019). Wildlife organisations have been able to create awareness of the protection and conservation of wild animals through these platforms, and this has strengthened people's support for such causes (Szpargala, 2021). Evidence is also empirical that

social media works for animal welfare fund-raising. Such features as crowd funding campaigns and collective action mobilisation are among those that make it happen (Bergman et al., 2019; Olafson & Tran, 2021). Collectively, these studies support the instrumental nature of social media for developing pro-animal beliefs, actions, and activism towards improving animal welfare.

2.4.1 Awareness and advocacy

Social media use has led to public awareness of animal welfare issues because animal right organisations have been useful (Morel, 2014). Examples of social media groups with a large membership base include PETA, which promotes animal rights and welfare. While research has not yet explicitly demonstrated how social media affects people's willingness to support animal research, there are indications that pro-research initiatives receive relatively less negative attention on social media (Kruse et al., 2001). This proves that even people who are unaware of animal research could play a significant role in this field simply because of the magnitude of social media.

Therefore, animal photos and videos have become highly popular online, giving advocacy groups an opportunity to use platforms such as Facebook and Twitter to promote their cause. Social media has become an integral part of animal shelters, rescue organisations, and protection groups as a common tool for fundraising, event promotion, and animal adoptions. Open Cages, a Polish organisation, uses social media platforms, including Facebook and Twitter, to report on animal mistreatment on farms. This is aimed at advocating for changes in the law and societal norms. While public awareness will play an important role in fighting for animal rights and welfare, it may not be sufficient on its own ((Edes, 2019). Although it is obvious that social media expands the reach of animal aid movements, it requires subsequent offline mobilisation. However, social

media remains a central instrument of agenda-setting and increasing involvement in animal right activism during this period. (Morozov, 2009).

A study by a group called the American Society for Prevention of Animal Cruelty (ASPCA) looked into how social media affects animal shelters and rescue groups in society. The ASPCA notes that social media has tremendously boosted the awareness and engagement of animal rescuers and shelter groups. These organisations have become more visible on Facebook and Twitter. They have experienced high awareness levels and several adoptions of special and old pets, and the number has been rising steadily. While there is no doubt that social media has improved the animal shelter community, additional training and support are necessary for its full utilisation in the promotion of animal welfare (ASPCA, 2018). The ASPCA now uses its #FindYourFido programme to provide social media tools and teaching. They use these platforms best to find homes for lost pets. The literature shows how social media helps animal shelters by making them more well-known and leading to more pet adoptions. However, more training and help are needed to really use social media for making animals better.

2.4.2 Fundraising and Donor Relations

Sisson (2017) analyzed social media strategies for building donor relations in non-profit animal welfare organisations. Perceived control mutuality in social media interactions was positively associated with donor relationship satisfaction and the intention to further support organisations. This research emphasises the need for creating shared and cooperative experiences with donors on social media platforms that give them power within the relationship. Animal welfare organisations should develop appropriate messages for social media that are engaging,

involve shared control, responsiveness, and transparent inter-active communication. Therefore, more research is recommended on the mediators of control mutuality in digital contexts to enhance relationship management frameworks.

Research on the empirical level shows that the use of platforms such as Facebook and Twitter has significantly increased the money collection for animal rescue institutions such as for ACF Animal Rescue in Pakistan (ACF Animal Rescue, 2022). Brooke Pakistan and ACF Animal Rescue are important welfare non-profits that have used social media to reach out to the community, particularly the youth (Brooke Pakistan, 2020).

Therefore, the literature review highlights the many benefits of employing social media for animal welfare including the exploration of dynamic avenues for raising awareness of animal welfare in Pakistan by eliciting empathy and sympathy and attitudes and behaviours on social media. It affects the youth, animal rights organisations, celebrity advocates, beef industry, college students, and donors to non-profit animal welfare organisations. Social media has emerged as a significant instrument of animal welfare with empirical support and positive advocacy. This review also shows that content development and social media can be educational.

2.5 Concerns and Challenges of Social Media Use for Animal Welfare

In this part of the literature review, some important issues and challenges that arise when animals are used on social media are highlighted. Although social media platforms have many benefits, they also have potential hazards that may reduce animal welfare. Some of these include illegal wildlife trade, the promotion of harmful practises, misleading information, and exploitation

by influencers. These challenges should be investigated and addressed to properly apply social media to advance animal welfare (Yu & Jia, 2015; Sung et al., 2021).

The literature frequently underlines the need to closely monitor social media content, promote ethical social media literacy, and embrace a cooperative strategy with all stakeholders (Bergman et al., 2019; Di Minin et al., 2018). To respond, necessary tools and techniques must be developed, such as controlling wildlife trade on the Internet and monitoring social media. In addition, social media users' and influencers' awareness will help us fight animal welfare risks.

A recent study showed that people in Pakistan are using social media to show and encourage crimes against animals. A study examined almost 600 posts on Facebook where people shared illegal hunting, mistreatment, and trade of native animals (Haq et al., 2023). They discovered that social media shows these crimes more often, with posts usually receiving helpful comments. The research says we need to watch social media and make the police work better, so we can stop bad actions online about animals. This line up with wider studies about how social media can share views that make things seem okay or encourage unfair practises that are dangerous for animal welfare (Haq et al., 2023).

2.5.1 Illegal Wildlife Trade

One of the major problems with social media comes up in the literature. These studies demonstrate how such unbridled platforms provide an outlet for the illegal trade and marketing of wild animals. One of the greatest questions facing us is what we should do about this. This task can be made much harder by a lack of reliable means to monitor content and the limitations placed on even highly sophisticated tools able to detect illicit content within large volumes (Di Minin et

al., 2018). This problem represents a high-risk threat to animal welfare because, many animals are exploited and endangered. As a serious problem for wildlife conservation, it is imperative that we further develop such tools.

2.5.2 Harmful Practises

However, social media may inadvertently perpetuate low standards of animal treatment. These practises include taking selfies in the wild with wildlife, which may be taken as a form of indirect support (Bergman et al., 2022; Nekaris et al. 2015). Such activities may boost the demand for wild species, which results in overexploitation and trade of such species (Haines et al., 2016). Additionally, very rough and detailed animal cruelty videos still exist on YouTube. This is even though they have rules against it (Lady Freethinker, 2019). These videos have received thousands of views, showing that people are making money from using animals. Some people have spoken against weakly watching social media and stopping bad profiles.

Furthermore, celebrity selfies that have become 'normal' may also justify the use and abuse of wildlife (Kitson & Nekaris, 2017). Another risk factor is geotagging, which most social media platforms employ, making it possible for poachers to locate the animals (Paxian, 2019). Social media users should remain vigilant about these challenges.

2.5.3 Misinformation and Glorification

A great concern is the possibility that social media will propagate false information on a non-responsibility basis and directly celebrate ill deeds against animals. Selfies of irresponsible

content depicting animals as tame or suitable pets can create wrong impressions and encourage the exotic pet trade (Nekaris, 2013). As such, this deceptive representation of wild animals often encourages unaware and rash purchase decisions for pet ownership, disregarding the associated responsibilities. In addition, content that shows animals in unusual settings or distress can also attract engagement, compromise welfare, and further promote inhuman practises (Nekaris et al., 2015). The literature demonstrates that the harmful effects of misleading information and glorification must be addressed through responsiveness education.

Some influencers use social media platforms to perpetrate animal abuse in the name of fame (Animal Abuse by Pakistani Social Media Celebrities, 2021; Szpargala, 2021). The unfair manipulation of social media by unscrupulous companies can be extremely damaging to the public, especially young people, and result in the neglect of care for the animals in question. Social media and influencers have ethical responsibilities towards stopping them from using their platforms to spread violence.

In summary, the literature review highlights the important issues in the implementation of social media and animal welfare. Social media may be a useful avenue for increasing awareness, but it can also propagate bad practises, spread false facts, and facilitate crimes that undermine animal welfare. Therefore, solutions to the problems must be generated from the people which comprise social media companies, animal welfare groups, governments, and ordinary citizens. Therefore, education and outreach supported by the right use of social media can be a significant tool to avert the negative consequences on animal welfare.

2.6 Social media impacts on wildlife conservation and tourism

In this part of the literature review, the study is examining social media's role in reshaping and influencing wildlife conservation and tourism. Furthermore, it weighs its problems and opportunities. This has resulted in the harnessing of social media platforms such as Twitter and Facebook, for raising awareness and debating animal conservation, which is a minefield. Non-restricted trading goes as far as internet-driven information openness would allow illegal trade of wildlife or tourist intrusion. The literature indicates that platforms are more effective for the conservation and welfare of animals than not using them at all (Bergman et al., 2019; Llodra-Riera et al., 2015).

The literature clarifies the degree to which social media can be used as an effective means of advocacy and policy change for wildlife conservation. For instance, images of a stick-thin polar bear that were broadcast far and wide earned public rage, which led to new regulations and increased cognition (World Animal Protection, 2018). The increasing anger of such social media users fuels the movement behind curbed exploitation laws. Proper use of these platforms can positively contribute to good policy development and wildlife conservation.

Social media makes more people visit protected areas, hurting animals, and their homes (Llodra-Riera et al., 2015; Gretzel, 2019). Exciting pictures and the promotion of places can attract too many tourists, which leads to over tourism. This means more people than a place can handle. It also damages nature and, risks spreading invasive plants or diseases (de l'Église in 2019; Clout & De Poorter in 2005; Anderson et al., 2015)

Many social networking sites, such as Instagram and TripAdvisor, have also started discouraging unlawful activities involving wildlife tourists. Nevertheless, there are still problems,

especially regarding dealing with overshooting problems that are influenced by beautiful photographs hashtags, on Facebook, etc. In this case, social media constitutes a danger combined with a potential opportunity that needs appropriate handling if well managed. Venkatesh's (2020) observation on the connection between social media usage and how people buy pets. It has been highly examined, but we need to grasp how it affects the way we care for animals. This study supports the idea that social media can spread the word about animal rights, thereby getting people involved. However, it may spread false news or accidentally boost damaging habits. As I dig deeper into existing studies, researcher take a sharp look at social media's role in molding the public's views and shaping laws about animals' welfare, particularly in Pakistan.

Although social media can help save animals, it also has dangers. These include people buying pets without thinking and not taking care of them properly because they do not have the right information (Bergman et al., 2022). However, science has proven that social media can raise public support, attract money, and cause policy changes for saving different life forms by spreading conservation news. Telling good stories helps businesses increase engagement and gain more input from people (Shreedhar, 2021).

Even so, social media can put animals in danger. It might let people misuse them, unfairly pressure tourism, and do things that go against conservation (Marsh, 2019). Social media also allows people to share their thoughts on rules for nature that could affect public places and homes of animals. Another concern is showing preference for more attractive species. Social media helps conservation by raising public awareness of management practises and threats to species, enhancing understanding of human-nature interactions, and providing new data (Resbec, 2020).

Increasing funding for conservation projects is also one of the main benefits that social media brings to the conservation of wildlife. The strategic marketing and audience segmentation

of NGOs on different platforms have helped to raise support for conservation efforts. For instance, some examples, such as WWF's "Apps for Earth" initiative with Apple, support the idea that social media can generate huge financial contributions for conservation efforts. An additional factor to consider is that social media has the capacity to mobilise resources, which makes it a necessity for conservation funding.

Stephen (2016) argues that social media can control consumer behaviour through advertising and word of mouth. Through such means, this can lead to less usage of environmentally hazardous products. As a case in point, a YouTube video showing that straw pollution ruins sea turtles went viral all over the world, and subsequently, a movement against plastic straws was launched. Increased demand for "reus," like these symbolise, how social media can inspire people to be pro-conservation (Figgener, 2018; Ocean Conservancy, 2018).

In short, it appeared in the literature review that social media involves various aspects of wildlife conservation and tourism. In addition, they can be considered a challenge and an opportunity at the same time; however, these platforms can have the positive impact of enhancing support for environmental issues or inculcating the interest of conserving the environment in consumers through their strategic and innovative use.

