

University Students' Attitudes Towards Animal Welfare in Duhok Zoo

Ronak A. Meshabaz¹, Nizar J. Hussein², Assel. A. I. Al-nakshabandi³, Hawar M. Zebari⁴ and Nareen. S. A. Ali¹

¹Department of Environmental Sciences, Faculty of Sciences, University of Zakho, Kurdistan Region of Iraq.
ronak.meshabaz@uoz.edu.krd

²Department of Environmental Sciences, Faculty of Sciences, University of Zakho, Kurdistan Region of Iraq.
nizar.hussein@uoz.edu.krd

³Department of Medicine and Surgery, College of Veterinary Medicine, University of Duhok, Kurdistan Region of Iraq.
assel.anwer@uod.ac

⁴Department of Animal Production, College of Agricultural Engineering Sciences, University of Duhok, – Duhok, - Kurdistan Region, Iraq. hawar.mikahil@uod.ac

Abstract

Here in Kurdistan Region of Iraq, particularly in Duhok zoo, animal welfare is mostly neglected. Animals are not treated normally. As far as the author is aware, there is no study undertaken to understand the students or public attitudes toward animals in Duhok zoo. Therefore, the purpose of this study was to investigate the attitudes of the students of the University of Zakho, Faculty of Sciences, Departments of Environmental Sciences, and Biology about animal welfare concerns of Duhok Zoo. The study was undertaken at University of Zakho, Faculty of Sciences. Two hundred questionnaires were divided into the students of both Environmental Sciences and Biology Departments. The questionnaire comprised of 15 questions with 3 sections, which were: first, students identification including name, age, and sex. Second, information on animal welfare, and the last one was recording their opinions on the questionnaire. With each question, students had chosen one of the following opinions: Completely Disagree, Somewhat Disagree, Neither Disagree nor Agree, Somewhat Agree, and Completely Agree. All participants agreed to answer the questionnaire voluntarily. Results revealed that most of the students were of opinion that Duhok zoo should be improved; in addition, most of them were entirely or somewhat disagreed that Duhok zoo is acceptable in general. They had an agreement with the idea that there should be educational programs inside the zoo, and in addition, the zoo does not cover environmental needs for the most, if not all, captive animals. Students were also agreed that there should be conservation programs to conserve captive animals, especially endangered and rare species. However, almost all of the students did not want the zoo to be closed entirely. According to the findings of the students' attitudes obtained, it can be concluded that the zoological park of Duhok city has many shortages regarding the welfare of animals in dealing with their captive animals.

Keywords: Animal, Welfare, Zoo, Attitudes, Questionnaire

Received: June 26 2020 / Accepted: August 21 2020 / Online: September 15 2020

I. INTRODUCTION

A zoo, which is shortened from the zoological parks, can simply be defined as a place where wild animals live in captivity and are placed on display for zoo visitors to view [1, 2]. Similarly, zoos are public parks in which display animals mainly for the reasons of education or regenerations. The modern zoos were first established in Paris, Madrid, and Vienna in the 18th century and in Berlin and London in the 19th. In the 1870s, the first zoos of the United States of America were founded in Cincinnati and Philadelphia [3]. Nowadays, zoos are recognized as sites of entertainment, conservation, education, and research [4]. In the meantime, due to the estimations of the World Organization of Zoo, there are about 10,000 zoological parks and more than 250,000 animals kept in zoos worldwide [5]. In addition, there are about 620 million zoo visitors every year [6, 7]. Zoos and sanctuaries are mainly used for the protection and

conservation of animals brought from the wild into captivity so as to be similar to their natural environment [8, 7]; although, many people are not in the belief that the animals' captivity for the sake of their protection and conservation [9].

Studies of captive animals have a very long history; in which over before 2300 years, Aristotle, who was the Greek philosopher, wrote his History of Animals, includes the mating in camels as well as training of elephants. The first zoological park made for scientific purposes was in London named the Regent's Park Zoo, and now called ZSL London Zoo [10]. There is, in recent years, a growing interest in studying the welfare of animals of zoological parks [10].

The attitudes of the public are of major importance and of primary concern regarding animal welfare in zoological parks, and thus, any improvement in animal welfare science must be in the coordination with the values and attitudes of the public [11]. The public attitudes toward captive animals differ depending on the characteristics and nature of the animals' concerned [12, 13, 14, 15, 16]. Likewise, cultural, socioeconomic, and religious differences have a crucial role in affecting public's attitudes toward captive animals [17, 7]. There has been much research to comprehend public attitudes toward wild animals' conservation [18, 19]. On the contrary, there is a limited number of research concerning attitudes toward wild animals in captivity, and their management and conservation concern is limited. Little research has been undertaken to assess the public attitudes toward animals in developing countries such as in Iraq, particularly the Northern part of it, which is the Kurdistan Region. Most of the similar studies have been conducted in developed, mainly western countries [7].

