

A STUDY ON STUDENTS PERCEPTION AND APPROACH TOWARDS BIRDS AND THEIR CONSERVATION

¹BILAL A. BHAT, ²PARMIL KUMAR, ³SIDRAT-UL-MUNTAHA ANEES, ⁴NUSRAT, ⁵INTIZAR AHMAD, ⁶MUNAZAH YAQOOB AND ⁷MASRAT SIRAJ

¹Division of Social Science, Faculty of Fisheries, Rangil Ganderbal, SKUAST-Kashmir, J&K

²Department of Statistics, University of Jammu, J&K

³Government College for Women, M.A.Road Srinagar, Kashmir, J&K

⁴IMFA, University of Kashmir, Hazratbal Srinagar, 190006, J&K

⁵S.H. Institute of Islamic Studies, University of Kashmir, Srinagar, 190006, J&K

^{6,7}Division of Entomology, Faculty of Agriculture, Wadura, Sopore, SKUAST-Kashmir, J&K

ABSTRACT

Birds are outstanding indicators of environmental health and on a less quantitative level, they offer humans with pleasure, joy and spiritual inspiration merely by their existence. They are usually admired for their beauty, songs, and the beauty of their near miraculous ability to fly without recognizing their role direct or indirect to the Ecosystem Services. The most significant reason to study birds is to promote our understanding of the ecosystems that support all life on earth, including humans. To have a healthy planet, we must know how the natural systems on which we depend function. In this paper, a well designed and validated questionnaire was used to collect the information from a sample of 400 (200 boys and 200 girls) students studying in higher educational institutions of Kashmir valley. The main aim of our study was to find out the perception and approach of students towards birds and their conservation in Kashmir. The data collected from the survey was analyzed using appropriate statistical techniques. The results of our study revealed that students have a poor knowledge about the reorganization of bird species. Further, the results of our study showed that students boys as well girls showed interest towards birds, nature and wildlife conservation. Finally, it is suggested that education programmers be introduced among the students/people to increase awareness about the role played by bird in our lives, importance of wildlife conservation and management.

Key Words: Perception, Approach, Birds, Students, Kashmir, Conservation, Statistics.

