

INTERNATIONAL JOURNAL OF LAW MANAGEMENT & HUMANITIES

[ISSN 2581-5369]

Volume 7 | Issue 6

2024

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A Critical Study on the Interference on Animals' Rights Due to Their Caging in Zoos with special reference to Chennai

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ABSTRACT

The research critically explores the interference with animals' rights due to their confinement in zoos, with a special focus on Chennai. This topic was chosen due to the ethical dilemma of balancing wildlife conservation and public education with the rights and welfare of animals in captivity. The study aims to assess the impact of caging on animals' physical and psychological well-being, analyse the effectiveness of legal frameworks like the Wildlife Protection Act and Central Zoo Authority guidelines, and compare practices in Chennai's zoos with global standards. Employing an empirical methodology, the research gathers primary data through surveys and interviews with zoo officials, visitors, and animal welfare activists, complemented by secondary data from legislative and policy reviews. Key findings reveal that while Chennai's zoos have made strides in conservation and education, challenges persist, such as inadequate infrastructure, limited enrichment opportunities, and insufficient public awareness of animal rights. The study highlights a disconnect between policy intentions and ground-level implementation. The conclusion underscores the need for ethical reforms, enhanced public engagement, and stricter enforcement of welfare standards. By addressing these gaps, the research advocates a balanced approach that aligns conservation goals with the humane treatment of animals, fostering a compassionate and informed society.

Keywords: *animal rights, endangered species, natural habitat, cruelty, caged animals.*

I. INTRODUCTION

The concept of confining animals for human purposes can be traced back thousands of years to ancient civilizations where exotic animals were collected and displayed as symbols of power, wealth, and curiosity. The earliest forms of zoos were not institutions of conservation but rather private collections of royalty and aristocrats, serving as emblems of dominance over nature. Over centuries, zoos evolved to include broader public access, with the primary objective of entertaining visitors. However, this focus on spectacle often came at the expense of the animals'

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welfare. Animals were housed in cramped and barren enclosures, deprived of their natural habitats and behavioural stimuli. It was only in the mid-20th century that a significant transformation in the ethos of zoos began to take place. Globally, the emphasis shifted from mere exhibition to education, conservation, and welfare. The growing awareness of animal rights brought ethical considerations to the forefront, questioning the moral justification of keeping animals in captivity. In India, the development of modern zoos reflects this transition. Zoos, such as the Arignar Anna Zoological Park in Chennai, have gradually adopted practices aimed at balancing conservation, public engagement, and animal welfare, marking a notable shift from their historical purpose. However, even as zoos strive to redefine their objectives, the ethical dilemma surrounding the caging of animals for human purposes persists.

II. HISTORICAL CONTEXT OF ANIMALS IN CAPTIVITY

The evolution of zoos also reflects wider societal changes in the way humans perceive and interact with animals. But the explosion of animal rights movements worldwide brings the issue of ethics to captivity, questioning the conventional role of zoos as centres of exhibition only. Public perception is shifting toward an understanding that animals possess intrinsic rights as living beings with feelings, forcing zoos to take a re-evaluation of their activities. Chennai's zoos, like others worldwide, have embraced this change by focusing on education, conservation, and humane treatment. Participatory initiatives such as citizen science programs and conservation campaigns have further enhanced public engagement, fostering a sense of shared responsibility for wildlife. However, ethical debates surrounding zoos remain unresolved. Critics argue that no matter how advanced, zoos cannot fully replicate the natural habitats and behaviours of wild animals. Advocates for animals were suggesting alternative ways, like sanctuaries or virtual tours, that avoid imprisonment. Such ongoing discussion naturally put light on the tough questions between the goals of conservation, public demands, and the rights of animals in captivity.

III. GOVERNMENT INITIATIVES ON ANIMAL RIGHTS IN ZOOS

The law related to zoos in India speaks a lot regarding the country's intentions to serve animal welfare. The main structure of this framework is the Wildlife Protection Act of 1972, wherein all the rules for the management of zoos and conservation of wildlife are outlined. Another offshoot of this act is the Central Zoo Authority, which manages and streamlines zoos across the country. Some of the guidelines that CZA enforces regarding maintenance of ethical and scientific standards with respect to zoos are enclosure designs, veterinary care, conservation breeding, and visitor education. Besides, the Protection of Animals Act 1960 affords greater

legal protection to all animals, including those in captivity, through prevention of cruelty and abetment of cruelty. The National Zoo Policy in 1998 still affirms a more essential role of zoos in conservation and education but further emphasizes humane treatment. Along with these national efforts, Tamil Nadu's zoos enjoy state and global networking. For example, financial assistance by the World Bank and collaboration with international conservation bodies have made it possible to introduce modern practices in Chennai zoos. However, the lack of uniform enforcement as well as scarcity of resources further represents areas that require improvement for effective animal welfare.

(A) Factors Affecting Animal Rights in Zoos

The welfare of captive animals in a zoo is determined by several interacting factors such as enclosure design, animal husbandry practices, funding, and the expectations of the public. For instance, large and complex enclosures impact directly on the physical and psychological welfare of the animals. Well-designed naturalistic environments, which accurately reflect wild environments, may promote better health and reduce stress behaviours such as pacing or self-mutilation. In contrast, poor enclosures often lead to adverse welfare outcomes and a poor quality of life. Husbandry practices, including diet, veterinary care, and enrichment activities, also play a critical role in promoting good welfare. Regular health check-ups, diets appropriate to species, and opportunities for social interaction can all minimize the unfavourable impacts of captivity, but zoos are often severely constrained in the effective implementation of these practices by budgetary constraints. In addition, conservational and tourism objectives create conflicts of priority. Although zoos claim to be a place of entertainment and education, they may sometimes compromise more apparent wants of iconic species-visually appealing and requiring popular attractions-to less perceptible needs of animals. These factors reflect the complexity involved in making zoo management ethics practical.

(B) Current Trends in Zoos and Animal Welfare

There are recent trends in zoos and animal welfare: more emphasis on ethical practices, conservation, and education. Modern zoos pay much attention to the physical and psychological well-being of animals through naturalistic enclosures that mimic their habitat. Enrichment programs such as puzzle feeders and interactive toys are now a norm in order to stimulate mental engagement as well as reduce stress behaviours. Advanced veterinary care and species-specific diets also enhance animal welfare. In fact, conservation has become one of the primary missions that zoos undertake. Most institutions are participants in species breeding programs, with the bred specimens reintroduced into the wild. Zoos also provide resources and lend themselves to

the funding and execution of animal behaviour studies, genetics, and habitat restoration research projects. The other area of focus is on education where zoos use technology to engage visitors. Virtual reality and interactive exhibits along with citizen science have changed the visitor experience, helping people move closer to wildlife and make conservation awareness possible. Transparency and accountability are becoming essential, with zoos increasingly collaborating with animal rights organizations and adhering to international welfare standards. Critics, on the other hand, challenge the fundamental ethics of captivity, advocating alternatives in the form of wildlife sanctuaries and virtual zoos that eliminate confinement. This is despite continued challenges: especially regarding balanced demand between conservation and tourism, as well as resource constraint. The COVID-19 pandemic clearly exposed the existing vulnerabilities, which now increasingly demand sustainable funds and adaptive management. Generally, zoos are now moving from exhibition centres to institutions which focus on humane care, conservation, and education, while moulding the changing societal values.

IV. COMPARATIVE ANALYSIS: ZOOS IN CHENNAI VS. OTHER REGIONS

Zoos of Chennai compared with zoos elsewhere in the world reflect progress made and challenges in bringing them up to par with the rest of the world. The zoos of Chennai, especially Arignar Anna Zoological Park, have been significant time-builders in conservation and welfare spheres, following the impetus of CZA and association with research and conservation bodies. However, due to resource limitations and infrastructural challenges, this sophistication, as practiced in advanced countries, is not reached. In the United States, the United Kingdom, and Australia, zoos enjoy advanced technology, sound funding, and well-established public support, making it possible for these zoos to actually put into practice the most advanced and modern practices on animal welfare, research, and education. For example, a zoo in such countries often conducts interdisciplinary research in genetic, cognitive capabilities of animals, and ecosystem. Such, zoos make significant contributions to conservation science. Conversely, the zoos in Chennai and other parts of India face twin challenges of balancing ethics with practicalities. However, the zoos in Chennai are in pursuit of progress: utilizing government support and public advocacy along with partnerships from around the world to enhance standards.

(A) Objectives

- To Investigate public attitudes, awareness, and perceptions regarding the treatment of animals in Zoos
- To Analyse existing laws, regulations, and policies governing the operation and management of Zoos

- To Identify key challenges and obstacles hindering the promotion of animals' rights and welfare in Zoos
- To Promote ethical considerations and compassionate stewardship among zoo personnel, policymakers, and visitors

(B) Review of literature

Sherwen et al (2019). This study examines the impact of zoo visitors on animal welfare, focusing on stress-related behaviours in various species. The researchers conducted behavioural and physiological analyses to evaluate responses to visitor presence and density. Findings indicate mixed effects, with some species showing increased stress while others habituate. The study highlights the need for controlled visitor interactions to enhance animal welfare. The authors conclude that zoos must integrate visitor management strategies and environmental enrichments to minimize negative impacts, emphasizing the dual role of zoos in public education and animal welfare.