2.7 Role of Social Media in Shaping Tourist Perceptions and Practices

The literature also shows how social media affects animal welfare in tourism (Nekaris et al., 2013; World Animal Protection, 2018; Vail, 2018). One main issue that arises in this literature concerns the normative effect of social media on sanctioning such illegal engagements. Pictures and videos of individuals hugging, cuddling, or taking selfies with wild animals can be found on

social media platforms. This gives the impression that the interaction is harmless and righteous. Such portrayals conceal possible animal welfare risks and illegal removal of animals from their natural habitats. This has led to the normalisation of inappropriate wildlife interactions, and this personal need for encounters has caused concern among conservation and animal welfare communities.

However, the literature also emphasises the possibility of using social media as an engine to promote ethical wildlife tourism. Some social media influencers employ their websites to campaign for sightings of animals in their natural habitat rather than in captivity (Janieiks, 2020). Conservation organisations are keenly utilising social media with posts and information about how people should view animals as having their own space in nature (Shaw et al., 2022). Social media is used proactively to shift perceptions of encountering wild animals.

2.7.1 Complex Impact on Tourist Perceptions

Social Media and Wildlife Encounters: A review of the literature indicates that social media influences public perception, attitude, and behaviour towards animal encounters. This has a significant bearing on animal tourism practises. Lenzi, Speiran, and Grasso (2020) have presented an extensive literature review that describes the negative impacts of viral animal videos and 'wildlife selfies' among social media users, which are believed to promote unlawful wildlife trade and tourist attacks. The authors conclude that further empirical research is needed to fully analyse the impacts of social media exposure and interaction on animal wellbeing from a conservation standpoint (Lenzi et al. 2020). As a result, social media usage is both useful and harmful in the

course of people's perceptions and behaviours, as visible through the way they interact with wildlife somewhere in Pakistan.

As per the literature, evidence-based policymaking, laws, and initiatives are the centers of attention in all manners, including resourceful and eco-friendly measures (Lenzi et al., 2020). The main thing that is needed is research in relation to the context of Pakistan to have a better perception of how social networking has an impact on nature and wildlife and to better understand the intricacy that social media has on this. Such research is capable of contributing to the development of context-specific solutions that will favour the welfare of animals, conservation of nature, and fair development for everyone.

In particular, future research must examine ways through which social media content advisories and warnings might stimulate tourists' choice processes and result in the emergence of new norms related to tourist-wildlife encounters (Daly 2017; Nekaris et al. 2013). Because of the inherent nature of social media, a solution-based approach is required given its complexity regarding tourist practises.

2.7.2 Symbols and Communication

The literature also considers that social media can be used to spread information on the welfare of animals with images and memes that contain animal images. Animals are often employed as powerful signs to send welfare-related messages, even in the context of social media (Passariello, 1999). "Advice animal memes" are very common on social media networks for humour and communication among animal-related memes (Dynel, 2016). In animal imagery, animal-related attitudes, emotions, or messages are often expressed through memes (Vickery,

2014). On the other hand, social media is a platform for people to comment on their personal feelings about animal issues and concerns, which influences the entire discussion. Thus, the literature recognises the tremendous value of social media as a medium for animal welfare discourse.

2.7.3 Impact on Public Perceptions

The literature also explores how social networks affect public opinions and perceptions of wildlife and animals. This explains why it is becoming so popular for net-users to treat endangered species as pet, such as slow lorises, despite their conservation status (Nekaris et al., 2013). This demonstrates that animal exploitation can be promulgated in the public through social media, putting animal welfare at risk. Moreover, viral content on social media has seen many studies related to animal welfare. These "tickling" videos, which many users believe are funny, in fact constitute images that express stress and poor animal welfare (Nekaris et al., 2015). Regarding viral content generated through social media channels, we cannot ignore animal welfare concerns. A study by Clarke, Reuter, LaFleur, and colleagues (2019) investigated the impact of viral videos, using the example of the ring-tailed lemur "Sefo" on public attitudes towards owning wild animals as pets, and the significance of the study in uncovering the relation between viral content, public wildlife perception, and outcomes for animal welfare. This study highlights social media roles, such as Twitter, in responsible sharing of wild-life-related content to decrease negative impacts on animal welfare.

To summarise, the literature surveyed here takes a comprehensive look at the multi-faceted character of SNSs (social networking sites) in terms of building tourist perceptions and practises

about how to come into contact with and interact with wildlife animals. It shows how social media legitimizes bad work and raises the profile of sustainable travel. It also highlights social media's complicated influence on tourists' attitudes and behaviour. More research is needed to arrive at evidence-based policies and solutions. The literature similarly acknowledges the potential to disseminate animal welfare messages through symbols, memes, and viral content on social networks. To understand the influence that social media can have on the formulation of policies and spaces supporting responsible tourism and animal welfare, especially in terms of promoting them in Pakistan.

2.8 The Evolving Nature of Animal Rights Activism

This part deals with the illustration of the transformation of the public perception of animal rights activism and the emergence of various philosophical stances in activist movements. The literature tells us that social media has a huge effect on global activism, and many successful actions and wide campaigns have been orchestrated. This method realises that there are people representing animal protection organisations from different spheres of life and that they might hold the same beliefs about human rights, but in a variety of robust ways.

The multi-headed modern animal rights movement is a good example of organised activism spreading throughout the world. There are a great variety of viewpoints and opinions among the communities. Such kinds of informal groups are characterised by their opinions, which are basically dependent on the social, cultural, and political contexts (Aji, 2019; Morozov, 2009). This diversity appears in the animal rights movement through the use of various approaches and planning goals.

Because the internet and social media are crucial for animal rights activism, most campaigns have the advantage of generating worldwide audiences and feeding frenzys (Wrenn, 2019). The prevalence of the causes of the movements, which may bring virtual activists together from different locations, as well as the usage of social media to fight for animal rights. Celebrity influencers not only have influence, but they also lead people from all corners of the world to become part of the growing movement towards veganism driven by online communities like social media (Janssens & Rodgers, 2020). Access to social media has empowered those involved in the animal rights movement to be able to exercise more strength and to meld with different cultures. Knight and Herzog (2009) explored the importance of animals in human cultures and emphasised the need for new perspectives on animals. This study emphasises the necessity of understanding the various ways in which animals are perceived and valued by humans.

According to Becker (2012), this study explored the effects of social media on participation, activism, and organisational dynamics within the animal protection movement. Animal right organisations mentioned using social media to mobilise supporters for events and to facilitate the expansion of activist repertoires with new tactics such as online petitions. Some companies also failed to govern their branding on open forums, attracting public controversy or divergence from the intended objective. The article concludes that social media alters engagement routes and yet presents organisations' problems in managing decentralized, participatory movements (Becker, 2012). Future research needs to investigate the long-term implications and ways to capitalise on the benefits and minimize the demerits of social media for animal advocacy.

This literature review sheds light on the complex and diverse impact of social media on animal welfare attitudes and behaviours worldwide. However, empirical insights associated with Pakistan's distinct sociocultural setting, particularly addressing the dominant millennial

generation, remain uncertain. Critical knowledge gaps remain in understanding how Pakistani adolescents engage with animal-related content on social media and how they are affected from a welfare standpoint. Quantitative online surveys can reveal usage patterns and attitudinal and behavioural consequences on animal welfare reflected by emotional sensation, activism pursuits, and policy preferences. While considerable research has established the educational and fundraising benefits of social media for animal advocacy groups, the negative consequences of misinformation, unethical regularization, and wildlife trade necessitate urgent investigation within Pakistan's rapidly growing digital sphere.

The impact of awareness channels, regulations, and reform initiatives, particularly those encouraged by social media, on increasing animal welfare in the country should be investigated. There is limited evidence on the influence of social media in informing policy concerns and collective action regarding animal preservation in Pakistan. Without contextual information, stakeholders who seek to optimise good uses while overcoming problems cannot fully understand the benefits and drawbacks of growing social media platforms. As social media penetration grows in Pakistan, social and cultural reforms are essential for improving animal welfare.

This research delivers essential learning that is suited to a country's specific requirements and routes. Analysing selective university cohort' social media activity in the arena of animal welfare can expose the complexities of traditional values and modern technologies in determining current perspectives and activism tendencies. The findings will assist stakeholders in leveraging social media to enable animal security measures linked with cultural norms in the age of digital media, particularly Pakistan's requirements. Bridging these knowledge gaps is critical for realising social media's potential for welfare development.

2.9 Theoretical Framework

The theoretical framework provides the foundation for understanding how social media usage impacts animal welfare. It integrates relevant theories to offer a structured explanation of this relationship. Specifically, by combining the uses and gratification theory with social learning theory, the study aims to reveal how social media shapes people's behaviors and attitudes toward animals. This framework helps to identify the reasons behind social media use and its effects on animal welfare perceptions and practices, particularly in the context of Pakistan.

2.9.1 Uses and Gratification

Uses and gratification theory (Katz, Blumler, & Gurevitch, 1974) based on U&G individuals have various options under the different types of media to fulfill their particular preferences and requirements. This theory highlights the way and the reasons why people look for specific media for the purpose of self-realization and seeking gratification (Katz & Foulkes, 1962). Uses and gratification theory has proved useful in the research of social media motivational factors (Korhan & Ersoy, 2016; Malik et al., 2016). This framework is divided into gratifications sought (GS), anticipating gratification from media use, and gratifications obtained (GO), the subjective experience obtained (Katz et al., 1973; Palmgreen, 1984). This research focuses on the gratification obtained because it allows investigating the effects on real behaviour.

Prior research has applied U&G to examine motivations for using social media. For instance, Whiting and Williams (2013) identified key gratifications obtained from social media usage as entertainment, information seeking, self-documentation, social interaction, and

convenience. This align with the recurring needs identified in earlier U&G literature around traditional media.

Within the animal welfare context, social media enables users to satisfy various needs by engaging with related content and communities:

Social media allows people to gratify their need for information regarding animal welfare issues, pet adoption opportunities, humane organisations, wildlife conservation efforts, among others. Users seek specific accounts, participate in groups, or look for particular hashtags related to knowledge, news, resources, or action plans. Exposure to current news on threats to animals, such as habitat destruction, cruelty situations, or climate change consequences, creates awareness and builds attitudes. However, information needs are fulfilled as users learn about animal issues, adoption opportunities, humane organizations, conservation efforts, etc. Exposure to news about threats to animals can raise awareness and shape attitudes (Riddle & Mackay, 2020).

Another gratification that comes from these cute, funny, or amazing animal videos, memes, gifs, images, and stories is entertainment. Animal content makes users happy, entertains them, and creates a human relationship with animals. Seeing them play and interact in a kind way will enable people to consider these animals as emotional and intelligent beings worth our respect. Entertainment needs are satisfied through funny or cute animal videos, memes, and stories that amuse users and foster emotional connections with animals (Myrick, 2015; Szpargala, 2021).

Social media also enables social interaction between users with shared interests in animal welfare. Through online communities centred around animal organisations, rescues, shelters, and general advocacy, individuals exchange perspectives, provide encouragement, ask questions, coordinate efforts, and may experience social pressures regarding certain views or behaviours affecting animals. Being involved in positive, supportive online groups strengthens humane

activism (ASPCA, 2018). Social interaction needs are met via online communities where animal enthusiasts exchange perspectives organize, efforts, experience social pressures, and build a collective identity (Sisson, 2017; Aji, 2019).

Lastly, posting and sharing favoured animal content, especially related to rescue, adoption, or advocacy, allows self-presentation gratifications. Users can showcase their love of animals and efforts to help animal welfare causes as part of their online persona and values. This public commitment reinforces pro-animal attitudes that are integrated into their lifestyle and identity. Self-presentation needs are achieved by sharing favoured animal content that displays one's identity and values aligned with animal welfare causes (Varga, 2020; Myrick, 2015). Varga's (2020) dissertation emphasised that Facebook helps people share information, get help, and learn about animal rights. This helps people learn and form the right attitude about animal welfare issues. This study also provides evidence that social media is essential for groups and individuals who care about animals to set the agenda and engage their audience. Her findings support the use and gratification perspective that social media meets certain needs for users who care about animal welfare. Further study can build on her work to explore nuances within the Pakistani context regarding social media's role in shaping public discourse on animal rights.