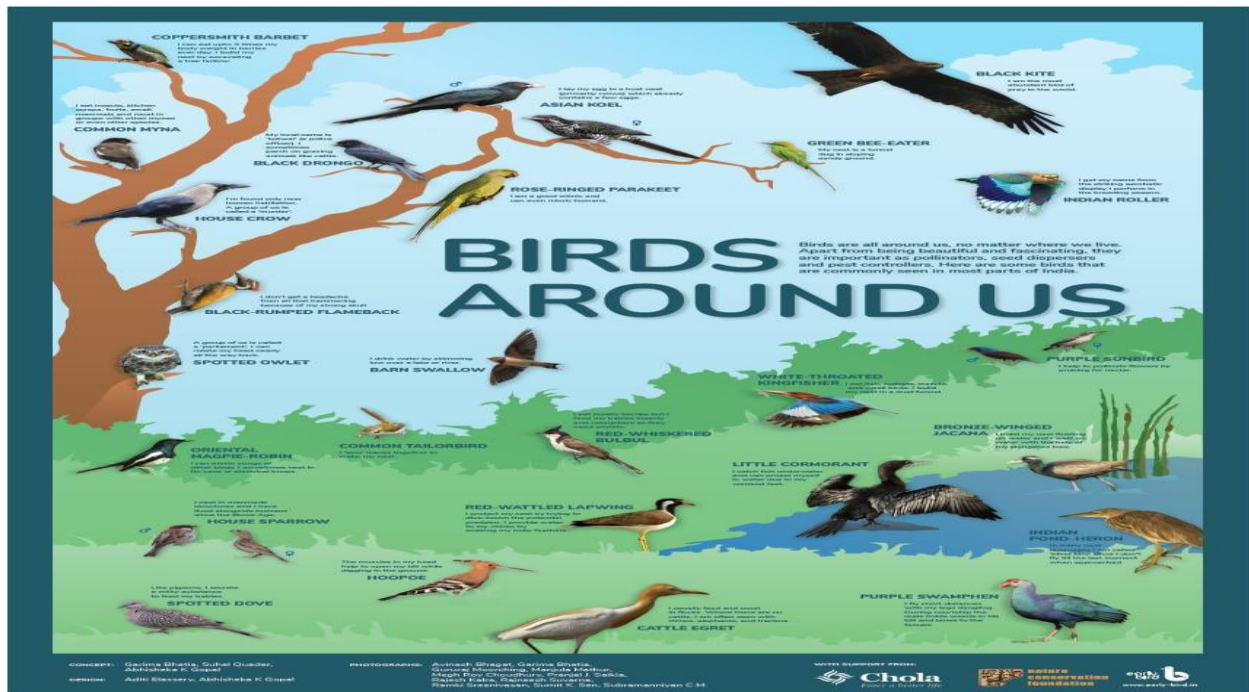
INTRODUCTION

Birds form a significant component of the ecosystem as they play useful role in the control of insect pests of agricultural crops, as predators of rodents, as scavengers and pollinating agents. It is noticed that wildlife conservation takes precedence in world natural resource agenda; for conservation measures to be implemented, it becomes necessary to know the species diversity, type of the habitat they live in and local abundance of fauna of an ecosystem. Birds do matter and their songs are the reason connecting us to nature. The year 2018 has been declared as the Year of Birds (with the aim of celebrating and protecting them) by the US National Geographic Society to commensurate the 100th anniversary of the signing of the Migratory Bird Treaty Act (MBTA), passed in 1918, which officially makes it a crime to “*pursue, hunt, take, capture, kill or sell*” a migratory bird or its “*nests, eggs and feathers*”. The current January issue of the US National Geographic Magazine carries a fascinating quote on its cover page “*it is not just what bird’s do for the environment-it’s what they do for our souls*”. This statement conveys million dollar message and does not express their biology only but vindicates philosophy behind bird’s life and their association to human life. Birds are mystifying and a marvelous creation as small as male humming birds (57 mm) or as large as ostrich (9-10 feet) weighing about 150 kg. Biologically birds are Aves, warm blooded vertebrates, have an average body temperature of 41-42⁰C, bear wings and feathers, have four chambered heart, have sharpest vision, great power of singing and deep power of smell (especially in migratory birds who can smell even the environmental objects). The cognitive behaviour of birds is remarkable and Corvids (crows, ravens and magpies) are recognized for their social adaptability and are considered the most intelligent among birds on this planet. The stories of *chalakkawa* (clever crow) have always been quite interesting and fascinating for children of all times. Birds are quite strategic and some birds especially ground foragers (shore birds, game birds, thrushes, sparrows, etc.) are hardly noticeable in nature due to camouflage to protect themselves from enemies and environmental harm. Peculiar among birds are also parrots with historical and cultural significance for human. Birds have ecological, cultural, social and economic importance for us. They are ecologically crucial in maintaining the balance of many ecosystems by sustaining various food chains and energy cycles. Birds are a cheerful, wonderful, beautiful, magical, vibrant, majestic and a playful creation. It has long been speculated that human music has its start in bird song. This makes common sense as mankind had been listening to bird songs long before man learned to sing or make musical instruments (Nature’s Music, 2004). Throughout human history, it has been noticed that writers, musicians, poets, and dreamers of various sorts have been inspired by bird songs and sounds. Many earlier poets, naturalists, educators and composers (e.g., Aristotle, Kurt Schwitter, Olivier Messiaen, Douglar Quin, Emily Doolittle, Hollis Taylor) tried to emulate the musical energy of the birds by using the shape of their melodies etc. It is noticed that in Biomass (i.e., a particular form of sampling, but in contrast to reusing or sample of a sound recording from another musical pieces, sample from