Meredith J et al (2007). The research investigates environmental factors influencing the behaviours of zoo-housed lions and tigers, particularly pacing—a stereotypic behaviour. Using observational studies, the authors explored the effectiveness of visual barriers in reducing pacing. Results show that barriers limited visual stimuli from visitors, significantly reducing stereotypic behaviours. The study concludes that modifying zoo environments can positively affect animal welfare, suggesting that zoos should incorporate such environmental adjustments to promote natural behaviours in big cats and other species. However, the study suggests considering sensory access and environmental variables when designing environments for captive carnivores.

Phillip J et al (2023). This commentary evaluates the societal value of modern zoos, exploring their roles in conservation, education, and community engagement. Using qualitative analysis of case studies, the authors highlight how zoos contribute to local and global sustainability efforts. The findings emphasize the positive societal impacts, including fostering public awareness about conservation and supporting biodiversity through breeding programs. The authors conclude that zoos serve as vital hubs for education and conservation, urging stakeholders to maximize their potential for global environmental benefits.

Williams et al (2023). This quantitative review analyses visitor impacts on non-primate species in zoos, focusing on behavioural and physiological responses. Data from multiple studies were synthesized to identify patterns of stress and habituation. The findings reveal species-specific variations, with some exhibiting stress indicators while others adapt over time. The study

concludes that tailored visitor management and habitat designs are essential for mitigating negative impacts, supporting the need for evidence-based practices to enhance animal welfare in zoos.

Andrew Moss and Maggie Esson (2012). This study critiques the educational claims of zoos, examining their efficacy in promoting conservation awareness. Using visitor surveys and educational program assessments, the authors evaluate learning outcomes. Results indicate limited long-term retention of conservation messages among visitors. The study concludes that while zoos hold potential as educational platforms, improvements in program design and delivery are necessary to achieve meaningful conservation education goals.

Krebs et al (2018). The study reviews strategies for managing aged zoo animals to ensure positive welfare outcomes. Through a literature review and case studies, the authors examine age-related challenges and interventions such as specialized diets, healthcare, and habitat modifications. Findings underscore the importance of individualized care plans for geriatric animals. The study concludes with recommendations for research-driven welfare strategies to improve the quality of life for aging zoo populations.

Emma S et al (2022). This study evaluates the contributions of zoo-based research to primate cognition over 15 years, focusing on behavioural and cognitive studies. Employing a meta-analysis, the authors highlight advancements in understanding primate intelligence and welfare. Findings reveal that zoos provide unique opportunities for studying complex behaviours in controlled settings. The study concludes that integrating cognitive research into zoo practices enhances animal welfare and supports broader scientific inquiries into primate cognition.

Gareth Davey (2015). The study reviews visitor behaviour in zoos, analysing its influence on animal welfare and educational outcomes. Employing observational and survey methods, the research identifies patterns such as visitor noise levels and movement affecting animal stress and visitor learning experiences. Findings suggest a need for visitor education to foster respectful interactions with animals. The study concludes that managing visitor behaviour is critical for achieving both welfare and educational objectives in zoos.

Jakob-Hoff et al (2019). This study assesses the impact of construction noise on zoo animals by focusing their attention on stress responses both behavioural and physiological. Acoustic monitoring and behaviour observation document the results, with significant signs of stress in sensitive species, such as increased vigilance and disrupted activity patterns. The results indicate that extended exposure to high levels of noise can affect the welfare of animals negatively. The authors suggest the adoption of noise-reduction measures in the execution of

construction work, such as off-hour scheduling or the use of quieter machines. The study concludes that zoos should balance their development needs with strategies to mitigate stress on zoo-housed species while prioritizing animal welfare.

Clifford-Clarke et al (2022). This research examines the effectiveness of animal ambassadors in conservation education programs at zoos. Pre- and post-visit surveys were conducted to measure changes in visitor attitudes and conservation knowledge. Findings indicate that direct interactions with animal ambassadors significantly enhance visitors' understanding of conservation issues. However, the study highlights concern about potential stress for the ambassador animals. The authors recommend careful selection and training of ambassador species to ensure minimal welfare costs. The study concludes that while animal ambassadors are powerful educational tools, zoos must prioritize ethical practices and animal welfare in program design.

D'Cruze et al (2019). This global review explores the dynamics of animal–visitor interactions in zoos and aquariums, analysing their impact on animal welfare and visitor engagement. Case studies and literature analyses reveal that poorly managed interactions can result in stress and behavioural changes in animals. The study highlights the need for stricter welfare standards and evidence-based interaction protocols. Findings suggest that well-designed interactions can improve public conservation awareness while safeguarding animal well-being. The authors conclude that zoos must balance educational objectives with the ethical treatment of animals, emphasizing the importance of ongoing research to refine best practices.

Kleespies et al (2022). This study evaluates the impact of guided zoo tours on participants' connection to nature and conservation attitudes. Using pre- and post-tour surveys, the researchers measure shifts in visitor awareness and emotional engagement. Results indicate that guided tours significantly enhance visitors' appreciation of biodiversity and support for conservation efforts. The study emphasizes the role of interactive educational experiences in fostering environmental stewardship. The authors conclude that guided tours are an effective tool for zoos to strengthen conservation messages, recommending their integration into standard educational programming to maximize visitor impact and promote pro-conservation behaviours.

Titilayo O. Olukole. (2009). The integration of GIS databases to facilitate wildlife-based tourism at University of Ibadan Zoo, Nigeria is discussed in this study. Spatial analysis and visitors' surveys identify operational inefficiencies as well as opportunities for the optimization of resources. Conclusions thereby demonstrate facility planning, visitor management, and conservation efforts improved through the use of GIS technology. With the study, therefore,

GIS adoption is seen as key to improving general management and sustainability of zoos, supporting the conservation hub and tourist attraction functions. The overall recommendation is to continue investing in GIS training and technology to further offer long-term benefits for wildlife tourism.

Greenwell et al (2023). This study examines whether zoo animals serve as effective conservation ambassadors without compromising welfare. Using behavioural observations and visitor surveys, the authors find that ambassador animals positively influence visitor attitudes but may face welfare challenges. The study concludes that zoos must balance educational goals with stringent welfare measures to ensure ethical practices.

Spooner et al (2021). This study investigates whether zoo animals serve as effective conservation ambassadors and the potential welfare costs involved. Behavioural observations of ambassador animals and visitor surveys reveal that such programs significantly increase visitor awareness of conservation issues. However, the study highlights welfare concerns for the animals, such as stress from frequent interactions. The authors recommend implementing welfare safeguards, including species-appropriate training and enrichment. The study concludes that while ambassador programs are valuable educational tools, zoos must prioritize animal welfare to balance ethical concerns with conservation education goals.

Susan Clayton et al (2011). This study examines the role of zoos in fostering environmental identity and promoting conservation behaviour among visitors. Using psychological assessments and post-visit surveys, the research identifies a positive correlation between zoo visits and increased environmental awareness. Findings suggest that interactive and immersive experiences, such as animal encounters and conservation talks, enhance visitors' connection to nature. The study concludes that zoos play a critical role in shaping environmental identities, advocating for expanded educational programs and more engaging visitor experiences to maximize conservation impact and promote sustainable behaviours.

Williams et al (2021). This longitudinal study examines the effects of COVID-19-related declines in zoo visitor ship on zoo animal behaviour. Drawing on species-specific observations, the research documents decrease in stress-related behaviours such as vigilance and aggression through comparative analyses during lockdown and control periods. It points out the critical role interactions with visitors seem to have for animals' welfare and which species benefit from reduced crowding. The study concludes that zoos need to review their visitor management strategies post-pandemic to balance public engagement with animal welfare. Visitor-free days could be introduced, along with quieter zones, for those species particularly disturbed by human

disturbances.

R. Ballantyne et al (2007). This study explores conservation learning in wildlife tourism settings, with a focus on zoos and aquariums. Using visitor surveys and program evaluations, the authors analyse the effectiveness of educational initiatives in promoting conservation behaviours. Findings suggest that interactive experiences, such as behind-the-scenes tours and keeper talks, significantly enhance visitor understanding of biodiversity issues. The study concludes that zoos must adopt innovative educational strategies to foster long-term conservation awareness. Recommendations include integrating multimedia tools and participatory activities to create impactful learning experiences and support zoos' broader conservation missions.