Social media allows people to meet their needs of entertainment, information, self-presentation, and social interaction related to animal welfare. Prior studies have identified key social media gratifications such as information seeking, status socializing, and entertainment (Lee & Ma, 2012; Wang et al., 2012). Information seeking refers to gaining relevant knowledge. Status gratification involves gaining recognition and reputation. Entertainment fulfills the needs for enjoyment and emotional release. Socializing provides community belonging and interpersonal connections.

Thus, U&G theory provides a useful framework for this study to examine how social media gratifies various needs, which may encourage pro-animal welfare attitudes and behaviors among Pakistani users. Further research can build on existing findings to explore nuances within the local sociocultural context.

2.9.2 Social learning theory

Social learning theory highlights how individuals learn new information, attitudes, and behaviours by observing others (Bandura, 1977). This modeling process explains how social media usage can shape perspectives on animal welfare.

Observing positive modeled examples of human-animal interactions and compassionate caretaking practises promotes similar learning among viewers. Social media provides abundant access to animal advocates, experts organisations, and everyday citizens exemplifying gentle, ethical treatment of creatures through their posted content (Aji, 2019; Wicks et al., 2021). For instance, educational videos on proper pet nutrition or training use modelling to teach proper care. Exposure to such humane perspectives and animal husbandry techniques fosters observational learning of welfare-centric values and behaviours.

However, the opposite effect can also occur if social media users view content that displays aggressive, abusive handling of animals. Observational learning indicates that repeated exposure to models mistreating animals can gradually normalise cruelty in the minds of viewers, leading them to accept inhumane practises as routine (Aji, 2019). Unfortunately, intentional animal abuse or training videos involving harsh punishment are common on YouTube. According to social

learning theory, exposure to such antisocial modelling risks propagating animal cruelty by vicariously teaching observes these behaviours.

Social interactions on media provide validating responses, such as likes, comments, and shares, that act as positive reinforcers when users observe them applied to modeled content (Sisson, 2017). When animal lovers on platforms such as Facebook see that posts advocating for humane causes or sharing adoptable pet profiles receive ample likes and comments praising the positive message, they are vicariously conditioned to continue sharing such pro-animal welfare content according to learned behavioural patterns (Aji, 2019). The social reinforcement of collectively applauding animal advocacy material motivates its spread.

However, the inverse effect is also possible according to the principles of vicarious reinforcement. When social media users observe individuals receiving ample attention, shares, and praise for modeling harmful practises such as exotic pet-keeping or abusive discipline methods posts, it socially reinforces inappropriate treatment of animals (Aji, 2019). If antisocial animal-related behaviours are met positive reinforcement, observers are more likely to replicate those behaviours in hopes of gaining social validation.

One risk of excessive social media usage highlighted in prior literature is emotional desensitization resulting from repeated exposure to disturbing animal content such as abuse, injuries, or habitat destruction (Varga, 2020). Social learning theory explains that users can become habituated to horrific imagery and descriptions through observational learning over time, perceiving it as normal and leading to a blunted empathetic response. This desensitization to animal suffering online can decrease real-life protective actions, representing a concerning potential effect.

Social learning can also positively motivate activism. When social media users view storytellers and peers modelling caretaking animals rescued from abuse, volunteering at shelters, adopting special-needs pets, and performing other humane acts, these vicarious experiences can inspire observers to engage in similar prosocial activities by teaching them the behaviours (Wicks et al., 2021). The collective forum of sites such as Facebook allows observational learning about animal welfare practises that can ultimately mobilise widespread participation.

In summary, social learning theory constructs illuminate multidimensional processes of media modeling that can significantly shape modern animal welfare perspectives, underscoring the need for further research within Pakistan's digital environment. Findings can support educational efforts to optimise social media's benefits while mitigating risks such as normalisation of cruelty or desensitization.

3. METHODOLOGY

This chapter explains the research methods which are adopted to observe the changes in attitude towards animal welfare in response to social media usage in Pakistan. Here, the research philosophy, approach to study, design of study, research questions and hypotheses, research variables, research sample, data collection instrument, pilot study, variables and operationalization, data analysis techniques, reliability and validity are covered.

3.1 Research Philosophy

This research employed a positivist philosophy to discover the ways; through which, social media influence the viewpoint on animal welfare in Pakistan. Positivism helps researchers to apply an objective quantitative approach which method is based on analyzing data collected by using various tools: questionnaires are a great example of such tools (Creswell, 2014).

Using a quantitative approach, the researcher tried to find out social media usage patterns and how they influence attitudes toward animal welfare. Because of this, the researcher selected the positivist perspective. Therefore, the primary instrument was a questionnaire, which was utilized to gather information in a numeric form related to age, social media use, and animal welfare (Ryan, 2018).

Furthermore, positivism helps determine emerging patterns and relationships by data patterns analysis. (Zukauskas et al., 2018). A rigid positivist approach and clearly defined rules help minimise errors and allow meticulous hypothesis testing (Creswell, 2014).

Hence, it was most suitable to apply a positivist philosophy to quantify how social media influenced animal welfare views using descriptive statistics derived from structured questionnaires. This made it possible to conduct an objective examination of the research questions.

3.2 Study Design

A quantitative cross-sectional survey approach was employed to obtain numerical data at one point in time. Cross-sectional studies use survey methods to collect data from a sample representative of the target population within a particular period (Setia, 2016). This type of survey method using a questionnaire, supported the deductive approach and positivist philosophy of this research.

The survey method was preferred in the study due to the fact that it allows the researcher to gather information from a numerous individual within the shortest time possible. Surveys offer a good way of obtaining valid information from multiple respondents, which is suitable for statistical investigation (Saunders et al. 2015). Due to the online distribution of the survey, the targeted group of selective university cohort social media users was easily accessible. This allowed cost and time-effective data collection from a nationwide sample, providing initial baseline insight (Wright, 2005; Couper and Miller, 2008). Anonymity allows for truthful responses in online surveys (Fricker & Schonlau, 2002).

Specifically, an online questionnaire was administered targeting key demographic groups to quantify their self-reported social media habits, exposure to animal welfare content, knowledge gained, attitudes, and perceptions regarding major animal welfare issues. Cross-sectional online

surveys offer advantages such as flexibility, access to wider geographic samples, ease of data collection/analysis, and the ability to preserve anonymity compared with longitudinal studies (Wright, 2005).

To test the propositions, numerical data were required. Therefore, a survey strategy in the form of a structured questionnaire was appropriate for this deductive approach. Respondents were administered a questionnaire involving close-ended Likert-scale questions concerning their levels of use of social media, their views about animal welfare issues, and the factors that influenced their perspectives.

The online questionnaire was designed using Google Forms and distributed through social media for 1 month. In the current study, IBM SPSS was used for descriptive statistics and correlation analyses. Questionnaires are the type of data collection tools that are fairly easy to administer, and yields standardized data from a large number of individuals that can be compared and analyzed. This technique is very helpful when one is interested in testing hypothesis and or searching for trends, patterns or associations between two or more variables in a sample population (Fowler,2014). Thus, as the goal of the study is to describe students' behaviors and attitude, using the survey method is effective and encompassing to gather the required details. However, there are some reasons why I decided to use only the surveys as a type of the analysis for this research: it is cost-effective and logistically possible. Hence, the rationale for using the survey method can be justified grounded on the objectives of the study and the practicality of survey method.

However, the cross-sectional design also has limitations such as the inability to infer causal relationships conclusively and threats to external validity (Setia, 2016). Still, it was an appropriate design suited to the exploratory nature of this research focussed on quantifying social media's relationship with animal welfare perspectives among young social media users.

3.3 Research Questions and Hypotheses

1. What are the usage patterns of social media in Pakistan about animal welfare?

2. How do social media influence the attitudes and behaviours of the public towards animal welfare in Pakistan?

3. What factors influence the attitudes of the public towards animal welfare in Pakistan?

The subsequent hypotheses were tested:

H1: There is a significant correlation between the level of exposure to animal welfare content on social media and the public's attitudes towards animal welfare in Pakistan.

H2: Social media usage patterns have a significant influence on perceived knowledge about animal welfare.

3.4 Sampling

In this section, the sampling process, sample size determination, and sampling method are discussed.

3.4.1 Population

The population of study for this study was the university students of Islamabad, Pakistan who use social media. Social media usage in Pakistan has grown to 71 million active users by 2023, according to the latest industry reports (Kemp, 2023). Being 31% of the 243.47 million people (Worldometer, 2024), a large part of the population is frequent social media users. This makes them a suitable target population for exploring the impact of social media.

Among the large population, this study was more particular to university students who actively used social media. Three leading universities located in Islamabad were selected: The National University of Modern Languages (NUML), the International Islamic University (IIU), and the Quaid-e-Azam University. Setting the focus on the population narrows down the research to the group, which is at the core of social media usage in the country. In addition, their tech-mindedness and advanced educational level make them ideal candidates for analysis of social media's impacts.

3.4.2 Sample size

The term sample size refers to the number of people chosen from the population to participate in the study (Oribhabor & Anyanwu, 2019). 300 participants have been chosen because of the logistical feasibility as well as the practicality of the study, which may be a reasonable and doable sample size. A sample size of 300 is usually used in social science research due to its efficiency and reliability in the results (Krejcie & Morgan, 1970). Therefore, the sample size enables the realization of the objectives of the study and in general, provides a strong quantifiable framework.

3.4.3 Sampling Method

For this study, a non-probability convenience sampling technique was used to recruit participants. A convenience sampling means recruiting participants from among people who are readily and willingly available (Etikan et al., 2016). This sampling technique was chosen based on

time and budget constraints, as it is relatively reliable in terms of data collection while still being within the time limit and the given financial resources (Vehovar, Toepoel, & Steinmetz, 2016). Despite the fact that probability sampling gives wider generalization, it could not be implemented in the study due to some constraints

The sampling was based on convenience method and it was conducted among 300 students studying in three universities. The respondents were selected according to their availability and will to take part in the online data collection process. At present, the operational volumes and versatility of sampling methods are important criteria of determining the methods. Though, this approach allowed for prompt data collection from the specific population group of college students, it suffers certain limitations at the same time. These problems of bias persist, and the possibility of generalizing the results beyond the sample is debatable.

Though convenience sampling had some limitations, it represented a significant, broad, and diverse sample which could allow for reliable statistical analysis and understanding of the social media influence on Pakistani youth. While such non-random sampling raises ethical considerations, it was the most appropriate method considering the practical considerations of the research.

The sampling strategy is intended to target the research objectives using the views and experiences of the target group's social media users to examine the influence of social media on the attitudes and behaviours related to animal welfare in Pakistan.

3.5 Data collection instrument

This study employed quantitative methods using an online survey questionnaire to collect primary data. Primary data enable the collection of first-hand information directly relevant to the research objectives (Creswell, 2014).

An online questionnaire was created and circulated with Google Forms. This provided an effective platform for online data collection that could be easily shared via social media (Saunders & Lewis, 2015). The survey began with an overview of the study's purpose and informed consent procedures. Participants provided consent before proceeding to the questionnaire items.

The questionnaire comprised closed-ended questions on key variables, including the following:

- Demographic information: Participants indicated their age group (18-25, 26-35, 36- and above), gender, and education level under graduate, graduate, post graduate).

- Social media usage patterns: Statements assessed the frequency of using different platforms such Facebook, Twitter, Instagram, and TikTok on a 5-point Likert scale from "Never" to "Very often".

- Exposure to animal welfare content: Participants rated how often they encountered animal welfare content on social media from "Never" to "Very often".