Most of the studies that are related to the attitudes are mostly targeting students. These studies have discovered that educated people (students) are more concerned about the welfare of animals than those that have lower education levels [20, 2]. That is the reason for choosing educated people in the present study. Here in Kurdistan Region of Iraq, particularly in Duhok zoo, animal welfare is mostly neglected. Animals are not treated normally. As far as the author is aware, there is no study undertaken to understand the students or public attitudes toward animals in Duhok zoo. Therefore, the purpose of this study was to investigate the attitudes of the students of the University of Zakho, Faculty of Sciences, Departments of Environmental Sciences, and Biology about animal welfare concerns of Duhok Zoo

II. METHODOLOGY

A. Participants and Zoo properties

The participants of the present study were students who are studying at the University of Zakho at Faculty of Sciences – both Environmental Sciences and Biology departments at Zakho city, Duhok Governorate, Kurdistan Region of Iraq. The 200 total participated students of 2017 and 2018 were 137 females and the other 63 males, whereas 100 students in 2019 were 50 females and the other 50 males. Their ages were between 18 and 25 years. The data collection started from November 2017 to October 2019. The properties of the zoological park of Duhok are shown in table I.

TABLE I: SOME FACTS ABOUT DUHOK ZOO WITH DESCRIPTIONS.

Facts	Descriptions
Location	Duhok city in Kurdistan Region of North Iraq
Establishment year	2000
Zoo area	6250 square meters
Animal Number	268
Animal Species	55

B. Questionnaire

A questionnaire was managed with the help of 2 Environmental Sciences and 1 Biology student volunteers from the University of Zakho. All the volunteer students were taught on how to conduct the questionnaire and write responses of the students directly to the questionnaire. The questionnaire comprised of 15 questions with 3 sections which were: first, students identification including name, age and sex. Second, information on animal welfare and the last one was recording their opinions on the questionnaire. With each question students had chosen one of the following opinions: Completely Disagree, Somewhat Disagree, Neither Disagree nor Agree, Somewhat Agree and Completely Agree. A total of 300 printed questionnaires were distributed to the students (200 students of 2017, 2018 and 100 students 2019) and thus, their attitudes were recorded. All of the participated students were asked whether they want to be participated before recording their answers. Therefore, all participants agreed to answer the questionnaire voluntarily.

C. Data Analysis

All the recorded data were projected to Microsoft Excel Worksheet so as to be analyzed. All data were then spread to the Past3 Software Program (Paleontological Statistics, Version 3.08) to be analyzed (Folk.uio.no, 2019) to be analyzed. Tables were prepared in Microsoft Excel sheets.

III. RESULTS AND DISCUSSIONS

Attitudes of the total 300 students of the Environmental Sciences Department and Biology Department of Faculty of Sciences at the University of Zakho were collected. Their attitudes for all 15 questions on the questionnaire were illustrated at percentages in Tables II and III. Most of the students were completely or somewhat disagreed about that Duhok zoo is acceptable; however, some of the 2019 students (17%) somewhat agreed that it is an acceptable zoo. In addition, 81.3% for 2017- 2018 and 80% of 2019 students completely agreed about the idea that the zoo should be improved. Most of the students (about 83% for all 300 students) agreed that there should be education programs in the zoo and no one completely disagreed about that. In addition, most of them were of the opinion that there should be conservation programs and the zoo does not cover animals' environmental needs. However, 1 – 3% was about the idea that animals are happy in their cages inside the zoo, most of students agreed that animals are not contented. In addition to all opinions, students do not want the Duhok zoo to be closed entirely, although 11.5% of 2017 – 2018 and 14% of 2019 students agreed. Furthermore, students were of the opinion that animals feel hunger at the zoo. These attitudes of the university students obtain that there are shortages in Duhok zoo.

The presence of zoological parks with their respectable purposes include science, recreation, conservation, education and entertainment, can be justified ethically when there is a guarantee from zoos regarding their animals' welfare, including the behavior of their captive animals [21, 4]. Most, not all, of the

research undertaken at zoos is concerned with behavior [10]. It is not simple to compare the behaviors of animals in the wild with zoos and recognize which one is similar in both cases. Previously, many behaviors of animals were reported at zoos as unnatural; however, they were natural in the wild after they were seen in the wild such as cannibalism and eating their feces [21]. When studying the behavior of captive animals, four major questions were outlined over 5 decades (4 whys), which are: causation, development, function and evolution of particular behaviors, particularly stereotypic ones [22, 10]. According to the participants of this study, animals do not express their normal behavior as in the wild; they rather express stereotypic behaviors like circling and pacing, especially in wolves, dogs, and tigers. Therefore, as a result of the previous point, people (zoo visitors) do not have any entertainment for watching animals and students were unwilling to pay to the zoo of Duhok city to see animals insulted in cages with depressed facial expressions of animals and incorrect animal feeding strategies and content.