Alba et al (2023). This study investigates how demographic factors such as gender and age influence attitudes toward wildlife and perceptions of zoo animals. Using surveys and controlled visual experiments, the authors find that women and younger visitors demonstrate stronger pro-conservation attitudes. Interestingly, visual context had little impact on these attitudes. The study concludes that zoos should tailor educational and engagement strategies to different demographic groups to maximize conservation advocacy. The authors suggest leveraging demographic insights to design targeted outreach campaigns and foster inclusive conservation education that appeals to diverse audiences.

Nygren et al (2017). Zoos nowadays often claim that their main objective is nature conservation and that they strive to educate visitors on this subject. A considerable amount of research has been undertaken on conservation education in zoos. This overview performs a qualitative meta-analysis of the methodology, concepts and results of research articles on zoo visitors, particularly regarding learning, education and conservation. Our main finding is that most of the research uses quantitative methodologies and the qualitative, lived experiences of zoo visits remain under-researched. Based on the articles analysed, "nature conservation" (the substance of conservation education in zoos) becomes implicitly defined as captive breeding and far-off conservation projects, distancing the visitors and their daily lives from nature and issues of conservation.

(C) Methodology

This study deals with empirical research. This is a non-doctrinal study. This paper depends on both primary and secondary sources. Convenient Sampling method is used to collect the primary Information from the respondents. A convenient sample of 211 samples has been collected from survey analysis from the study area. The sample frame taken here is at Saveetha

School of Law, Poonamallee High Road, Chennai - 77. The secondary sources are collected from various sources like books, journals, articles, e-sources. The researcher has also utilised commentaries, books, articles, notes and other writings to incorporate the various views of the multitude of jurists, with the intention of presenting a holistic view. The current paper uses SPSS analysis and uses various kinds of complex statistical data analysis. The method of collecting data is through an in-person survey method by getting the people's opinions on the questionnaire. The Chi Square Test is applied for hypothesis testing.

(D) Hypothesis

1. **H1:** There is a relationship between parameters of Age and their responses on the question of the entertainment value of animals performing in shows at Chennai Zoos

H0: There is no relationship between parameters of Age and their responses on the question of the entertainment value of animals performing in shows at Chennai Zoos (**Figure 13**)

2. **H1:** There is a relationship between Educational Qualifications and their responses on the question of do you believe animals have rights

H0: There is no relationship between Educational Qualifications and their responses on the question of do you believe animals have rights (**Figure 14**)

3. **H1:** There is a relationship between Monthly Income and their responses on the question of the living conditions of animals in zoos

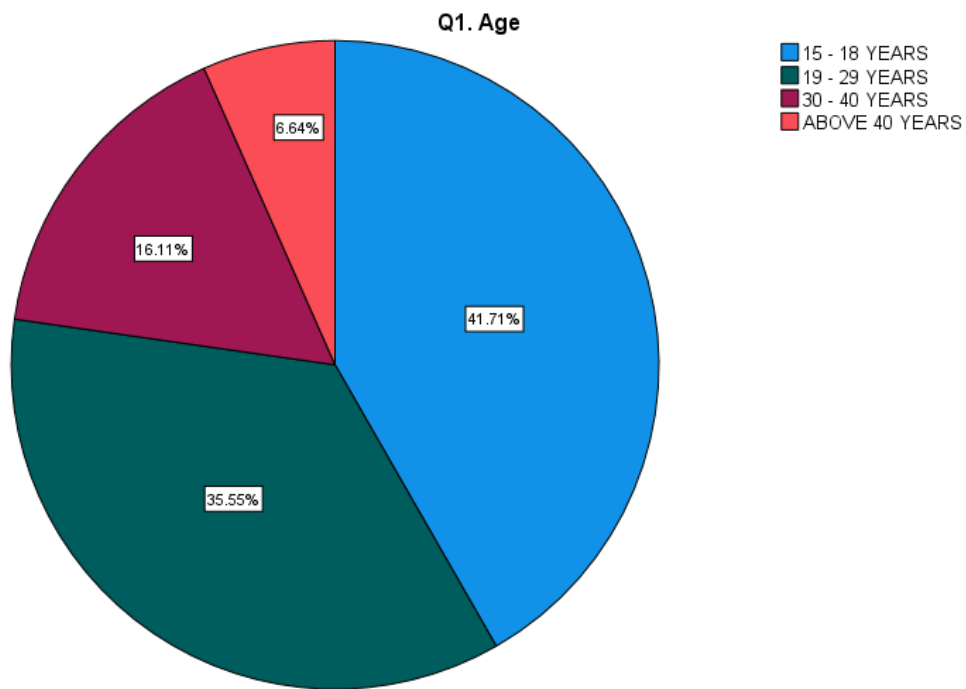
H0: There is no relationship between Monthly Income and their responses on the question of the living conditions of animals in zoos (**Figure 15**)

4. **H1:** There is a relationship between Educational Qualifications and their responses on the question of rating the scale on the concept of zoos should be reconsidered altogether

H0: There is a relationship between Educational Qualifications and their responses on the question of rating the scale on the concept of zoos should be reconsidered altogether (**Figure 16**)

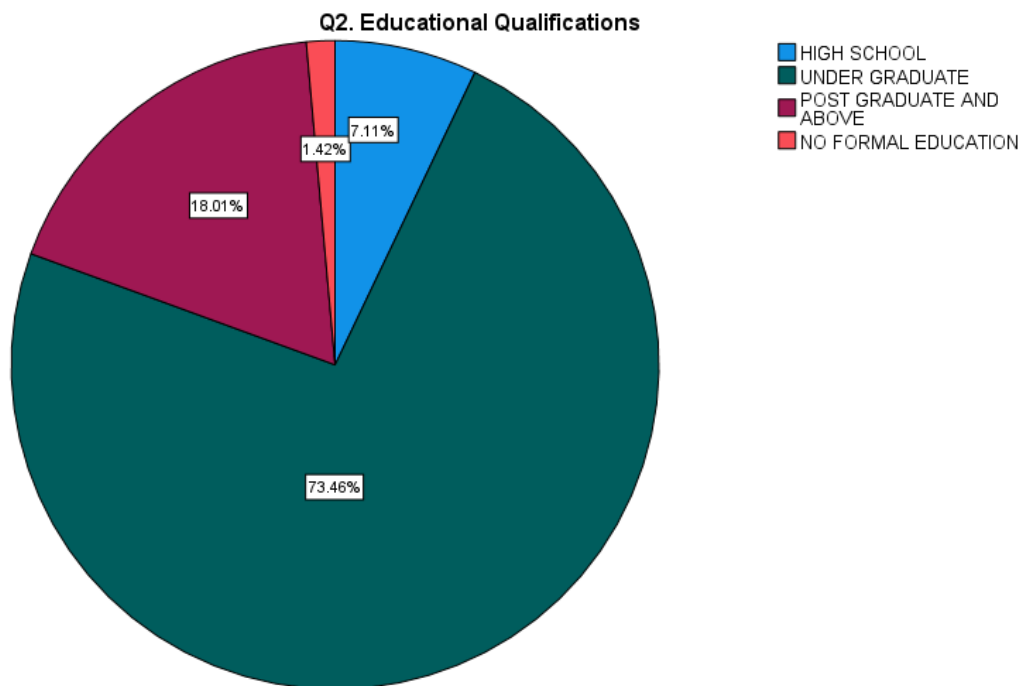
V. ANALYSIS

FIGURE 1



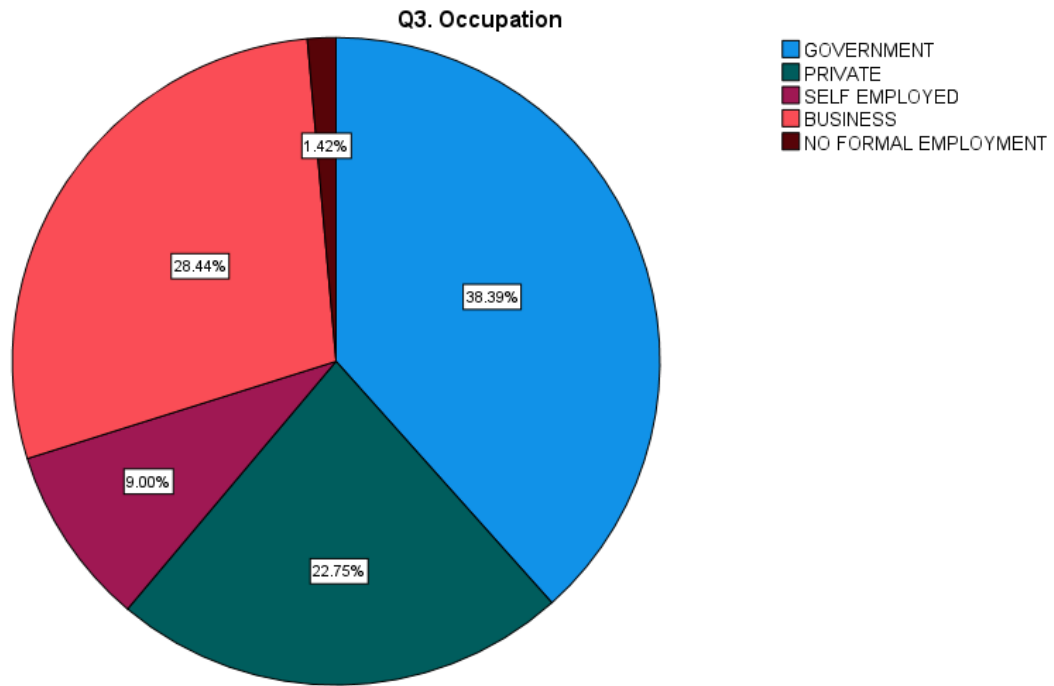
LEGEND: The above figure shows the Pie Chart on the Age Groups of the Respondents