- Attitudes towards animal welfare content: Agreement was indicated on seeing different types of content (e.g. rescue stories, conservation, cruelty exposes, adoption promotions) on a 5-point Likert scale from "Strongly disagree" to "Strongly agree".

- Perspectives on factors influencing animal welfare attitudes in Pakistan: Level of agreement was recorded on a 5-point Likert scale regarding the impact of elements such as religion, culture, education, and social media.

- Perceived knowledge, learning, perceptions, and willingness to take action on animal welfare after engaging with social media content. Statements were assessed on a 5-point Likert scale, ranging from "strongly disagree" to "strongly agree."

The questionnaire format enabled the collection of comprehensive quantitative data to address the three research questions on social media usage, attitudes, and perspectives regarding animal welfare in Pakistan.

In summary, the online survey allowed researchers to collect current data from the target audience of Pakistani social media users. The quantitative self-report approach allowed for statistical analysis of the impact of social media use on animal welfare issues.

3.6 Variables and operationalization

3.6.1 key variables of the study

This section identifies and introduces the primary variables under investigation.

3.6.6.1 Independent Variable

Social Media Usage Patterns: This variable represents the patterns and levels of activity on social media platforms by the participants. It entails the nature and amount of contacts with different types of social media.

Exposure to Animal Welfare Content: This variable measures the extent to which a participant is exposed to animal welfare content on social media platforms. It covers the frequency and types of animal welfare issues experienced by users regularly as they use social media.

3.6.6.2 Dependent variables

Knowledge Acquired about Animal Welfare: This variable deals with the self-report from the participants on how they understand and learn about animal welfare through social media. It is related to the level of knowledge of animal welfare issues that the participants gain after they use the social media platform to engage with the content.

Attitudes and Perceptions towards Animal Welfare Issues: This variable discusses participants' changes in feelings, thinking, and beliefs, as well as actions involving animal welfare caused by social media participation. It is a mix of changes in attitudes, emotional responses, and behavioural intentions towards the issue of animal rights.

3.6.2 Operationalization of the key variables

This section describes the conceptual and operational definitions of the main variables in the presented study. It gives a holistic picture of how these variables are conceptualised and operationalised in detail.

Table 3.1

Conceptual definition and operational definition

Variable	Conceptual Definition	Operational Definition
Animal Welfare	Well-being of animals, considering health, behaviour, and living conditions (Li et al., 2023).	Animal welfare in this study entails awareness of animal rights, empathy for animals, assistance with welfare initiatives, and participation in acts that improve the conditions of animals.
Social Media Usage	Patterns and levels of engagement with social media Apps like X, Facebook, Instagram, TikTok, etc.	Social media usage in this study refers to having accounts on different social media platforms including X, Facebook, Instagram, TikTok. Survey question were used to determine usage frequency across several platforms on an ordinal scale ranging from "Never" to "Very Often".
Exposure	Participants' exposure to animal welfare content on social media.	Frequency measures on an ordinal scale from "Never" to "Very Often" were used to assess how frequently participants encountered various forms of animal welfare knowledge such as rescue stories, conservation activities, cruelty occurrences, adoption ads and animal welfare related content on social media platforms(Facebook, Instagram and TikTok)
Knowledge Acquisition	Participants' self-reported learning and understanding of animal welfare.	Knowledge gained on a variety of animal welfare topics, including pet adoption, animal cruelty issues, wildlife conservation, animal rights campaigns, and so on. Participants rated their level of agreement using a Likert scale.
Attitudinal Change	Changes in feelings, perspectives, and behaviours related to animal welfare.	A change in feelings, attitude, and activities connected to animal welfare by participants after social media engagement. Measured through multi-item Likert rating scale. Changes in optimism/pessimism, readiness to take action, and participation in welfare issues were among the topics explored.

Table 3.1 presents key variables, the conceptual variables that explain what each variable stands for in general, as well as the specific operational variables that demonstrate what these variables mean and how they were assessed and measured in the study.

3.7 Pilot Study

In the thesis, a pilot study was conducted which is a key step to establish the reliability and efficacy of the survey tool. Before the full data collection, the questionnaire was administered to a small group of 30 people 10% of the total, who represent the subjects of the study. The pilot study was aimed at the evaluation of several parameters of the survey, such as the face validity, content validity, length, completion time, and user-friendliness. The participants gave their feedback on the level of comprehension of instructions, question phrasing, answer format, navigation as well as overall survey experience.

Additionally, Cronbach's alpha values were computed for the different scales in the questionnaire in order to measure the internal consistency (Nunnally & Bernstein, 1994). The scales demonstrated sufficient internal consistency, with alpha values ranging from 0.83 to 0.90. Any issues identified during the pilot phase were corrected by modifying item wording, enhancing flow/transition, and cutting scales if necessary.

The pilot study enhanced the final questionnaire used in the full-scale study as it ensured that it was correctly designed, user-friendly, and reliably captured the intended constructs. This represented a major step into quality control, which was necessary to increase the reliability and efficiency of the survey instrument. More importantly, the pilot study allowed for the evolution of the instrument's methodological soundness and overall solidness of the results.

3.8 Reliability and Validity

The research undertaking method includes the reliability and validity of the research instrument. Instruments are assessed by their reliability using the consistency and replicability of the measurement processes of the construct under study. Validity refers to the correctness and actual values of the measurements or the facts that the instrument offers. Content validity, which is one of the validity types, is concerned with the importance of whether the examination items can correctly represent the concepts measured. This can be achieved by linking the items to previous literature and the specific goals of the questionnaire as well as using ordinary words devoid of ambiguity, and simple wording that correspond with previous actions that have been termed operational issues in questionnaire design (Mohajan, 2017; Johnson, 2020). This study incorporated several key strategies to enhance reliability and validity:

3.8.1 Reliability:

The survey was pilot tested (n=30) among some of the distribution samples to identify and avoid problems with the instrument before its complete deployment (Mohajan, 2017). Based on the input from the participants on question wording, the format, length of the survey, flow, and navigation, the structure and operation of the questionnaire were improved. A typical way of testing the internal consistency of a multi-item scale is by using Cronbach's alpha (Tavakol & Dennick, 2011).

Table 3.2

Reliability Statistic

Cronbach's Alpha	N of Items
.915	13

Table 3.2 displays the Cronbach's alpha values for the 13 variables. A score of 0.7 or more is regarded as reliable (Nunnally & Bernstein, 1994) and the number achieved here, 0.915, suggests excellent reliability. This statistical robustness provides confidence in the consistency and dependability of the instrument.

3.8.2 Validity:

Content validity was established by grounding the social media use and animal welfare survey items in previous empirical research and relevant theories related to social media, human-animal interaction, and animal ethics (Aji, 2019; Wicks et al., 2021). This helps ensure adequate coverage of the key constructs of social media use, attitudes, and behaviours affecting animal welfare. Attention to question wording, format, layout, and survey flow addressed the face validity or logical validity of the instrument in capturing the intended measures (Taherdoost, 2016). In doing so, these questions addressed the face validity or logical validity of the instrument (Statistics Solutions, n. d.). The questionnaire reviewed by the experts of mass communication field to improve the face validity. Measures that improved the statistical conclusion validity included an adequate sample size, previously validated measurement scales, and appropriate statistical analysis.

To enhance the statistical conclusion validity, an adequately large representative sample of social media users in Pakistan was surveyed to achieve sufficient statistical power. The instrument

incorporated validated scales from prior research on social media use, animal ethics, and human-animal interaction where possible. Appropriate statistical analysis techniques for the data type and research aims were applied.

Indeed, systematic efforts to evaluate and improve reliability and validity across various stages of development, testing, and analysis made this study highly methodologically sound. The psychometric properties of the resulting instrument ensure that it is consistent and valid in capturing the intended constructs. This increases the validity and possible generalizability of the research results.

3.9 Data analysis techniques

Descriptive and inferential statistics were used to analyse the survey data collected, using IBM SPSS Version 22 (Creswell, 2014). The descriptive statistics of frequencies, means, and standard deviations were computed to capture the sample profile as well as trends in social media use (Ong & Puteh, 2017). It was visualised, with recommendations for measures of central trends and the dispersion of inconsequential variables. Cronbach's alpha values were calculated to determine the internal consistency and reliability of the scales used in the study (Schober and Vetter, 2020). A correlation analysis was conducted to determine the statistical relationship between several characteristics, such as social media exploitation and views towards animal welfare. This allowed us to determine the direction and strength of all of the interrelations between the variables (Schober & Vetter, 2020). The hypotheses were tested by an online poll of 300 Pakistani respondents. The poll included questions about social media use, exposure to animal welfare content, attitude, perceived knowledge, and animal welfare behaviours. The utilisation of

social media and subjective insights regarding animal welfare received from social media were evaluated using a one-way ANOVA. (Galling et al., 2017).

In the research, I endeavor to examine all the values of the hypothesis that have the significance of 95% confidence level in statistics. As a result, descriptive and inferential analyses were carried out to present the sample's data, ensure scale reliability, seek correlations, and test two hypotheses about animal welfare in Pakistan that social media usage is related to. The statistical methods of the study were a mark of the deductive and quantitative characteristics of the study.

3.10 Ethical Considerations

Each participant willingly provided informed voluntary consent before taking the survey. No personal data were taken to observe anonymity. Response data were completely confidential and were only used by academics. Participants in the research were allowed to withdraw at any time. this study received approval from the university ethics review committee. All data collection and analyses adhered to ethical guidelines.

The above-mentioned approach allowed an accurate statistical assessment to explore how Pakistani youths' attitudes towards animal welfare are influenced by online platforms.

4. RESULTS

This chapter presents the findings from the testing of two hypotheses regarding the relationship between social media usage and exposure, along with attitudes and knowledge of animal welfare in Pakistan. Descriptive statistics, frequency analysis, and inferential statistical methods were utilised to examine the survey results. Descriptive statistics were used to offer a summary of the sample and its primary variables. The association described in H1 was studied via correlation analysis. In this study, a one-way ANOVA was performed to identify significant differences in perceived knowledge among social media users based on their H2 use patterns.

4.1 Descriptive Statistics:

Table 4.1

Descriptive statistics

Variables	Mean	Std. Deviation
Usage Patterns of Social Media	3.18	.738
Exposure to Animal Welfare Content	2.68	.771
Attitudes Towards Animal Welfare	3.05	.660
Perceptions of Social Media Impact on Animal Welfare Information	2.20	.890
Factors Influencing Attitudes Towards Animal Welfare	3.56	.658
Perceived Knowledge About Animal Welfare	2.89	.792
Learning About Animal Welfare Topics	3.09	.774
Social Media Platforms Influencing Attitude Towards Animal Welfare	2.78	.717
Perceptions	3.17	.813
Optimism About Animal Welfare	3.64	.701

Pessimism About Animal Welfare	3.45	.870
Willingness	2.69	1.080
Awareness and Participation	3.22	.927

Table 4.1 presents descriptive statistics, including means and standard deviations, for the key variables examined in this study. There were 13 variables related to social media usage, attitudes, perceptions, and behaviours regarding animal welfare in Pakistan.

The average score of 3.18 out of 5 for the item Usage Patterns of Social Media indicated that the respondents were moderately active on social media. Exposure to animal welfare content had a moderate mean of 2.68. The attitudes towards animal welfare were seen to have a mean of 3.05, indicating positive attitudes. Impressions of Social Media Influence on Animal Welfare Knowledge had a mean of only 2.20, indicating a low perceived impact of social media on awareness. On welfare knowledge gained from social media, the mean Perceived Knowledge score was 2.89, which is about halfway, suggesting uncertain attitudes. Mean scores for Learning, Attitudes, and Perceptions were moderately high. Nevertheless, the willingness to take action was 2.69. The descriptive statistics show the average usage and exposure to animal welfare content on social media by the respondents. However, the effect on attitude and knowledge gained was more mixed. Overall, the descriptive statistics revealed moderately high social media usage, exposure, and learning regarding animal welfare among the sample. However, the perceived impact of social media and knowledge gained was more mixed. The findings provide a useful summary of the central tendencies and dispersion of the key variables.