naturalistic recording are used), Composers use recorded sounds of animals (or even plant) as part of their music (Henrik Brumm, 2012). Humans make music for aesthetic and practical reasons: music sounds beautiful to ears, express a wide range of emotions, commemorates particular events and acts as a universal language. Human music has altered and evolved throughout history, but our survival is not dependent on our sounds and music-making abilities. On the other hand the sounds of any given avian species have remained unchanged since that species first evolved. Humans are skilled to sing as they are not born with innate ability to musically express themselves or their needs. However, very few birds ever have the need to learn to sing as thousands of bird species on the planet, are born with the sounds they use. Only four of the twenty-three major groups of birds need to learn to make their sounds: song-birds, parrots, humming birds and lyrebirds. Birds make a variety of calls, sounds and songs with a language as complex as any spoken words that have many meanings, purposes and uses which only birders (bird watchers) can perceive and understand. Birders who are familiar with the special sounds birds make can use those sounds for auditory identification. For example, hearing an alarm call of birds may prompt an observant birder to search for birds of prey nearby, while hearing a begging call may initiate a search for a well-hidden nest. When the bird is spotted by the birder, the noises it makes, including the pitch, tone, rhythm, and quality of its sounds, can help create a positive identification of the species. Birding by ear takes practice, but birders who recognize the different types of bird sounds can use their ears as well as their eyes to find and identify birds in the field. There are many different types of bird sounds that have different meanings and uses. Birds make a variety of calls, songs, and sounds with a language as complex as any spoken words. Each type of sound has a different purpose, and birds use them in different circumstances e.g., **Alarm Calls** i.e., the sharp, piercing calls used to warn other birds of danger, **Begging Calls** i.e., calls made by young birds not usually loud are designed to draw attention and may include small peeps, whines, rasps, wheezes, and chirps. Begging bird sounds are frequently accompanied by wing flutters and other motions to attract parent birds' attention. **Contact Calls** i.e., moderately loud chirps, chips, buzzes, and other simple bird sounds that are clear but not as piercing as alarm calls used by birds travel in flocks or contact calls may be used to alert other nearby birds to a good food source when they want to signal one another. **Flight Calls**., calls that sound similar to contact syllables or may be slightly more musical, but in general they are used for birds to announce their presence and location to others while moving. These bird calls are most common during migration, and birders can often identify birds migrating at night by their distinctive calls, even when the birds can't be clearly seen. **Songs**, the most distinctive and familiar bird sounds. These calls are longer, more elaborate, and generally more musical strings of syllables that have many purposes. These are used by birds to attract mates, advertise their territory, or discourage intruders. The quality, duration, and variation of bird songs depend on the species, and there are also geographic song variations in bird populations. Birds may also have dissimilar songs for different times of day, or

may only sing in the morning or evening. It is noticed that in addition to songs and calls, many bird species also incorporate nonverbal sounds (Bill drumming, Wing beats, Bill Snaps, Scratching noises etc) Bird songs are nature's alarm clock, with the dawn and dusk chorus signaling, designating the start and end of the day, stimulating us cognitively. Bird songs relax people physically and stimulates mentally, reducing stress and anxiety. That is why in hospitals in most parts of the world, bird songs are played prior to surgical procedures to reduce stress and anxiety. Birds are the indicators of climatic conditions and are the good indicators of natural calamities and even minor environmental disturbances. They are acting as bio-indicators of potential human impact and environmental degradation, therefore, they are natural agents measuring the ecosystem health. Birds are the natural cleansing agents of our environment. They eat the seeds of some weeds, therefore, are natural agents of weed control. Birds act as an efficient biological control agents by feeding on various agricultural pests (rodents, mosquitoes, beetles, moths and other insects). The excreta of birds being rich in uric acid (easily convertible to ammonia-source of nitrogen) is very important as a good source of manure. Similarly, guano (droppings) from seashore birds are a great source of nitrogen for agriculture. Birds have a worldwide nutritional importance as a source of protein rich food (eggs, meat) for human. In the traditional medicine, the breast meat of certain birds is preferentially given to chronically ill people to rejuvenate them. The down feathers are put to many industrial uses like manufacturing of pillows, quilts, sleeping bags, etc. Besides the goose down feathers are used in the manufacturing of warm outerwear (jackets) in the cold climate zones of the world. Pet birds like pigeon, parrot, etc. are still a popular choice among the people as a means of luxury and leisure time. Bird watching and sport is an important hobby in the world and are becoming part of a rapidly growing ecotourism industry. Therefore, they deserve to be treated with honour by devoting a full year for them to know further and to devise measures for their protection. There are about 9,000-10,000 living species of birds estimated on earth and around 13 percent are found in India. Kashmir valley is a home to around 262 species of birds including resident and migratory birds (summer and winter visitors) from Central Asia (Kazakhstan, Uzbekistan, Tajikistan, etc.), some countries of Eastern Europe (Russia, Poland, Hungary, Romania, Bulgaria, Serbia, etc.), Siberia, China, Japan, Philippines and other regions of the world out of the total of 358 species recorded from the State of Jammu Kashmir. A solid understanding of wildlife in communities might lead to improvement of wildlife species conservation and low public knowledge of wildlife certainly leads to low conservation (Clevo & Clem 2004; Wilson & Tisdell 2005). According to Gichuki 1999, local people who frequently interact with birds in their local environment may develop a broader knowledge of the life histories, behaviour (breeding period and habitat use), movement and seasonal changes in composition and abundance of those birds. The study of Huntington 2000 revealed that the additional knowledge is increasingly used by academics, agency scientists and policy-makers as a source for ideas on ecosystem management, restoration and conservation biology. The public's knowledge of