More than 23 – 45% of the students disagreed that animals are fed correctly and 4 – 32.7% agreed. Feeding animals in zoos correctly as they are in nature is crucial for reintroducing programs [23]. Advanced zoos always try to enable their captive animals to have a natural life as similar to the wild as possible by providing them with accurate environments; however, zoos cannot provide them natural environments such as migration and hunting [21]. Conservation and reintroducing programs are one of the zoo purposes.

In spite of zoos' popularity in history, there are recently significant changes made with zoos in both function and structure. Zoos today highlight their involvement to wildlife conservation programs [24, 25]. However, no conservation programs are there in Duhok zoo in which about 77 – 79.8% of the participants were willing the zoos to have programs for conserving captive animals, particularly endangered animals. To do so, there should be reproductive programs so as to increase the population of targeted animal(s), and then animals can even be reintroduced to the wild. Overall, most of the students of all years had about similar ideas on the zoo of the city of Duhok.

IV. CONCLUSION

From the present study, according to the findings of students' attitudes obtained, it can be concluded that the zoological park of Duhok city has many shortages in dealing with their captive animals. Animals do not have an environment that is close to the wild environment. Students were aware of animal welfare concerns in Duhok zoological park. It needs feeding animals as in their nature, especially predator animals such as lion, wolves, and tiger; in addition to that, there should be some programs for educating zoo visitors, conservation as well as entertainment programs such as feeding herbivores by zoo visitors. More research is required to study the behavior and welfare of animals in Duhok zoo. In addition, some studies are required to obtain and measure enclosure use by captive animals.

TABLE II: ILLUSTRATES THE PROPORTIONS OF 200 STUDENTS' ATTITUDES OF 2017 AND 2018 TOWARD THE QUESTIONS IN THE QUESTIONNAIRE.

Questions and ideas	completely disagree	Somewhat disagree	neither agree nor disagree	Somewhat agree	Completely agree
1. Duhok zoo is acceptable in general.	57.7	18.3	15.9	6.2	1.9
2. Animals are abused in Duhok zoo in general.	75.9	6.8	5.7	3.4	8.2
3. Do you agree that the zoo should be improved?	13.9	2.4	1.4	1.0	81.3
4. Do you want Duhok zoo to be closed entirely?	78.8	8.3	0.0	1.4	11.5
5. Animals are fed correctly according to their needs?	46.6	5.3	10.1	5.3	32.7
6. Are animals free of hunger and thirst?	61.1	4.3	16.8	1.4	16.4
7. Are animals free from injuries?	39.9	9.1	0.0	10.1	40.9
8. Are animals free from pain and distress?	57.2	13.0	17.3	5.8	6.7
9. Are animals free from insulting?	45.2	9.6	5.3	6.3	33.6
10. Are animals free to express normal behavior?	67.8	14.0	0.0	11.0	7.2
11. Are animals contented in their small cages?	75.5	15.9	2.4	5.2	1.0
12. Does the zoo cover their environmental needs as they are in nature?	71.2	9.1	13.5	0.9	5.3
13. Animals do not feel fear in captivity.	39.0	17.3	19.7	6.7	17.3
14. There should be conservation programs to conserve animals.	1.9	1.5	1.9	14.9	79.8
15. There should be education programs to deliver extra information to people about zoos.	0.0	1.0	1.4	14.9	82.7

TABLE III. ILLUSTRATES THE PROPORTIONS OF 100 STUDENTS' ATTITUDES OF 2019 TOWARD THE QUESTIONS IN THE QUESTIONNAIRE.

Questions and ideas	completely disagree	Somewhat disagree	neither agree nor disagree	Somewhat agree	Completely agree
1. Duhok zoo is acceptable in general.	31	28	19	17	5
2. Animals are abused in Duhok zoo in general.	20	34	26	13	7
3. Do you agree that the zoo should be improved?	8	1	1	10	80
4. Do you want Duhok zoo to be closed entirely?	62	6	7	11	14
5. Animals are fed correctly according to their needs?	23	34	35	4	4
6. Are animals free of hunger and thirst?	12	34	36	12	6
7. Are animals free from injuries?	12	35	31	15	7
8. Are animals free from pain and distress?	10	27	33	20	10
9. Are animals free from insulting?	20	21	26	15	18
10. Are animals free to express normal behavior?	61	19	7	6	7
11. Are animals contented in their small cages?	38	25	32	2	3
12. Does the zoo cover their environmental needs as they are in nature?	58	23	10	6	3
13. Animals do not feel fear in captivity.	14	14	32	17	23
14. There should be conservation programs to conserve animals.	6	0	5	12	77
15. There should be education programs to deliver extra information to people about zoos.	3	0	0	14	83

V. ACKNOWLEDGEMENT

The authors are thankful to the Environmental Sciences Department and Biology Department staff and students. Also, we thank the volunteer students who participated in this study.