4.2 Frequency analysis

Demographic profile of respondents

Table 4.2

Gender

Response Code	Frequency	Per cent	Valid Percent	Cumulative Percent
Male	129	43.0	43.0	43.0
Female	171	57.0	57.0	100.0
Total	300	100.0	100.0	

In 4.2 table, the frequency and percentage of the males and females of the sample are depicted. There were 43% males (n=129) and 57% females (n=171). This suggests that the number of female respondents to the survey was slightly higher than the number of male respondents. Primarily it is believed that females are those with more social media exposure and spend more time on them as compared to males. This might influence their perception, attitude, and knowledge on several subjects including animal welfare. Nevertheless, it should be emphasized that this is a generalization, which implies that individual differences may take place both among genders and even in the context of gender to social media usage patterns and their impact.

Table 4.3

Age

Response Code	Frequency	Per cent	Valid Percent	Cumulative Percent
18 to 25	177	59.0	59.0	59.0
26 to 35	98	32.0	32.7	91.0
36 to 45	25	9.0	8.3	100.0
Total	300	100.0	100.0	

Table 4.3 shows respondents' frequencies, and percentages in each age bracket The mostly affected age group was 18-25 years old having 177 (59% of the respondents). 98 respondents (32%) aged from 26 to 35 years old. This illustrates that a large portion of the respondents was young adults within 35 years old.

Table 4.4

Education

Response Code	Frequency	Per cent	Valid Percent	Cumulative Percent
Bachelor's (BS/MSc/MA)	229	76.3	76.3	76.3
MS/Mphil	63	21.0	21.0	97.3
PhD	8	2.7	2.7	100.0
Total	300	100.0	100.0	

The education table presented the percentage and frequency of respondents at the different education levels. 76.3% had a bachelor's degree, 21% MS/Mphil, and 2.7% had a PhD. In general, the majority of the sample, 76%, had undergraduate students. The frequency tables represent the respondents' demography profile in terms of gender, age, and education in a very clear way.

Question 1: How often do you access the following social media platforms, with 1 being 'Rarely' and 5 being 'Very Often.

Table 4.5

Usage Patterns of Social Media.

Social Media Platforms	never	Rarely	Sometimes	Often	very Often
Facebook	5.7%	30.0%	15.7%	31.3%	17.3%
Instagram	2.0%	18.0%	35.0%	24.3%	20.7%
Twitter	0.7%	9.0%	14.3%	30.7%	45.3%
YouTube	32.3%	21.3%	26.0%	11.3%	9.0%
TikTok	19.0%	12.7%	27.3%	33.3%	7.7%
other	8.0%	12.7%	64.7%	11.7%	3.0%

Table 4.5 presents the percentage of social media platform usage among 300 participants on an ordinal scale from 1 ("never") to 5 ("very often"). The Facebook engagement frequency was regarded as 31.3% often and 17.3% very often. The different pattern on Instagram was reported to be that 35% participants checked it sometimes, while the other 20.7% did so Very often. 0.7% users stated that they never accessed Twitter, while 9% participants reported very low frequency levels. However, TikTok attracted participants from a cross-section of frequencies; for instance, 27.3% accessed it "sometimes" while 33.3% accessed it "often." Users within this category exhibited different patterns as well, including a breakdown that showed 64% sometimes. This

breakdown is crucial because it reveals the dynamics of user interactions with platforms for researchers and other stakeholders.

Q2: How often do you come across animal welfare content on social media?

Table 4.6

Exposure to Animal Welfare Content

Response Code	Frequency	Per cent	Valid Percent	Cumulative Percent
never	22	7.3	7.3	7.3
Rarely	84	28.0	28.0	35.3
Sometimes	166	55.3	55.3	90.7
Often	25	8.3	8.3	99.0
very Often	3	1.0	1.0	100.0
Total	300	100.0	100.0	

Table 4.6 highlights the involvement of 300 respondents in exposure to animal welfare content on social media. According to a scale of "never" to "very often," 7.3% indicated that they had not encountered such content, while 28.0% experienced rare exposure. It is worth noting that almost half of the respondents, 55.3%, said sometimes, which speaks of broad sensitization concerning animal welfare. Among those with frequent exposures, 8.3% indicated that they were often exposed, while 1.0% suggested that they were very often exposed. This percentage, almost reaching 99.0%, indicates that most exposure is to animal welfare content. This brief analysis is therefore relevant for researchers and other stakeholders to inform them about the implications of animal-related problems on social media.

Q3: Indicate your level of agreement with the following statements related to animal welfare content on social media

Table 4.7

Attitudes Towards Animal Welfare Content on Social Media

Statements	Strongly disagree	Disagree	Uncertain	Agree	Strongly Agree
I often see Rescue stories on social media	9.3%	18.0%	22.3%	48.0%	2.3%
I often see Wildlife conservation content	1.7%	26.0%	46.0%	21.3%	5.0%
I often see Cruelty/neglect exposes	8.7%	19.7%	35.7%	32.3%	3.7%
I often see Adoption promotions	4.7%	39.3%	39.0%	14.3%	2.7%
I often see Animal testing campaigns	3.7%	21.0%	49.0%	24.7%	1.7%
I often see Pet care advice on social media	4.0%	30.0%	36.7%	27.3%	2.0%
I often see Animal rights activism	2.3%	22.0%	46.7%	25.0%	4.0%
I often see Memes/Jokes	3.0%	23.7%	52.0%	19.0%	2.3%
I often see News articles	2.0%	15.3%	22.3%	41.7%	18.7%

Table 4.7, "Attitudes Towards Animal Welfare Content on Social Media," reflects opinions from 300 participants. Rescue stories saw 50.3% agreement, while wildlife conservation and cruelty/neglect exposes received 71.3% and 67.7% agreement, respectively. Adoption promotions faced resistance, with 43.3% disagreement. Animal testing campaigns and pet care advice showed 36.0% and 49.0% uncertainity but also garnered agreement. Animal rights showed, 46.7% undecidable and 29% agreement. Memes/jokes and news articles generated 52.0% and 22.3% uncertainity, with 19.0% and 41.7% agreement, respectively. This concise analysis unveils nuanced attitudes, providing crucial insights into participant preferences in the digital discourse.

Q4: Social media in Pakistan has provided a lot of information about animal welfare issues in the country?

Table 4.8

Perceptions of Social Media Impact on Animal Welfare Information

Response Code	Frequency	Per cent	Valid Percent	Cumulative Percent
Strongly Disagree	63	21.0	21.0	21.0
Disagree	143	47.7	47.7	68.7
Uncertain	65	21.7	21.7	90.3
Agree	28	9.3	9.3	99.7
Strongly agree	1	.3	.3	100.0
Total	300	100.0	100.0	

Table 4.8 is about "Perceptions of social media impact on animal welfare information," that different participants express their perceptions of the information about animal welfare in Pakistan that is available online. 68.7 percent of those surveyed disagreed, suggesting that they were skeptical or dissatisfied. On the other side, 21.7 percent were uncertain, and 9.3 percent admitted that social media provides information about animal welfare. A minimal 0.3% strongly agreed. In this brief analysis, one can see the spectrum of opinions within the sample on the role of social media in informing about animal welfare issues in Pakistan.

Q5: Factors influence attitudes towards animal welfare in Pakistan.

Table 4.9

Factor Influencing Attitudes Towards Animal Welfare

Statements	Strongly disagree	Disagree	Uncertain	Agree	Strongly Agree
Religious beliefs	2.0%	2.0%	11.7%	55.0%	29.3%
Cultural practice	1.0%	14.3%	18.7%	59.3%	6.7%
Level of education	2.0%	16.0%	26.7%	35.7%	19.7%
Economic status	12.7%	9.7%	32.7%	40.7%	4.3%
Urban versus rural living	1.3%	3.0%	17.7%	42.3%	35.7%
Government policies	13.0%	14.7%	28.0%	40.3%	4.0%
Dietary preferences	1.3%	19.0%	34.7%	41.7%	3.3%
Activism and advocacy	12.0%	14.7%	27.3%	42.0%	4.0%
Personal experiences	1.7%	3.3%	18.0%	44.7%	32.3%
Social Media	0.7%	3.7%	28.3%	60.7%	6.7%

Participant views on major factors influencing attitudes towards animal welfare in Pakistan are presented in Table 4.9. The researchers found that 84% people are greatly affected by their religious beliefs. Culture and level of education, 65% agreed, 35.7% agreed and 19% strongly agree. There was an agreement with 40% participants on the economic status while an inclination to agreement for 42.3% and strongly agreement 35.7% participants on urban vs. rural living. A mixed bag of opinions comes from government policies, eating habits, activism, and personal animal experiences. A particular mention goes to social media, which had 60.7% respondents. This

brief analysis provides useful information on how different factors influence attitudes towards animal welfare in the selected sample from Pakistan.

Q6: "I am very knowledgeable about animal welfare issues because of social media".

Table 4.10

Perceived knowledge About Animal Welfare due to social media

Response Code	Frequency	Per cent	Valid Percent	Cumulative Percent
Strongly disagree	17	5.7	5.7	5.7
Disagree	60	20.0	20.0	25.0
Uncertain	163	54.3	54.3	80.0
Agree	59	19.7	19.7	99.7
Strongly agree	1	.3	.3	100.0
Total	300	100.0	100.0	

In table 4.10, "Perceived Knowledge About Animal Welfare Due to Social Media," indicates diverse participant views on the impact of social media on their understanding of animal welfare. A significant 54.3% expressed uncertainity, while 20.0% disagreed, suggesting a substantial portion not attributing their knowledge to social media. Conversely, 19.7% agreed, indicating belief in the contribution of social media to their understanding. A minimal 0.3% strongly agreed. This brief analysis highlights varied participant perspectives on the perceived influence of social media on their knowledge of animal welfare issues within the sample.

Q7: Please indicate your level of agreement about how much you have learned the following animal welfare topics in Pakistan through social media.

Table 4.11

Learning About Animal Welfare Topics Through Social Media

Statements	Strongly disagree	Disagree	Uncertain	Agree	Strongly Agree
I have learned more about adopting pets or stray animals	2.7%	25.0%	33.0%	33.7%	5.7%
I have learned more about animal cruelty issues	3.7%	23.0%	28.3%	42.7%	2.3%
I have learned more about Wildlife conservation efforts	2.7%	23.0%	52.7%	19.0%	2.7%
I have learned more about animal activism and rights campaigns	2.0%	24.7%	40.3%	29.3%	3.7%

The table sheds light on the actual scope of people discussing animal welfare issues on social media platforms. Through different statements, respondents give a bunch of different nouns to reflect the kind of learning they had. Mainly, a considerable amount of the other respondents think that they have known how to adopt pets or wandering animals (39.4% combined) and the issue of animal abuse (45.0% combined). On the other hand, far fewer people said attending lessons on wildlife conservation efforts (21.7% combined) and animal activism and rights campaigns (32.9% combined) are factors that bring them closer to the bond of nature. These results

give evidence for the diversity of social media concerning animal welfare as a learning platform and programme.

Q8: Indicate your level of agreement that the following social media platforms have influenced your attitude towards animal welfare in Pakistan.

Table 4.12

Social Media Platforms Influencing Attitude Towards Animal Welfare

Social Media Platform	Strongly disagree	Disagree	Uncertain	Agree	Strongly Agree
Facebook	3.3%	19.0%	47.7%	26.7%	3.3%
Instagram	3.3%	26.0%	47.0%	18.7%	5.0%
YouTube	3.7%	18.3%	42.7%	30.0%	5.3%
Twitter	20.0%	48.0%	22.0%	8.0%	2.0%
TikTok	22.3%	24.0%	41.3%	9.7%	2.7%

The table 4.12 presented the role of various social media facilities in the opinion of people towards animal rights as perceived by those who are subject of study in numbers. For example, Facebook and Instagram, which are the most used social media platforms, have opinions that are divided. They get significant uncertain as well. On the other hand, Twitter and TikTok generate more divergent views, as is seen where a large share expresses the strongly disagreeing opinions.