FIGURE 2



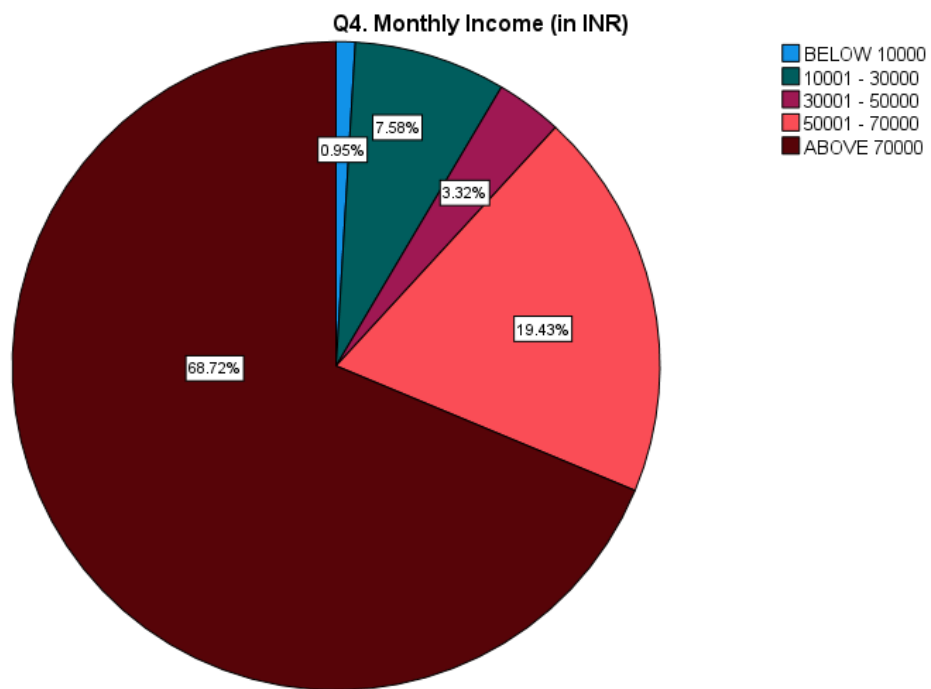
LEGEND: The above figure shows the Pie Chart on the Educational Qualifications of the Respondents

FIGURE 3



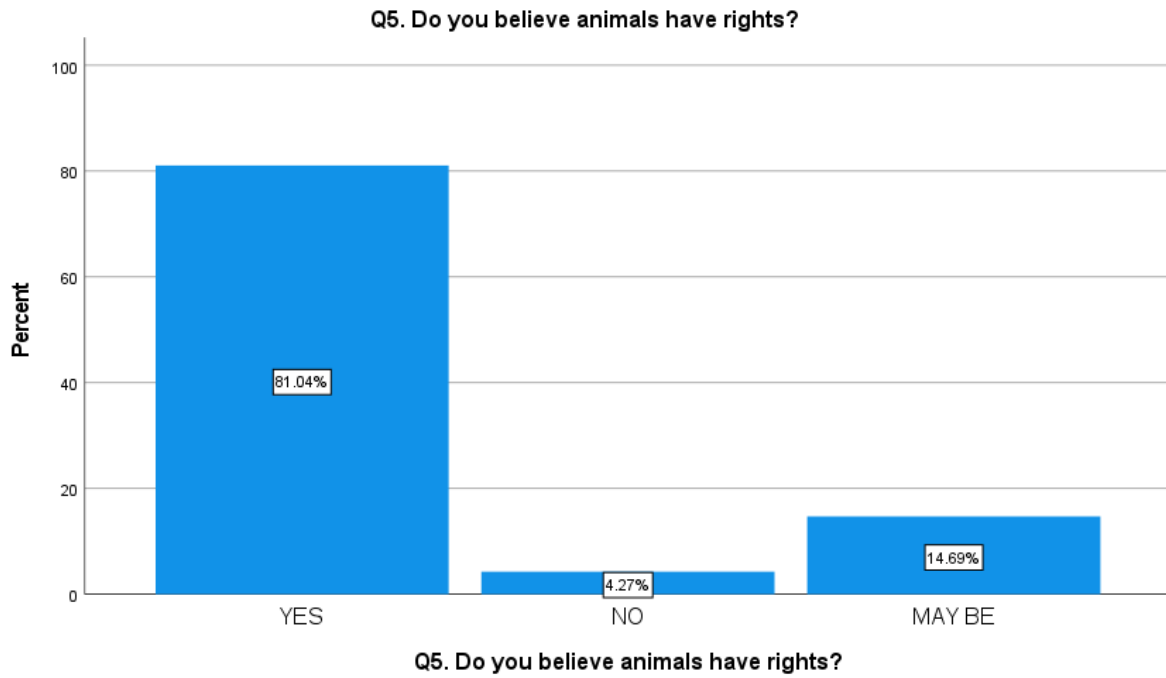
LEGEND: The above figure shows the Pie Chart on the Occupation of the Respondents

FIGURE 4



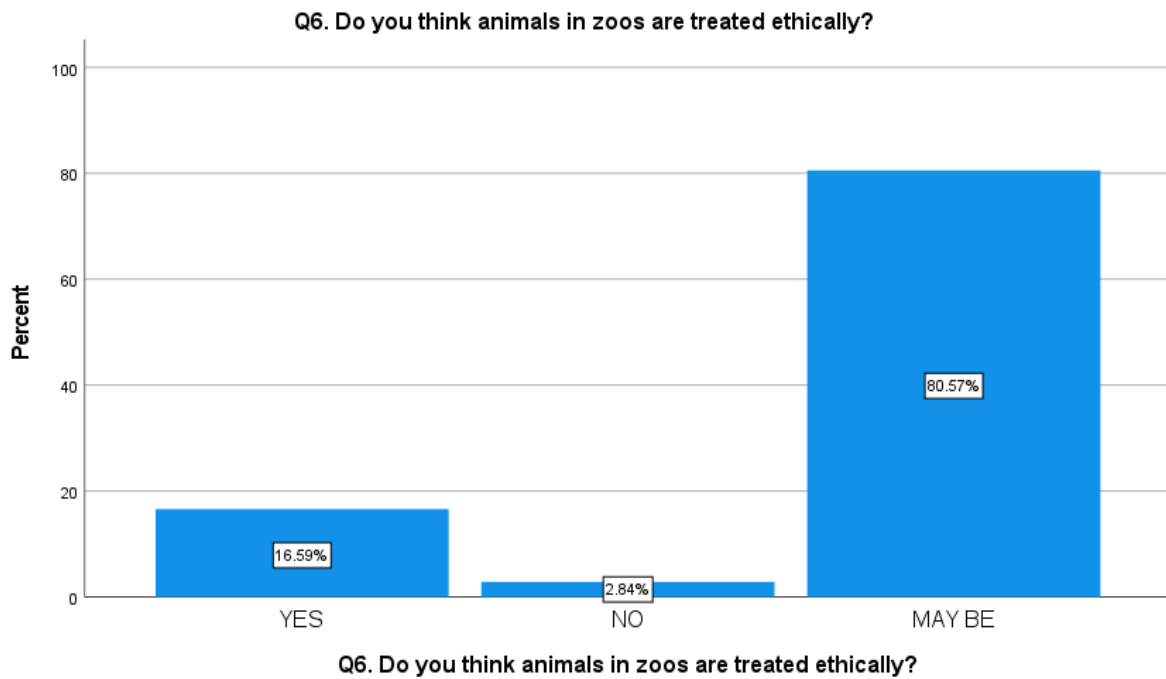
LEGEND: The above figure shows the Pie Chart on the Monthly Income of the Respondents