REFERENCES

- [1] Nekolný, L., & Fialová, D. (2018). Zoo Tourism: What Actually Is a Zoo?. *Czech Journal of Tourism*, 7(2), 153-166.
- [2] Turan, İ., & True, E. M. (2019). Research on Awareness of Zoos: Landscape Architecture Students. *Journal of International Environmental Application and Science*, 14(2), 59-69.
- [3] Jamieson D. (2017) *Against Zoos. Environmental Ethics: Readings in Theory and Application*, Chapter Seven Edition, Cengage Learning, ISBN: 978 - 1285197241, Part I, Ch. 3, Animal Rights, pp: 121 -128.
- [4] Carr, N., & Cohen, S. (2011). The public face of zoos: Images of entertainment, education and conservation. *Anthrozoös*, 24(2), 175-189.
- [5] Mackay, R. (2002): *The atlas of endangered species*: 94–95. London: Earthscan Publications Ltd.
- [6] Gusset, M., & Dick, G. (2011). The global reach of zoos and aquariums in visitor numbers and conservation expenditures. *Zoo Biology*, 30(5), 566-569.
- [7] Gurusamy, V., Tribe, A., Toukhsati, S., & Phillips, C. J. (2015). Public attitudes in india and australia toward elephants in zoos. *Anthrozoös*, 28(1), 87-100.
- [8] Durrell, I. and mallinson, J. 1987. Reintroduction as a political and educational tool for conservation. *Dodo: Journal of the Jersey Wildlife Preservation Trust* 24: 6–19.
- [9] Reade, L. S., & Waran, N. K. (1996). The modern zoo: How do people perceive zoo animals?. *Applied animal behaviour science*, 47(1-2), 109-118.
- [10] Rees, A. P. (2015) *Studying Captive Animals: A Workbook of Methods in Behaviour, Welfare and Ecology*, First Edition. John Wiley & Sons, Ltd. Oxford, UK.
- [11] Serpell, J. A. (2004). Factors influencing human attitudes to animals and their welfare. *Animal welfare-potters bar then wheathampstead-*, 13, S145-S152.
- [12] Burghardt, G. m. and herzog, h. a. (1989).
- [13] animals, evolution, and ethics. In *Perception of Animals in American Culture*, 129–151, ed. R. hogue. Washington, DC: Smithsonian Institution Press.
- [14] Driscoll, J. W. (1992). attitudes toward animal use. *Anthrozoös* 5: 32–39.
- [15] Plous, S. (1993). Psychological mechanisms in the human use of animals. *Journal of Social Issues* 49: 11–52.
- [16] Gunnthorsdottir, A. (2001). Physical attractiveness of an animal species as a decision factor for its preservation. *Anthrozoös* 14: 204–215.
- [17] Myers, G. (2002). Symbolic animals and the developing self. *Anthrozoös* 15: 19–36.
- [18] Kendall, H. A., Lobao, L. M. and Sharp, J. S. (2006). Public concern with animal wellbeing: Place, social structural location, and individual experience. *Rural Sociology* 71: 399–428.
- [19] Kellert, S. R. and Berry, J. K. (1980). Knowledge, Affection and Basic Attitudes toward Animals in American Society: Phase III. Washington, DC: U.S. Dept. of the Interior, Fish and Wildlife Service
- [20] Kellert, S. and Dunlap, J. (1989). *Informal Learning at the Zoo: A Study of Attitude and Knowledge Impacts*. Philadelphia: Zoological Society of Philadelphia.
- [21] Braithwaite, J. and Braithwaite, V. (1982). Attitudes toward animal suffering: an exploratory study. *International Journal for the Study of Animal Problems* 3: 42–49.
- [22] Wickins-Dražilová, D. (2006). Zoo animal welfare. *Journal of agricultural and environmental ethics*,19(1),27-36.
- [23] 22. Tinbergen, N. (1963). On aims and methods in ethology. *Zeitschrift fur Tierpsychologie*, 20 :410–433.
- [24] 23. Ings, R., Waran, N. K., & Young, R. J. (1997). Attitude of zoo visitors to the idea of feeding live prey to zoo animals. *Zoo Biology: Published in affiliation with the American Zoo and Aquarium Association*, 16(4), 343-347.
- [25] 24. Tribe, A., & Booth, R. (2003). Assessing the role of zoos in wildlife conservation. *Human Dimensions of Wildlife*, 8(1), 65-74.
- [26] 25. Kirkwood, J. K., & Hubrecht, R. (2001). Animal consciousness, cognition and welfare. *Animal welfare*, 10(1), 5-17.