This demonstrates the level of complexity in which media outlets can contribute in various ways to the emerging picture of attitudes toward animal welfare.

Q9: Social media has affected my feelings or perceptions towards animals.

Table 4.13

Perceptions

Response Code	Frequency	Per cent	Valid Percent	Cumulative Percent
Strongly disagree	5	1.7	1.7	1.7
Disagree	53	17.7	17.7	19.3
Uncertain	139	46.3	46.3	65.7
Agree	93	31.0	31.0	96.7
Strongly Agree	10	3.3	3.3	100.0
Total	300	100.0	100.0	

Table 4.13, "Perceptions," revealed participant responses to "Social media has influenced how I feel about or perceive animals." From this sample, 65.7% were not sure, 19.3% disagreed, and 19.3% agreed. This short overview gives us some understanding of how social media affected the participants' attitudes about animals in the sample.

Q10: Seeing happy, healthy animals on social media makes me feel optimistic about animal welfare.

Table 4.14

Optimism About Animal Welfare

Response Code	Frequency	Per cent	Valid Percent	Cumulative Percent
Strongly disagree	4	1.3	1.3	1.3
Disagree	6	2.0	2.0	3.3
Uncertain	105	35.0	35.0	38.3
Agree	164	54.7	54.7	93.0
Strongly Agree	21	7.0	7.0	100.0
Total	300	100.0	100.0	

Table 4.14, "Optimism About Animal Welfare," explores participant sentiments regarding the impact of positive animal content on social media. From the sample, 38.3% expressed uncertainity, while a majority of 54.7% agreed (7.0% strongly agreeing), finding optimism in such content. Conversely, a minimal 3.3% disagreed, with 1.3% strongly disagreeing. This brief analysis provides insights into participant perspectives on the optimistic influence of happy, healthy animal content within the sample.

Q11: Seeing neglected or abused animals on social media makes me feel pessimistic about animal welfare.

Table 4.15

Pessimism About Animal Welfare

Response Code	Frequency	Per cent	Valid Percent	Cumulative Percent
Strongly disagree	2	.7	.7	.7
Disagree	47	15.7	15.7	16.3
Uncertain	87	29.0	29.0	45.3
Agree	141	47.0	47.0	92.3
Strongly Agree	23	7.7	7.7	100.0
Total	300	100.0	100.0	

Table 4.15, "Pessimism About Animal Welfare," explores participant sentiments regarding the impact of neglected or abused animal content on social media. From the sample, 45.3% expressed uncertainity, while 47.0% agreed (7.7% strongly agreeing), indicating that a substantial portion felt pessimistic in response to such content. Conversely, a minimal 16.3% of respondents of respondents disagreed, with 0.7% strongly disagreeing. This brief analysis provides insights into participant perspectives on the pessimistic influence of neglected or abused animal content within the sample.

Q12: In the past year, I have taken action to help animals in need after seeing concerning posts on social media (e.g. donated, volunteered, reported cruelty).

Table 4.16

Willingness

Response Code	Frequency	Per cent	Valid Percent	Cumulative Percent
Strongly disagree	48	16.0	16.0	16.0
Disagree	87	29.0	29.0	45.0
Uncertain	81	27.0	27.0	72.0
Agree	79	26.3	26.3	98.3
Strongly Agree	5	1.7	1.7	100.0
Total	300	100.0	100.0	

Table 4.16, "Willingness," reflects participant responses on taking action for animals after viewing concerning social media posts. The majority (27.0%) expressed Uncertainity, while 26.3% were willing to take action, and 45.0% disagreed. This analysis offers insights into participant perspectives, revealing a diverse range of responses within the sample.

Q13: I am aware of and have joined social media groups dedicated to animal welfare issues?

Table 4.17

Awareness and Participation

Response Code	Frequency	Per cent	Valid Percent	Cumulative Percent
Strongly disagree	13	4.3	4.3	4.3
Disagree	57	19.0	19.0	23.3
Uncertain	89	29.7	29.7	53.0
Agree	134	44.7	44.7	97.7
Strongly Agree	7	2.3	2.3	100.0
Total	300	100.0	100.0	

Table 4.17, "Awareness and Participation," explores the participation and consciousness of social media groups with respect to animal rights-related issues. From the results of the sample data, 53.0% were Uncertain about whether they would participate in the study, with 44.7% agreeing (2.3% strongly agreeing). On the other hand, 23.3% disagreed (4.3% strongly). The analysis contributes to understanding the awareness and participation of participants in animal welfare-oriented social media sites by providing several reactions within the sample used.

Q14: What do you think is missing on social media platforms regarding animal welfare in Pakistan? (Select all that apply)

Table 4.18

Missing Elements in Social Media Regarding Animal Welfare in Pakistan

Items	Responses		Percent of cases
	N	Percent	
Informative and educational content on animal rights and welfare issues	218	12.4%	72.7%
Public awareness campaigns about major animal welfare problems.	205	11.6%	68.3%
Celebrity and influencer involvement in promoting animal welfare.	142	8.0%	47.3%
Guidance on how common citizens can help improve animal welfare	208	11.8%	69.3%
Connecting animal rescue groups with potential volunteers and donors	188	10.7%	62.7%
Reporting mechanisms for animal cruelty instances.	199	11.3%	66.3%
Consistent engagement from animal welfare organizations	170	9.6%	56.7%
Positive reinforcement content on treating animals humanely	205	11.6%	68.3%
Realistic coverage of ground conditions of animal welfare issues	230	13.0%	76.7%
Total	1765	100%	588.3%

a. Dichotomy group tabulated at value 1.

Table 4.18: "missing elements on social media about animal welfare in Pakistan" participants' responses illustrate the gaps perceived by them regarding animal welfare in the country. Derived from the sample, the data contains diverse opinions.

Significantly, 76.7% of the participants highlighted realistic coverage of ground conditions in aspects related to animal welfare. The participants mentioned 72.7% that informative and educational content is also missing regarding animal rights and welfare issues. The other key areas were public awareness campaigns (68.3%), citizens as contributors (69.3%), and positive reinforcement themes about treating animals humanely (68.3%).

This is a brief analysis that provides useful information regarding the deficiencies in animal welfare on social media platforms in Pakistan as perceived by the sample with various expectations.

4.3 Inferential Statistic

4.3.1Correlation Analysis

Correlation analysis tests the correlations between variables in a study. The coefficient, often referred to as the Pearson correlation, describes the degree to which two quantitative variables are positively associated with one another. This tool is useful because it depicts the strength of the correlation and the extent of the gap between the dimensions of the study constructs. As a result, correlation analysis was utilised to identify correlations between two or more quantitative variables. In addition to analysing the linearity of the constructs or variables utilised, this approach assesses the strength and reliability of correlations.

H1: There is a significant correlation between the level of exposure to animal welfare content on social media and the public's attitudes towards animal welfare in Pakistan.

The following is the correlation analysis performed to discover the relationship between the variables of the study:

Table 4.19

Variables Correlations Analysis

Variables		Exposure to Animal Welfare Content	Attitudes towards Animal Welfare Content on Social Media
Exposure to Animal Welfare Content	Pearson Correlation	1	.624**
	Sig. (2-tailed)		.000
	N	300	300
Attitudes towards Animal Welfare Content on Social Media	Pearson Correlation	.624**	1
	Sig. (2-tailed)	.000	
	N	300	300

Table 4.19 shows that the correlation between the variables, level of exposure to animal welfare content on social media, and the attitudes of the public towards animal welfare in Pakistan is significant at the 0.01 level (2-tailed). The correlation coefficient is .624, It reveals a substantial significant correlation between the two dependent variables. The correlation test results support the alternative hypothesis while refuting the null hypothesis. The alternative hypothesis suggests that there is a strong significant correlation between the level of exposure to animal welfare content on social media and the attitudes of the public towards animal welfare.

4.3.2 One-way ANOVA

One-way between subjects. ANOVA was used to examine the impact of social media usage patterns (heavy, moderate, and light) on perceived knowledge of animal welfare. One-way ANOVA test for the difference in a continuous dependent variable between two or more distinct groups or levels of an independent variable (Bevans, 2020). The participants were divided into three groups based on their self-reported daily social media usage:

Groups

- Heavy social media usage group

- Moderate social media usage group

- Light social media usage group

The heavy usage subgroup was formed up of the participants who were the most consistent social media users (30% of the sample), the moderate usage group included people who were regular and active social media users (60% of the sample) and the light usage group consisted of people who were the least active social media users (10% of the sample). Aging to middle-old ages was the smallest group (36 to 45 years) representing 27 respondents (9.0% of data set). These groups were developed based on participants' self-answered questionnaire types, responding either 'never' to' most often' to different social media platform usage. Individuals categorised as heavy users were those who spent 'most often' on social media platforms; the moderate group consisted of those who 'often' or 'sometimes' logged in; and lastly, 'rarely' or 'never' was the light usage group.

H2: Social media usage patterns have a significant influence on perceived knowledge about animal welfare.

Table 4.20

	Sum of Squares	df	Mean Square	F	Sig.
ANOVA					
Perceived knowledge					
Between Groups	13.554	2	6.777	11.580	.000
Within Groups	173.816	297	.585		
Total	187.370	299			

The one-way analysis of variance revealed a statistically significant difference in perceived knowledge among the groups of social media users, F (2,297) =11.580, p<.001. The effect size, calculated using the eta squared formula, was 0.07, which indicated a medium effect according to the guidelines of Cohen (1988). The F value is 11.580, and the significance level is .000. Because the significance level is smaller than 0.05, there is a statistically significant difference in the mean values of perceived knowledge among the three groups of social media usage patterns (heavy, moderate, and light). There are two degrees of freedom between groups and 297 within groupings. The sum of squares between groups is 13.554, whereas within groups it is 173.816. The mean squares are obtained by dividing the sum of squares by the df. In closing, social media usage patterns had a substantial effect on perceived knowledge regarding animal welfare at the p<0.05 level [F (2, 297) = 11.580, p = 0.000]. As a result, the null hypothesis can be rejected because there is adequate evidence to demonstrate that social media usage patterns have a significant influence on perceived knowledge about animal welfare, supporting the original research hypothesis. Some limitations could be the sample size and representative nature of the groups. Future studies could investigate specific differences between the groups using post hoc comparisons. However, based on this ANOVA, the hypothesis is supported.

5. DISCUSSION

Social media started playing the most important role in shaping the level and content of public discourse, activism, and awareness on different social issues, including animal welfare activities. In Pakistan, social media offers an opportunity for cultural, religious, educational, and experiential interactions to form attitudes and behaviours towards animal welfare. The purpose of this chapter is to highlight the social media usage behaviour of Pakistanis with respect to animal rights, by studying their perception behaviour, and social factors that affect public opinion about animal rights issues in Pakistan. This chapter analyzes how social media perceives and influences the attitude of animals towards Pakistani society. Taking the theories and findings of the researcher, this discussion focuses on social media's impact on attitudes and actions towards animal welfare in Pakistan, and what kind of dynamics present opportunities and challenges for advocacy and intervention efforts.

Research Question 1: What are the usage patterns of social media in Pakistan about animal welfare?

The first research question examined trends in social media use of animal welfare for Pakistani youth. The results of this paper give us a clue into the behaviour patterns of Pakistani youth with respect to social media posts on animal welfare. The results in Table 4.19 showed a remarkable significant correlation ($r = 0.624$, $p < 0.01$) between being exposed to animal welfare context on social media and the attitude towards animal welfare. This profound significant

correlation indicates that increased exposure to such content has favoured and shown a loving attitude towards animals' rights and welfare obligations in Pakistan.