FIGURE 5



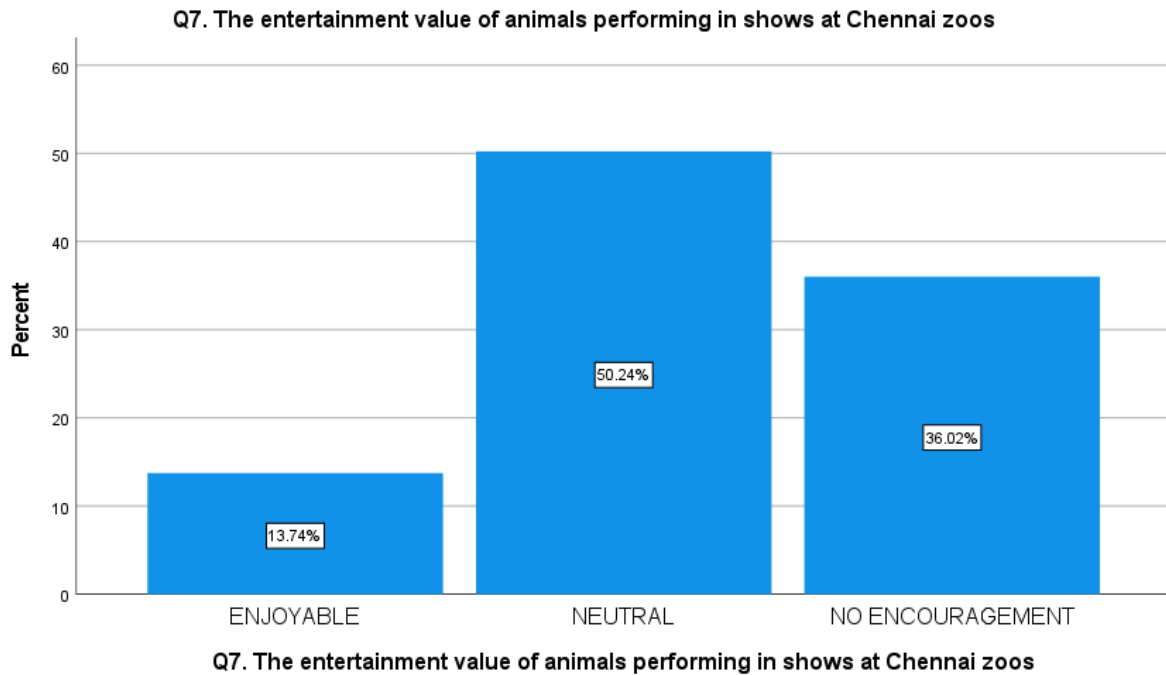
LEGEND: The above figure shows the Bar Chart on the public responses on the question of do you believe animals have rights

FIGURE 6



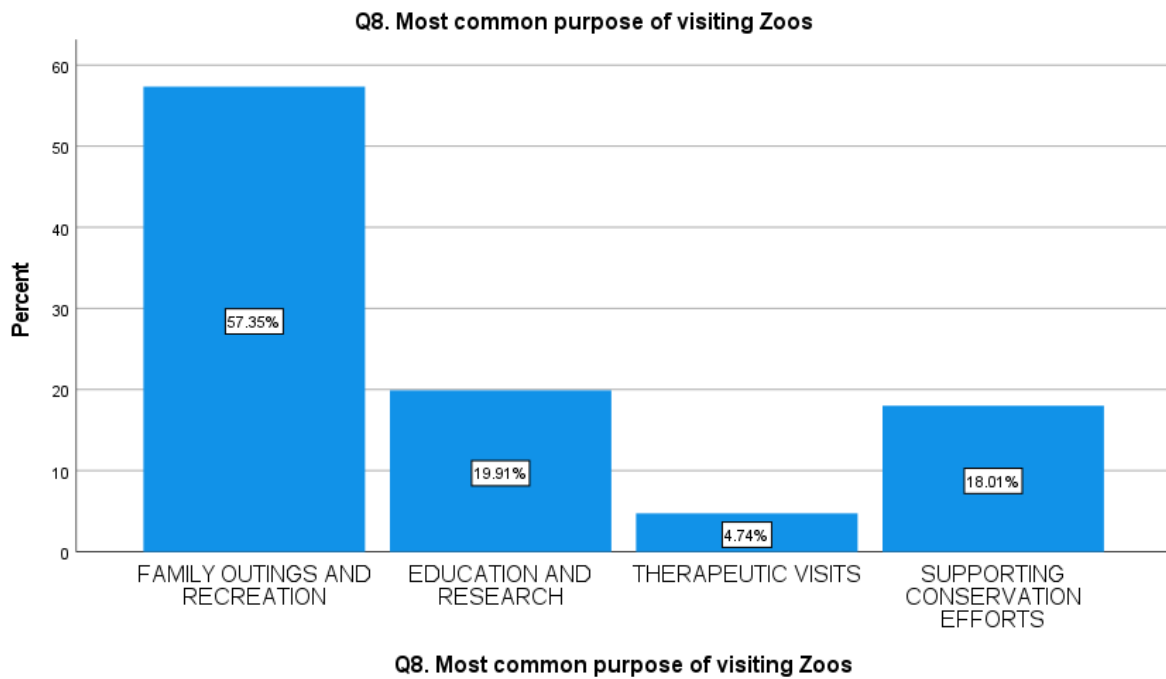
LEGEND: The above figure shows the Bar Chart on the public responses on the question of do you think animals in zoos are treated ethically

FIGURE 7



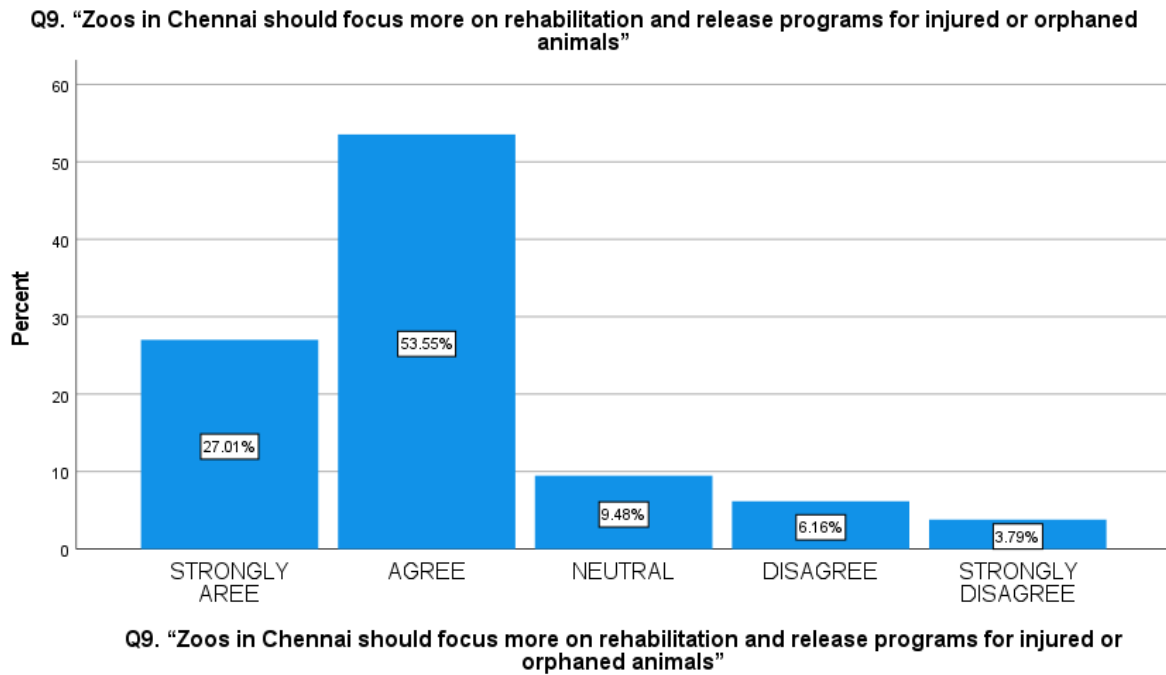
LEGEND: The above figure shows the Bar Chart on the public responses on the question of the entertainment value of animals performing in shows at Chennai Zoos