birds may consequently influence decisions about bird conservation taken by both governmental and non-governmental organisation conservation programmes. In the literature (e.g., Shah et al., 2000; Choudhary 2002; Sharma 2003; Ahmed 2004; Kumar and Sahi (2005 2006); Kumar 2006; Kotwal and Sahi 2007; Dar and Dar 2009) we observe various state level faunistic surveys carried. The present study was carried out in Kashmir valley of the Jammu and Kashmir state with the aim to assess the students perception and approach towards birds and their conservation.



METHODOLOGY

The present study has made an extensive survey of literature on the topic role of birds and their conservation in order to gain insight of the topic of the study. To collect the information a well designed questionnaire was prepared on the basis of the literature available on the topic. The questionnaire developed was pre tested and validated by specialists and experts using standard statistical tools. The study was intended to investigate the perception and approach of adolescent students towards birds and their conservation in Kashmir. The survey included 400 students (200 boys, 200 girls) studying in different Higher Educational Institutions of Kashmir valley using stratified random sampling technique. The respondents who participated in this study were given a verbal explanation regarding the purpose of our present study and were assured that confidentiality would be carried out throughout the study. The data collected were tabulated and analyzed with the help of standard statistical tools using SPSS version 20.

Hypotheses

- (a) There is no significant association between the gender and their perception/approach towards birds.
- (b) There is no significant difference between the boys and girls on attitude towards measures for bird conservation

In order to test Hypothesis, we use Mann-Whitney W test for comparison purpose and test statistic is given by

$$W = N_1 * N_2 + \frac{N_x (N_x + 1)}{2} - T_x ;$$

where N_1 is the number of subjects in group 1; N_2 is the number of subjects in group 2. T_x is the larger of the two rank totals and N_x is the number of subjects in this group.

To test the Hypothesis, that there is association between gender and interest towards birds, we use chisquare test (with usual notations) as given by

$$X^2 = \sum_{i=1}^2 \frac{(o_i - e_i)^2}{e_i}$$

where $X^2 \sim \chi_1^2$, o_i and e_i are observed and expected frequencies.

RESULTS AND DISCUSSION

Table 1: Birds seen by the respondents around their residential places (Gender wise)

| Gender | Different Birds seen around home | | |
|---------------------------------|----------------------------------|---------------|---------------|
| | 7-8 birds (%) | 4-6 birds (%) | 1-3 birds (%) |
| Boys | 23 (11.5) | 74 (37) | 103 (51.5) |
| Girls | 27 (13.5) | 56 (28) | 117 (58.5) |
| Chi-square =3.703, p-value>0.05 | | | |

The data presented in Table 1 reveals that majority of the respondents 51.5% boys and 58.5% girls showed interest towards birds and reported that they are seeing 1-3 birds around their home, followed by 37% boys and 28% girls who told that they are seeing 4-6 birds around their home, finally only 11.5% boys and 13.5% girls report that they are seeing 7-8 birds. It is obvious students living near forest areas or far flung areas view more

bird varieties as compared to students living in cities. Statistically, it has been observed that there is no association gender wise in the opinion of viewing birds around home. Boys as well girls show same interest towards birds around their home.