This result corresponded to the basic social learning theory of Bandura (1977). These social media platforms act as means to perform observational learning where users can see compassionate modelling of animal welfare causes and good education teaching about them. The frequency data in table 4.6 shows that the participants had an encounter with different types of animal welfare content, such as rescue stories (50.3% agreed), animal conservation efforts (26.3% agreed), cruelty/neglect reveals (36% agreed), and animal rights advocacy (29% agreed). As social learning theory suggests, repeated encounters with such information can guide individuals' consciousness, perception, and ultimately, attitude enhancement in the humane treatment of animals (Lenzi et al., 2020).

Further, the positive relationship between exposure and attitudes may indicat the assumptions of the uses and gratifications theory (Katz et al., 1973). Similar theory suggested that people select media content to meet certain needs, including to get information, socialise, and create self-image. It showed that social media was meeting users' expectations of knowing about the problem of animal welfare in Pakistan at present and is thus a factor in the growing empathy and potential actions by the users (Whiting & Williams, 2013).

Furthermore, the descriptive data seen in Tables 4.1 and 4.6 make it apparent that the overall social media usage frequency and the existence of specific animal welfare content exposure significantly differ. Through surveys, it was discovered that the level of social media usage by the participants was high (M = 3.18/5); however, the frequency of animal welfare content they saw was low, with the majority (55.3%) of them indicating that the content was seen rarely. Here is the difference in social media usage: despite continuous access to animal welfare materials, the door

gets opened for those who are relevant—animal welfare organisations, activists, and content developers—to make entertaining, viral, and informative materials that can be used as strong social media marketing strategies.

Frequency scores and Tables 4.7 and 4.18 gave the idea of which content could be more attractive or relevant to the target audience, leading to more engagements. For example, stories of human-animal bonding like amazing rescue stories (48% of respondents agreed), survey focusing on current animal wellbeing issues at the local level (76.7% liked to learn more), and content featuring religious or cultural information about animal feelings were found to be more communicative in changing attitudes.

Moreover, the results drawn from Table 4.9 showed the impact of distinct factors on attitudes towards the rights of animals in Pakistan. Subjects pointed out the key role of religious views (84% agreed), culture (66% agreed), education levels (55.4% agreed), and various personal experiences (77% agreed) in the formation of their stand. These insights reemphasize the point of taking into consideration the cultural, religious, and educational backgrounds of the target audience when planning social media content on animal welfare and, in that way, increasing its understanding and impact.

One more clear sign of a social network's effect on people's attitudes lies in the table, where we can see a strong positive relationship between exposure and attitudes, as generalised in Table 4.18. We do think that social media has a huge potential to be a tool that can lead to raising awareness and positive images, and at the final step, it will implement behavioural changes for animal protection in Pakistan. Strategically placed animist campaigns by NGOs, refined narrative planning that focuses on specific target groups, and algorithmic changes by social media platforms

to promote environmental conservation-related content would maximise the effect (Chagani, 2017; Koreski, 2020).

In a nutshell, the results dealing with Research Question 1 clearly revealed the present exposure levels and usage trends to the content related to animal welfare on social media by Pakistani youngsters. Though at this moment the scope of exposure was limited, the extremely strong link between exposure and attitude indicated that specific efforts directed at the rise of exposure via customised content marketing, related to those cultural and religious contexts, might considerably improve people's attitudes towards animal welfare. These findings were in line with the theoretical frameworks that incorporated topics like social learning theory and uses and gratifications theory. Mainly, it emphasised the role of media in changing the attitude and behaviours towards animal welfare in Pakistan.

The findings of this study have important theoretical implications in the light of the uses and gratifications theory (Katz et al., 1973) and social learning theory (Bandura, 1977). The results of this study have significant theoretical contributions. Positive attitudes towards animal welfare can be justified by the fact that there was high positive correlation between the amount of materials on animal welfare found in social media and the reactions to them. The uses and gratifications theory provides an understanding of how people consciously decide upon which media contents to attend to satisfy their wants at a given time, which might range from information to social interaction. As for the learning need, people that came across content related to animal welfare had an opportunity to gratify the information search and enrollment and contribute to the formation of a positive attitude. Furthermore, the social learning theory posits that individuals learn through observing and modeling the behavior of others. The exposure to animal welfare content on social media provided opportunities for observational learning, where users could witness positive

examples, campaigns, and educational efforts related to animal welfare causes. The following might have contributed to the increased understanding of humane treatment of animals through vicarious learning: The findings highlight the role of social media as a powerful platform for disseminating information, raising awareness, and influencing attitudes and behaviors through observational learning and fulfilling individual needs and motivations

Research Question 2: **How do social media influence the attitudes and behaviours of the public towards animal welfare in Pakistan?**

The second question focused on the impact of social media on knowledge, attitude, and behavior towards animal welfare among youth of Pakistan. The results related to Research Question 2 shed light on Hypothesis 2, which explained the relationship between social media usage patterns and the perception of knowledge about animal welfare in Pakistan. The one-way ANOVA analysis presented in Table 4.20 showed that there is a statistically significant difference in the perceived knowledge level between the three groups of social media usage (heavy, moderate, and light), $F(2, 297) = 11.580$, $p < 0.001$.

As a result, Hypothesis 2 was confirmed, and it was indicated that social media usage patterns did impact the perception of users about their knowledge level concerning animal welfare issues. If users spend significant amounts of time on social media platforms, they indicate that they know more about animal welfare than users who spend less time there.

These findings also corresponded closely with the assertion of the uses and gratifications theory (Katz et al., 1973) that people select media content to fulfil individual needs like getting information or knowing something. Media users who engage and have more exposure tend to

encounter and consume content that satisfies their curiosity and enriches their knowledge of animal welfare.

Also, the outcomes could be interpreted based on the social learning theory proposed by Bandura (1977). This theory focused on observational learning and modelling as key determinants of perceptions and actions. The most frequent social media users had more chances to be analysed through good examples, initiatives, and educational content, facilitating vicarious learning and increasing their potential knowledge level.

The study confirmed previous studies that had established the possibility of social media ramping up awareness and knowledge on diverse topics among humans, including animal welfare. An article by Szpargala (2021) suggests that people with a high social media frequency have a higher perceived knowledge of the welfare of animals compared with those with a low social media frequency.

The frequancy analysis in Table 4.11 also corroborated the above claim by respondents who indicated to some extent learning about some aspects of animal welfare, such as pet adoption (39.4%), animal cruelty issues (45%), and animal rights campaigns (32.9%). On the other hand, learning was highly dependent on the way topics were presented, which indicated that quality and depth of content were crucial in the perception of knowledge.

It was worth considering that having perceived knowledge was important, but there might not have been significant correspondence between this perception and actual knowledge levels. Future research could employ objective measures of the gained animal welfare knowledge to confirm the results of the study and run an experiment to investigate the interrelation between the perceived and actual knowledge.

Furthermore, the results could be interpreted through the lens of social learning theory (Bandura, 1977), which emphasized the role of observational learning and modeling in shaping perceptions and behaviors. Heavy social media users had more opportunities to witness positive examples, campaigns, and educational content related to animal welfare causes, facilitating vicarious learning and contributing to their perceived knowledge levels.

These findings aligned with previous research that had highlighted the potential of social media in enhancing knowledge and awareness about various topics, including animal welfare. A study by Szpargala (2021) found that frequent social media users reported higher levels of perceived knowledge about farm animal welfare compared to infrequent users.

The frequency analysis in Table 4.11 provided further support for this interpretation, as respondents reported moderate levels of learning about specific animal welfare topics, such as pet adoption (39.4% agreed), animal cruelty issues (45% agreed), and animal rights campaigns (32.9% agreed) through social media. However, the levels of perceived learning varied across different topics, suggesting that the quality and depth of content exposure played a crucial role in shaping perceived knowledge.

It was important to note that while perceived knowledge was a valuable indicator, it might not have always aligned with actual knowledge levels. Future research could incorporate objective measures of animal welfare knowledge to further validate the findings and explore the relationship between perceived and actual knowledge gained through social media.

Table 4.9 of the results also demonstrated that religion, tradition, and socialisation in education all contributed to Pakistanis' animal welfare attitudes. The aforementioned facts highlight the significance of designing social media content according to the cultural, religious,

and educational context, and those will make it more relevant, more believable, and more educational likewise.

In short, the findings connected with Research Question 2 confirmed Hypothesis 2, which claims that there are several patterns of social media use that affect perceptions of knowledge about animal welfare in Pakistan. People who spent quite a lot of time on social media believed they were more knowledgeable. This is probably due to increased awareness of issues, discussions, and chances to observe others. The results from the study were similar to theoretical frameworks that include a use-and-gratification approach and a social learning theory. However, further studies are needed to give an objective measure of knowledge and the role knowledge mediation, real knowledge, and certain content characteristics play in this process in order to understand the educational aspect of social media on animal welfare.

Research Question 3: What factors influence the attitudes of the public towards animal welfare in Pakistan?

The third research question, dealt with knowing the resourceful factors that influence opinions of animal welfare among social media users. The findings genuinely show that religious belief is the most essential consideration in the case of having interest in animal welfare. A significant figure of 88% was recorded as the agreement of the strong opinion. The study's results reflect a matching with the idea that the Islamic commands of considering the animals worthily and treating the animals with compassion and justice are the main elements in forming community views, both nationally and internationally (Abdul Rahman, 2017; Chagani, 2017).

Contrarily, the majority of the 59% of respondents believed that culture is more of the weaker force that does not affect attitudes. It suggests that cultural belief gets additional power in forming people's views on animal welfare, while religious values seem to have the biggest influence (Sinclair et al., 2022).

The level of education was the second most significant factor, apart from religion; 65% of the respondents agreed it influenced the attitudes. This demonstrates the results of numerous research studies from worldwide Muslim-majority counties such as Pakistan which determined that animal welfare is a growing issue among people who have higher education levels (Szűcs et al., 2012; Kalantari, 2023).

The respondents also presented conflicting opinion whether urban or rural living affected their attitudes towards animal welfare. While 35.7% thought that it had influence, the other 30% were uncertain. This is consistent with the idea of multi-faceted interconnections among the place, the culture and the attitude towards animals in Pakistan which need to be studied in further depth (Khan et al., 2020).

The impact of policies was not clear, since 56% were uncertain and 40% agreed that policies determine attitudes. This contradiction may indicate that there is room to investigate the relationship between animal welfare governance and public attitudes. Research shows that progressive policy reforms in Pakistan will result in a better attitude, but the obstacles to implementation limit their impact (Ilyas & Qazilbash, 2021).

Regarding personal experiences with animals, 62.3% of them felt that it has a strong influence on attitudes. This is also in line with the evidence that active engagement promotes compassionate attitudes, whereas deprivation of such interaction induces apathy towards animals

(Ormandy & Schuppli, 2014). Nevertheless, 18 % of respondents disagreed, thus highlighting the complex role of subjective factors.

Regarding social media itself, 60.7% of respondents believed it affects animal welfare perspectives, although only 12.7% strongly agreed. This indicates the recognition of social media's growing, albeit currently limited, role as an attitude shaper. Younger, educated, and urban residents are typically most susceptible to social media's attitudinal influence (Khan et al., 2020; Riddle & Mackay, 2020).

Overall, the findings emphasise that religious values and teachings remain the foremost factor driving animal welfare perspectives within the Pakistani cultural context. However, education level, direct experiences, geographic factors, policies, and social media have nuanced, intersecting impacts that warrant deeper investigation through qualitative methods.

A key direction for future research is to explore the specific aspects of Islamic principles and texts that shape public attitudes towards animal welfare in Pakistan. Surveys and interviews can illuminate which scriptural concepts and messages have the strongest resonance in the religious imagination and hold the greatest potential for elevating empathy and concern for animal welfare. This is vital for developing impactful educational and awareness initiatives grounded in indigenous values.

Additionally, more research is required on the precise mechanisms through which higher education drives improved awareness and attitudes regarding animal welfare in Pakistan and other Muslim societies. Identifying how certain disciplines, pedagogies, ethics curricula, or service learning shape perspectives can inform humane education policies.