FIGURE 8



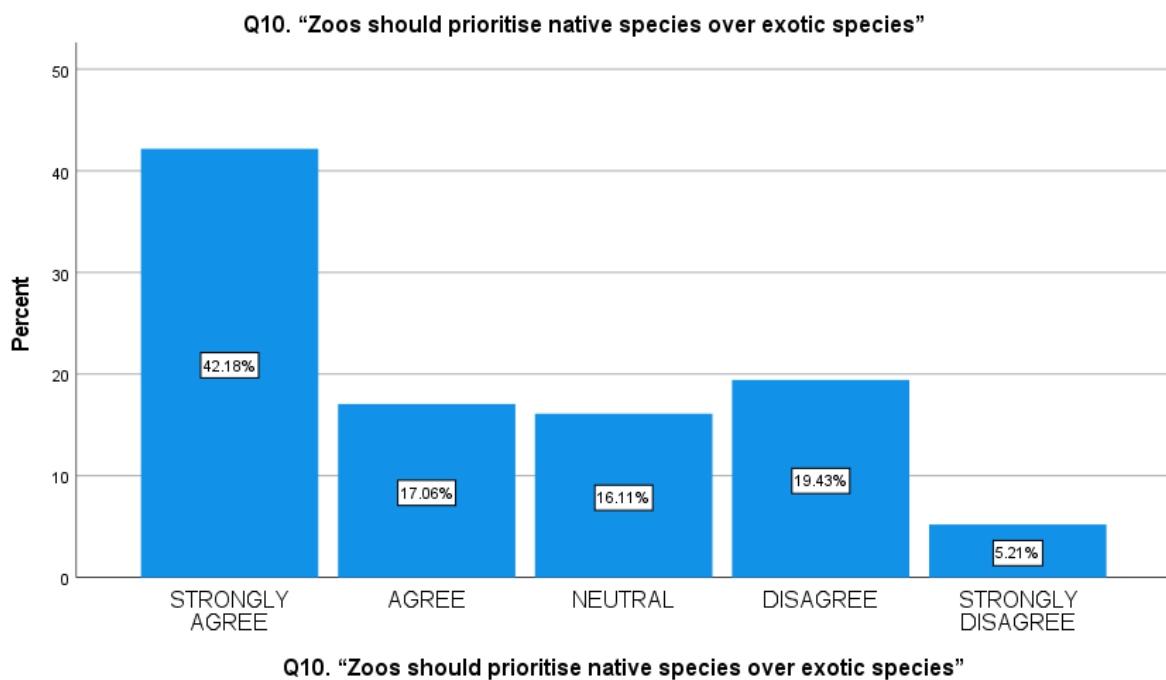
LEGEND: The above figure shows the Bar Chart on the public responses on the question of most common purpose of visiting zoos

FIGURE 9



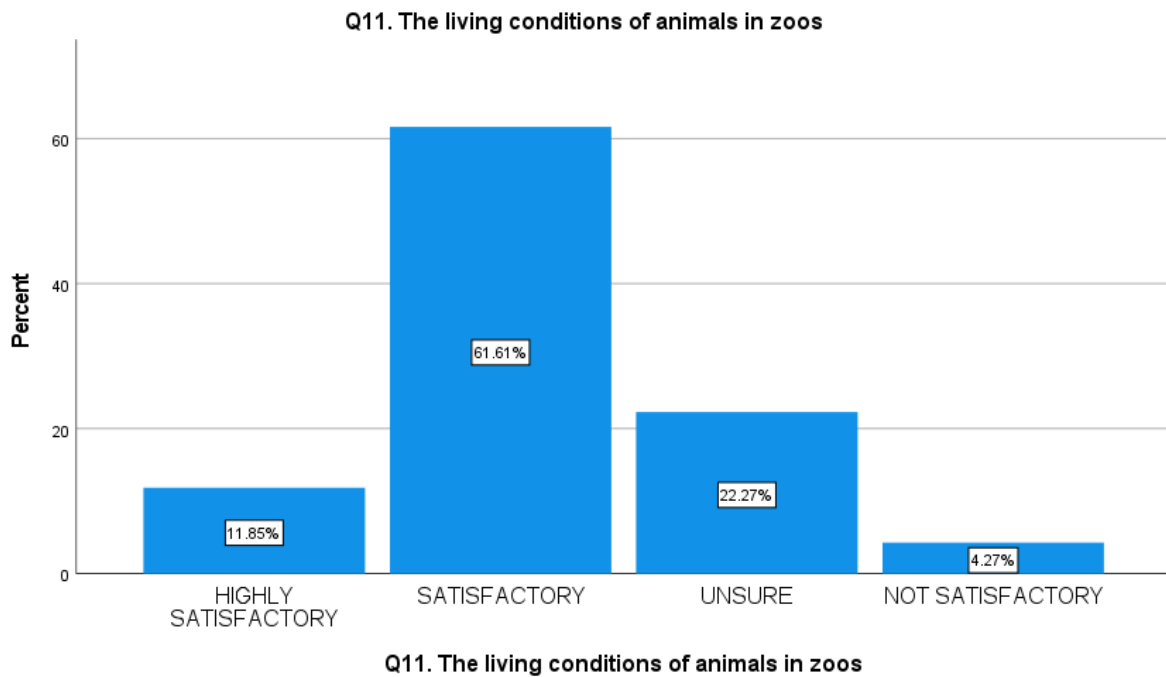
LEGEND: The above figure shows the Bar Chart on the public responses on the question of agreeability on the zoos in Chennai should focus more on rehabilitation and release programs for injured and orphaned animals

FIGURE 10



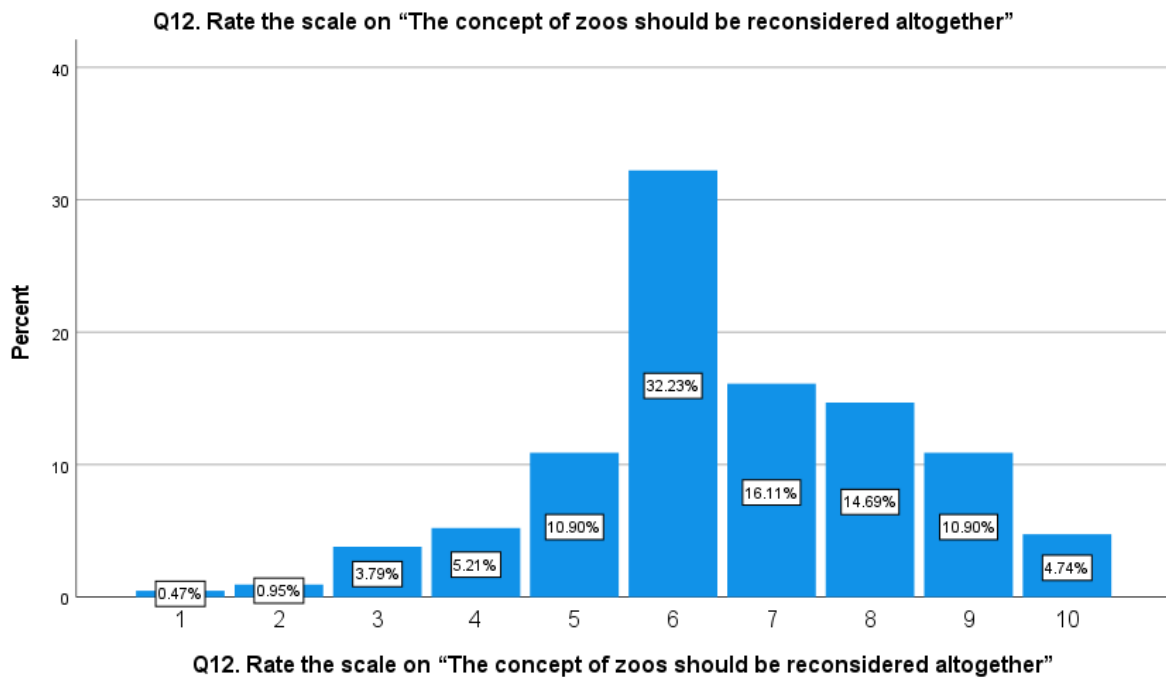
LEGEND: The above figure shows the Bar Chart on the public responses on the question of agreeability on zoos should prioritise native species over exotic species

FIGURE 11



LEGEND: The above figure shows the Bar Chart on the public responses on the question of the living conditions of animals in zoos

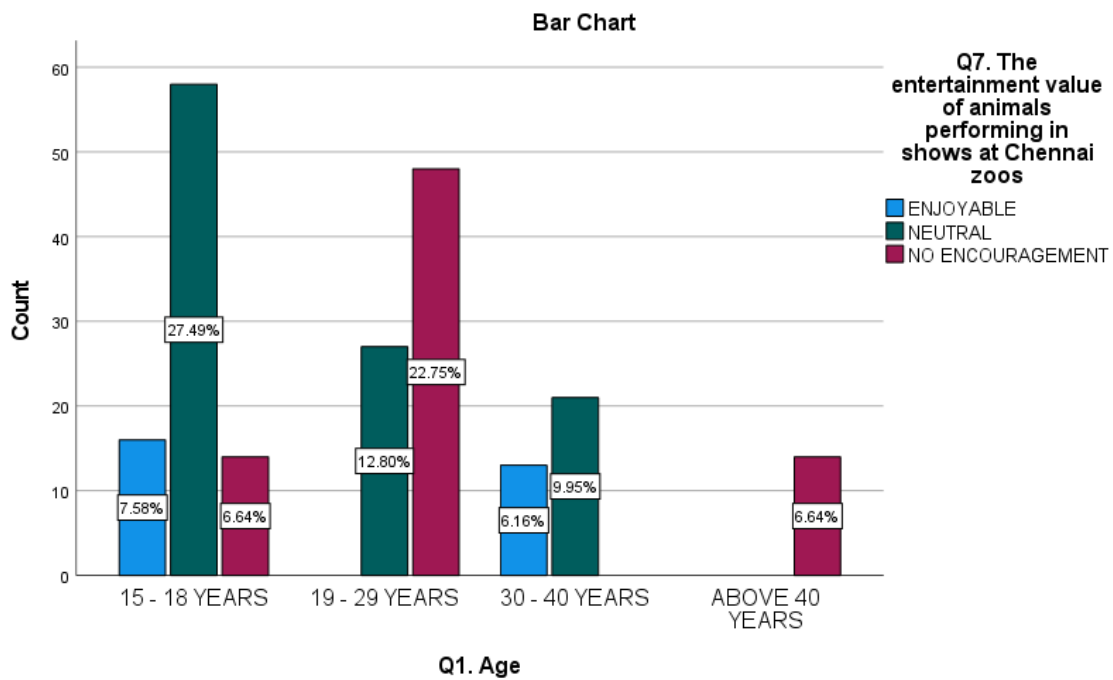
FIGURE 12



LEGEND: The above figure shows the Bar Chart on the public responses on the question of rating the scale on the concept of zoos should be reconsidered altogether

VI. CHI SQUARE TESTS

FIGURE 13



LEGEND: The above figure shows the Cluster Bar Chart on the relationship between the parameter of Age and their responses on the question of the entertainment value of animals performing in shows at Chennai Zoos

TABLE 1

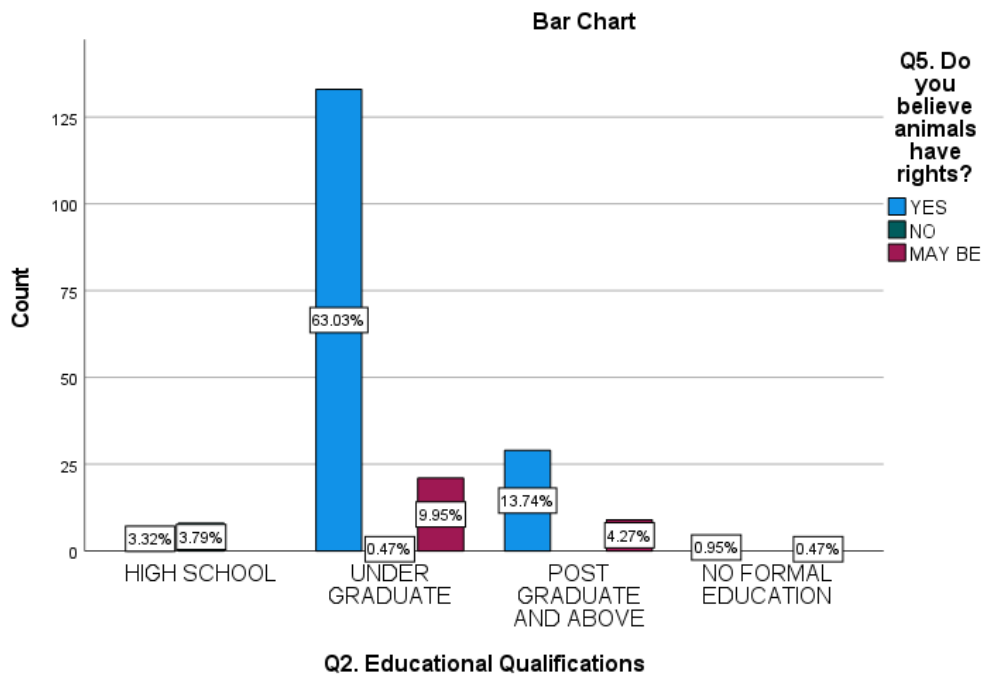
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	97.933 ^a	6	<.001
Likelihood Ratio	118.630	6	<.001
Linear-by-Linear Association	6.602	1	.010
N of Valid Cases	211		

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

INFERENCES:

There is a relationship between parameters of Age and their responses on the question of the entertainment value of animals performing in shows at Chennai Zoos. **PValue:** <0.001. Hence, Alternate Hypothesis is ACCEPTED

FIGURE 14



LEGEND: The above figure shows the Cluster Bar Chart on the relationship between the parameter of Educational Qualifications and their responses on the question of do you believe animals have rights

TABLE 2

Chi-Square Tests

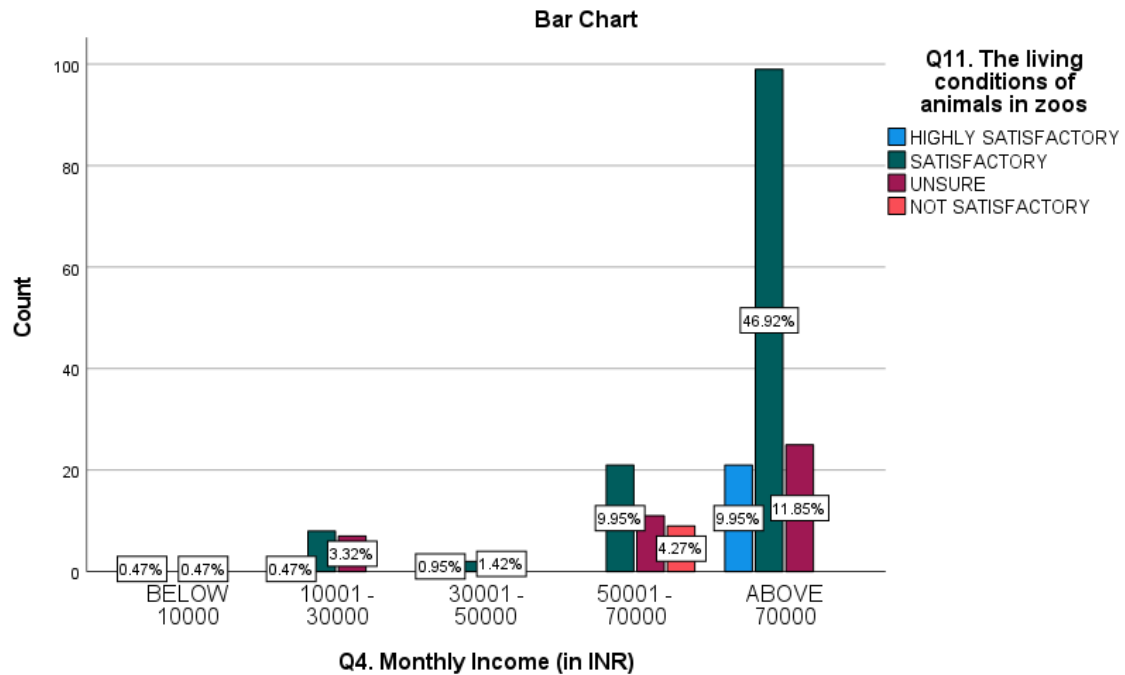
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	99.126 ^a	6	<.001
Likelihood Ratio	46.669	6	<.001
Linear-by-Linear Association	.568	1	.451
N of Valid Cases	211		

a. 6 cells (50.0%) have expected count less than 5. The minimum expected count is .13.

INFERENCES:

There is a relationship between Educational Qualifications and their responses on the question of do you believe animals have rights. **PValue:** <0.001. Hence, Alternate Hypothesis is ACCEPTED

FIGURE 15



LEGEND: The above figure shows the Cluster Bar Chart on the relationship between the parameter of Monthly Income and their responses on the question of the living conditions of animals in zoos

TABLE 3

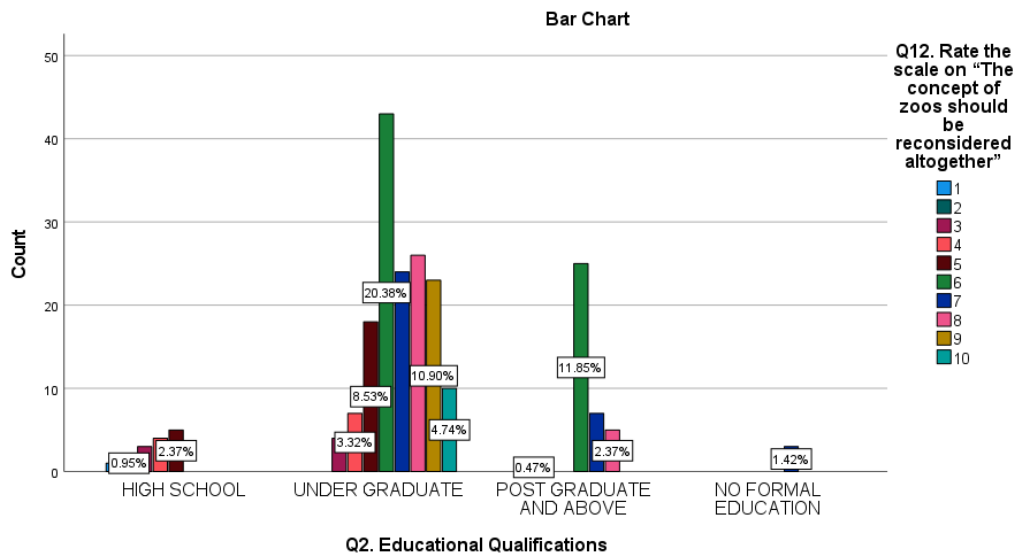
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	59.508 ^a	12	<.001
Likelihood Ratio	55.485	12	<.001
Linear-by-Linear Association	8.759	1	.003
N of Valid Cases	211		

a. 13 cells (65.0%) have expected count less than 5. The minimum expected count is .09.