Continuing to discuss the effects of social media use on animal welfare in Pakistan, there is a need to address the changing position of digital platforms in influencing public perceptions

and behaviours towards animals. Social networks have become leading discussion spaces, self-expression, advocacy, and awareness of some social issues, including those related to animal welfare and rights. In addition, we should conduct research on the features of social media's role in the formation of attitudes towards animal welfare in our state of Pakistan.

Social media platforms such as Facebook, X, Instagram, and TikTok have emerged as a place for sharing life news, wildlife stories, images, and videos. These platforms offer avenues for advocacy, education, and mobilisation in the field of human beings. However, regarding how social media has impacted public attitudes towards animal welfare, we have a murky picture, and it depends on cultural, religion, education, and life experiences.

With regard to a country like Pakistan where religion prominently occupies a place in social norms and values, there should be a discussion on the role of social media in the animal welfare movement, which also includes the application of spiritual principles and cultural practises. Even though faith greatly determines the perspective of people on animal welfare, the current case study says, social media can be used to amplify religious arguments and as a medium to disseminate religious messages. Investigations reveal that interpersonal interactions present the path for teaching compassion that ought to be aimed at animals, with treating them with kindness being the major principle in the life of all true believers. (Khan et al., 2020). Islamic theologians, prominent figures, and non-governmental organisations use social media to convey messages on the sympathetic treatment of animals based on Islamic teachings. Therefore, social media networks play a key role in the mediating process and in bridging the communication gap to create a better understanding of Islamic principles relating to animal welfare issues.

Furthermore, social media influence on attitudes towards animal welfare is tapped with educational attainment and urbanisation patterns in Pakistan. As can be seen from the findings, in

table 4.8, higher education and urban lifestyle correlate with increased vulnerability to the attitudinal influence of social media. Being educated urban crowds tend to have faster technological access and are more likely to initiate an online discussion on the issue of animal welfare. Further, personal interaction with animals that is discussed in the context of study results may be stressed with social media channels. People can narrate their stories with animal's stories, of rescue operations, and incidents of animal abuse, all of which can ignite empathy in readers and shape the perception of the public towards animals. As a rule, social networks have a visual orientation; many social media sites appear because of the spread of images and videos portraying animal suffering or rescue operations, which generate empathy and lead to supporting animal charity.

Nevertheless, despite the role of social media in ensuring the welfare of Pakistani animals, there are various challenges and limitations that should be addressed. The distortion of information, social modesty, and digital disparities are variables that can limit the efficacy of online lobbying efforts. Furthermore, the power of social media might not be the same for different age populations and regions in Pakistan, so thoughtful variables are necessary for digital outreach.

In short, social networking sites are an effective but huge means of influencing Pakistani public opinion in favour of animal welfare. The interplay between social media's use, religion's beliefs, education, and culture's dynamics is a perfect model to explain how stakeholders can utilise digital media more effectively to convey compassion, sympathy, and moral order for animals in Pakistani culture. The other area where more research should be focused is to eventually understand the paths through which social media control opinions about animal welfare and identify the best ways that could be used to magnify the positive impact and reduce the possible adverse effects.

Eventually, this work provides a highly perceptive view of the intricate connection between social media use and views for animal welfare in Pakistan. The study conclusively showcases the scope of the bond, making known the ways in which faith, cultural beliefs, level of education, personal circumstances, and digital space engage with each other. Social media has proved to be a mighty instrument for informational dissemination, advocacy, and public education. This, however, is the product of a complicated combination of the cultural factors characteristic of Pakistan. A comprehensive strategy that combines religious teachings, education sessions, and the judicious use of social media is an approach that will ensure the propagation of an ethical society where all sentient beings come first. Social research backed by in-depth examination of cultural and social dynamics will hence be the basis for taming social media in order to use the power of images to make possible the desired changes to animal welfare in Pakistan.

6. CONCLUSION

This study aims to establish the nature and magnitude of social media's effect on people's views towards the welfare and protection of animals in Pakistan. The study results show that social media media hold an important place in the spread of animal welfare ideas and in the generation of social awareness and activism in the country.

In addition, the results demonstrate a significant correlation between exposure to animal welfare materials on social media and good attitudes towards animal welfare. Those social media users who were familiar with the issues, such as rescues, wildlife protection, and animal rights, on social media often had a higher level of positive attitudes and empathy toward animals. This outcome is in line with social learning theories and uses and gratifications theories, making it clearer that various social media platforms can be a starting point for learning new information about the welfare of animals and allow individuals to satisfy their innate need for information and their expression of self-regarding these issues. Additionally, the study discovered that the way people use social media platforms extensively impacts their awareness of animal welfare. Those heavily using social media showed up consistently with higher levels of perceived knowledge than users of all three groups (heavy, moderate, and light). According to this research evidence, social media is no longer simply a means of communication but also an exceptional tool for education, which allows for vicarious learning and greater access to information about animal welfare causes.

The research found that the people's religious beliefs, their culture, education, and individual practical life experiences also played very important roles in the formation of animal welfare attitudes in Pakistan. The factors therefore regulate the impact of social media, calling for

a multifaceted approach to be taken by integrating religious teachings, educational initiatives, and tailored social media campaigns that fit the culture and religion of the audience.

The study results clearly have significance for the NGOs, governmental bodies, and animal welfare activists in Pakistan. Through the utilisation of social media networks, these stakeholders will not only carry out their advocacy efforts but also accomplish all these activities: awareness creation and the development of positive attitudes. Nevertheless, these strategies should be developed for the cultural and religious habitat of the end users so that they include elements that agree with the subculture and values of the specified group.

In future studies, the focus should be given to the determining mechanisms concerning the influence of social media on outlooks and behaviours towards animal welfare, along with the interaction of social media with religious dogmas, education, and cultural identities. The qualitative studies can also give deeper knowledge of the experienced life styles and thoughts of social media users regarding animal welfare issues in Pakistan.

Finally, this study reinforces role of social media in the moulding of public discourse and attitudes towards animal welfare in Pakistan. From here, policymakers can understand the possibility of online platforms for education and awareness and culturally sensitive methods, which can guide them in developing successful programmes for compassion, empathy, and finally positive behaviours towards animals in Pakistani society.

Limitations//Future Research Directions

However, non-probability sampling also limited the generalizability of the results, the reliance on self-reported data, and the incapacity of quantitative methods to capture qualitative subjective insights into usage, attitudes, and factors affecting usage are the major limitations of the

study. Future research can resort to mixed or only qualitative methods for more detailed, real-world insights from interviews or focus groups. Generalizability would also be increased by engaging a larger and more representative sample. Moreover, an examination of different cultures, age groups, and geographic regions by means of comparative analysis of the patterns could reveal some valuable patterns. As such, the exploratory research above provides a useful early contribution to the field of social media's impacts on animal welfare perspectives and provides a direction for further studies in this under-researched area.

Recommendations

- Animal welfare organisations should produce shareable and persuasive content suitable for the generally preferred platforms such as Facebook, YouTube, and Instagram in Pakistan. This is an effective way to meet the needs of the audience by creating the required attitudes.

- Messaging should incorporate Islamic teachings, which include compassion towards animals and environmental stewardship, so that influential religious values are addressed, thus ensuring the message's greatest authenticity and resonance.

- Leaders, such as celebrities or religious scholars, should be drawn in to show human treatment towards animals on social media as positive examples.

- The algorithms and interfaces of the platform companies should be changed to allow Pakistani users to access more animal welfare educational materials.

- Governments and educational institutions need to develop appropriate policies and curricula that can increase animal welfare awareness and attitudes, which can be achieved with a wide reach and appeal of social networks.

- The qualitative approach through interviews or focus group discussions can help in obtaining more in-depth information regarding the issues and motivations related to the animal welfare content found on social media sites.

- The study also supports the argument on campaigns developed in culturally and religiously sensitive manner. Because many people worldwide have their culture and religions, animal welfare organizations should ensure that their campaigns do not offend anybody. This can include consulting with local populations to ensure that the messages are appropriate and culturally sensitive.

- Cross-Platform Strategies: For instance, the organizations should design strategies for getting in touch with the different demographics interested in animal rights across various social media platforms. For instance, educational content could be provided in YouTube videos while short, striking messages could be posted in Instagram and Facebook.

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APPENDICES

Appendix A: Survey Questionnaire

What is your gender?

- Male
- Female
- Prefer not to say

What is your age?

- 18-25
- 26-35
- 36-45
- Above 46

What is the highest level of education you have completed?

- Matriculation
- Intermediate (FA/FSC)
- Bachelor's (BS/MSc/MA)
- MS/Mphil
- Phd

1.Please rate how often you access the following social media platforms.

Never, rarely, sometimes, often, very often

2. How often do you come across animal welfare content on social media.

Never, rarely, sometimes, often, very often

3.Please indicate your level of agreement with the following statements related to animal welfare content on social media:

Strongly Disagree, Disagree, Uncertain, Agree, Strongly Agree

- I often see Rescue stories on social media

- I often see Wildlife conservation content

- I often see Cruelty/neglect exposes on social media

- I often see Adoption promotions on social media

- I often see Animal testing campaigns on social media

- I often see Pet care advice on social media

- I often see Humane education initiatives

- I often see Animal rights activism

- Memes/jokes

- News articles

4.Please indicate your level of agreement with the following statement: "Social media in Pakistan has provided a lot of information about animal welfare issues in the country

Strongly Disagree, Disagree, Uncertain, Agree, Strongly Agree

5. Please indicate your level of agreement that the following factors influence attitudes towards animal welfare in Pakistan.

Strongly Disagree, Disagree, Uncertain, Agree, Strongly Agree

- Religious beliefs

- Cultural practice

- Level of education

- Economic status

- Urban versus rural living

- Government policies

- Dietary preferences

- Activism and advocacy

- Personal experiences with animals

- Social Media

6.Please indicate your level of agreement with the following statement: "I am very knowledgeable about animal welfare issues because of social media".

Strongly Disagree, Disagree, Uncertain, Agree, Strongly Agree

7. Please indicate your level of agreement about how much you have learned the following animal welfare topics in Pakistan through social media.

- I have learned more about animal activism and rights campaigns
- I have learned more about adopting pets or stray animals
- I have learned more about animal cruelty issues
- I have learned more about Wildlife conservation efforts

8. Please indicate your level of agreement that the following social media platforms have influenced your attitude towards animal welfare in Pakistan.

Strongly Disagree, Disagree, Uncertain, Agree, Strongly Agree

- Facebook
- Instagram
- YouTube
- Twitter
- TikTok

9. Social media has affected my feelings or perceptions towards animals.

Strongly Disagree, Disagree, Uncertain, Agree, Strongly Agree

10. Seeing Happy, healthy Animals on social media makes me feel optimistic about Animal Welfare in Pakistan.

Strongly Disagree, Disagree, Uncertain, Agree, Strongly Agree

11. Seeing neglected or abused animals on social media makes me feel pessimistic about Animal welfare in Pakistan.

Strongly Disagree, Disagree, Uncertain, Agree, Strongly Agree

12. In the past year, I have taken action to help animals in need after seeing concerning posts on social media (e.g. donated money, volunteered, reported cruelty).

Strongly Disagree, Disagree, Uncertain, Agree, Strongly Agree

13. I am aware of and have joined social media groups dedicated to animal welfare issues.

Strongly Disagree, Disagree, Uncertain, Agree, Strongly Agree

14. What do you think is missing on social media platforms regarding animal welfare in Pakistan? (Select all that apply)

- Informative and educational content on animal rights and welfare issues
- Public awareness campaigns about major animal welfare problems
- Celebrity and influencer involvement in promoting animal welfare
- Guidance on how common citizens can help improve animal welfare
- Connecting animal rescue groups with potential volunteers and donors
- Reporting mechanisms for animal cruelty instances
- Consistent engagement from animal welfare organizations
- Positive reinforcement content on treating animals humanely
- Realistic coverage of ground conditions of animal welfare issues
- Others