INFERENCES:

There is a relationship between Monthly Income and their responses on the question of the living conditions of animals in zoos. **PValue:** <0.001. Hence, Alternate Hypothesis is ACCEPTED

FIGURE 16



LEGEND: The above figure shows the Cluster Bar Chart on the relationship between the parameter of Educational Qualifications and their responses on the question of rating the scale on the concept of zoos should be reconsidered altogether

TABLE 4

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	128.250 ^a	27	<.001
Likelihood Ratio	106.389	27	<.001
Linear-by-Linear Association	7.693	1	.006
N of Valid Cases	211		

a. 29 cells (72.5%) have expected count less than 5. The minimum expected count is .01.

INFERENCES:

There is a relationship between Educational Qualifications and their responses on the question of rating the scale on the concept of zoos should be reconsidered altogether. **PValue:** <0.001. Hence, Alternate Hypothesis is ACCEPTED

VII. RESULTS AND DISCUSSION

Animal behaviours, especially that of mammals and birds, are manifestations that could indicate the presence of pain, pleasure, and all emotions, thus their rights must be ethically considered. Utilitarianism, deontology, and virtue ethics outline the compassionate and equitable treatment

of all creatures with sentiment. Many cultures and religions also spell out the intrinsic value of the animals and, by so doing, promote their welfare. Animals' recognition of rights can result in practical benefits including enhanced public health, food safety, as well as sustainable practices. This increasing consciousness is central to the ongoing international debate about which animals are treated ethically or otherwise, mainly within some form of captivity. **(Figure 5)**

Zoos are regarded as centres for education and conservation as they allow people to learn about wildlife and their welfare. Among regular demonstrations of care given to animals are public feeding times, veterinary demonstrations, and keeper talks. The overt activities of zoos could lead to having a good feeling about animal welfare. However, most visitors are unaware of the real behind-the-scenes welfare problems of animals. The role of zoos is still believed to be stewardship for extinct species and wild education. However, the concern about the ethics of keeping animals' captive and in training is growing. **(Figure 6)**

Animal welfare awareness raises concerns regarding the ethics of using animals in zoos as entertainment. Some see the educational benefits of animal shows, but others call it unnecessary and even unethical to train animals for purposes of entertainment. The possible stress and unnatural activities would gather heat in discussions on the balance between educational and entertaining content. Visitors are becoming increasingly aware of the welfare implications of using animals for human entertainment. As a result, zoos need to re-evaluate their programming in light of alternative means of public education that are less detrimental to the animal. **(Figure 7)**

A zoo is a family-friendly environment where people of all ages can spend quality time together, partake in outdoor recreation, and create lifetime memories. Many visitors view zoos as recreational sites where they can see a diverse range of animals, touch exhibits, and attend educational programs and shows. Going to the zoo is often one of the earliest memories of many people's lives, and these individuals take joy in reliving that experience with their children as a way of continuing the family tradition of zoo outings. Zoos provide the opportunity for families to take in natural, outdoor activities, such as walking, exploring, and having picnics, in a clean and safe environment. Unlike other recreation, zoos tend to be relatively affordable with admission and often offer reasonable family pricing, thus making it accessible to different socio-economic groups. **(Figure 8)**

As a matter of ethical importance, many regard it as the moral duty to care for and help injured and orphaned animals due to some human activities. Restoration and return to their natural habitat also embody principles of stewardship and compassion. Therefore, zoos must cherish

every animal's welfare in their care. Rehabilitation of injured or orphaned animals and enabling them to return to natural habitats allows them to live well and, in their surroundings, where they may be able to exhibit their natural behaviour and contribute to the health of their species. Rehabilitation and release programs are also good sources of education for visitors concerning wildlife conservation, animal behaviour, and the interconnectedness of ecosystems. These programs can be a way for zoos to involve the public and promote the concept of protecting natural habitats and mitigating human/wildlife conflicts. Zoos might have legal and moral duties, whether under wildlife protection laws or international conservation agreements, to rehabilitate and release animals. **(Figure 9)**

Native species are more directly attached to local ecosystems and face a greater risk of extinction due to habitat loss, climate change, and other human-induced factors. Nevertheless, prioritizing native species in the context of zoos can be a contributory factor in many conservation efforts made toward protecting and restoring the local biodiversity. Native species often are culturally and ecologically important in their native habitats. Native species play a very important role in maintaining ecosystem balance and function. The reintroduction of native species into their habitat ensures a better and greater chance to survive than exotic species. The reintroduction of native species into the wild is one of the important contributions of zoos toward the survival of native species. It may also be based on a notion of more effective resource usage, where conservation efforts can be focused on species that are in the utmost need of protection within the local context. **(Figure 10)**

Many people do not have vast exposure to the animals' natural habitats or to wildlife sanctuaries where animals have more space and freedom. Zoos do not take a small fortune to make sure that the enclosure they use is aesthetically pleasing and mimics some features of the natural habitats of the animals. Once they see aesthetically acceptable spaces, people accept these for the animals in zoos. The exhibits are usually labelled with educational signs that explain how the enclosure meets the needs of the animals. Animals in the zoo come to adapt to the enclosed habitats and sometimes display behaviours not observed in the wild. Many visitors would not realize the very sophisticated requirements of wild animals and how their imprisonment impacts their physical as well as mental well-being. People tend to translate information in a way that enables them to realize what they already think or feel about something. **(Figure 11)**

Many people have ethical objections to the reasons for which humans cage animals for entertaining and educational purposes. They would ask if keeping animals behind bars for the amusement purposes of people is ethically justified. Some would challenge whether zoos are an effective means for conservation. Such money spent for running zoos would otherwise be

useful in directly conserving real habitats or being proactive in the preservation of endangered species in their natural habitats and supporting community-based conservation efforts. Alternative forms like wildlife sanctuaries, rehabilitation centres, and even virtual zoos, would raise questions regarding the need and relevancy of the traditional zoo for the present world. While historically, zoos have been regarded as education centres, very few people would argue that an alternative is more effective in education through nature documentaries, wildlife tourism, and interactive media and has a similar teaching effect without carrying the ethical drawbacks of zoos. **(Figure 12)**

(A) Limitations

The limitation of this study is that it is one-time research conducted over a short period. Another limitation is that the research data collected was from a small size population of 211 samples. This research on the interference of animal rights due to caging in zoos, with a focus on Chennai, has several limitations. It primarily concentrates on Chennai's zoos, potentially overlooking broader practices in other regions. Data availability is another constraint, as the study relies on publicly available information and secondary sources, limiting firsthand insights. Variations in cultural, social, and ethical perspectives across different contexts could affect the generalizability of the findings. Additionally, the dynamic nature of animal welfare laws may impact the study's relevance over time. Finally, direct access to zoo operations and behind-the-scenes data is restricted, hindering deeper analysis. However, the responses were collected from people who have a good awareness of this matter.

VIII. CONCLUSION

The primary aim of this research was to critically examine the interference of animal rights due to caging in zoos, with special reference to Chennai. This study sought to understand the ethical, legal, and social implications of keeping animals in captivity, focusing on welfare concerns, governmental policies, and public perceptions. Key findings from the research indicate that zoos in Chennai, like many others worldwide, have evolved from merely entertainment-focused institutions to active participants in conservation efforts. However, despite improvements in animal care and educational programs, significant ethical concerns persist regarding the emotional and physical well-being of animals in captivity. Public awareness of these issues has grown, with debates about the moral justification of keeping animals confined for human benefit gaining traction. Furthermore, while legislation like the Wildlife Protection Act and various welfare organizations have made strides in addressing these concerns, the effectiveness of these measures remains a subject of ongoing debate. The research questions posed—how animal

rights are affected by caging, and the role of zoos in animal conservation and welfare—have been addressed through analysis of legal frameworks, ethical perspectives, and case studies from Chennai. The study demonstrates that while zoos play a critical role in conservation, their methods of animal care are often influenced more by public perception and tourist expectations than by the well-being of the animals themselves. The findings of this research hold significant implications for both policymakers and animal welfare advocates. It calls for stronger regulations and better enforcement of animal welfare standards in zoos, alongside a re-evaluation of the educational and conservation roles of these institutions. Further research should focus on the impact of public perceptions of animal rights on zoo management practices and explore alternatives to traditional zoos, such as sanctuaries and virtual experiences. Despite some limitations, such as restricted access to zoo operations and a narrow geographical focus, this research contributes to a deeper understanding of the complex intersection between animal rights, conservation, and public education. Future research should aim to further explore the evolving ethical frameworks surrounding zoos, ensuring that animals' rights are better respected and upheld. Ultimately, a more compassionate and scientifically informed approach to zoo management could create a future where both animals and humans coexist more harmoniously.

IX. REFERENCES

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