Table 2: Perception and approach of students towards birds

| S.No. | Variable | Type | Mean ± S.D. | P-value |
|-------|--|-------|-------------|---------|
| 1. | All birds are good | Boys | 2.23 ± 0.91 | >0.05 |
| | | Girls | 2.19 ± 0.88 | >0.05 |
| 2. | Some birds are good | Boys | 4.13 ± 0.68 | >0.05 |
| | | Girls | 4.10 ± 0.71 | >0.05 |
| 3. | Birds are bad | Boys | 3.67 ± 0.82 | >0.05 |
| | | Girls | 3.70 ± 0.79 | >0.05 |
| 4. | Some birds are bad | Boys | 4.14 ± 0.52 | >0.05 |
| | | Girls | 4.16 ± 0.55 | >0.05 |
| 5. | Birds are beautiful | Boys | 4.31 ± 0.47 | >0.05 |
| | | Girls | 4.34 ± 0.50 | >0.05 |
| 6. | God created birds so we should take care of them | Boys | 4.26 ± 0.61 | >0.05 |
| | | Girls | 3.23 ± 0.59 | >0.05 |
| 7. | Birds help us to improve our economy | Boys | 3.27 ± 0.62 | >0.05 |
| | | Girls | 3.25 ± 0.59 | >0.05 |
| 8.. | Birds help us to improve our environment | Boys | 3.71 ± 0.55 | >0.05 |
| | | Girls | 3.77 ± 0.54 | >0.05 |
| 9. | We should conserve birds | Boys | 3.74 ± 0.57 | >0.05 |
| | | Girls | 3.71 ± 0.51 | >0.05 |

(Here we use 5 point likert scale, Disagree=1, Strongly disagree=2, Neutral=3, Agree=4, Strongly disagree=5)

The data presented in Table 2, reveals that in response to statement, all birds are good majority of respondents boys as well as girls disagree and statistically, there was non significant difference in their opinion. Further, in response to all other statement, it has been observed that majority of the respondents boys as well girls accept the statements. Statistically, non significant difference in their opinion was observed (p>0.05).

Table 3: Knowledge about bird voices, music and bird activities meaning

| S.No. | Statement | Type | Mean ± S.D. | P-value |
|-------|--|-------|-------------|---------|
| 1. | Human Music has its origin in bird songs ? | Boys | 2.24 ± 0.89 | >0.05 |
| | | Girls | 2.28 ± 0.81 | |
| 2. | Human behavior affect bird communities in residential areas? | Boys | 3.71 ± 0.51 | >0.05 |
| | | Girls | 3.75 ± 0.55 | |
| 3. | Birds give warning calls? | Boys | 4.18 ± 0.82 | >0.05 |
| | | Girls | 4.23 ± 0.75 | |
| 4. | Birds recognize each other by the voice? | Boys | 2.45 ± 0.61 | >0.05 |
| | | Girls | 2.49 ± 0.57 | |
| 5. | Birds give begging calls? | Boys | 3.51 ± 0.69 | >0.05 |
| | | Girls | 3.55 ± 0.73 | |
| 6. | Birds give flight calls? | Boys | 2.65 ± 0.78 | >0.05 |
| | | Girls | 2.81 ± 0.74 | |
| 7. | In music Composition are also derived from studying birds? | Boys | 2.43 ± 0.57 | >0.05 |
| | | Girls | 2.49 ± 0.61 | |
| 8. | Birds create sense of beauty ? | Boys | 3.74 ± 0.56 | P>0.05 |
| | | Girls | 3.78± 0.49 | |

(Here we use 5 point likert scale, Disagree=1, Strongly disagree=2, Neutral=3, Agree=4, Strongly disagree=5)

The data presented in Table 3, shows that in response to statement, Human Music has its origin in bird songs, Birds recognize each other by the voice and in music composition are also derived from studying birds students boys as well as girls have low knowledge. In other statements as shown in Tale 3, students of both gender possess a good knowledge about bird voices, music and bird activities meaning. Statistically, non-signifiant difference was observed between in the opinion of boys and girls (P>0.05).

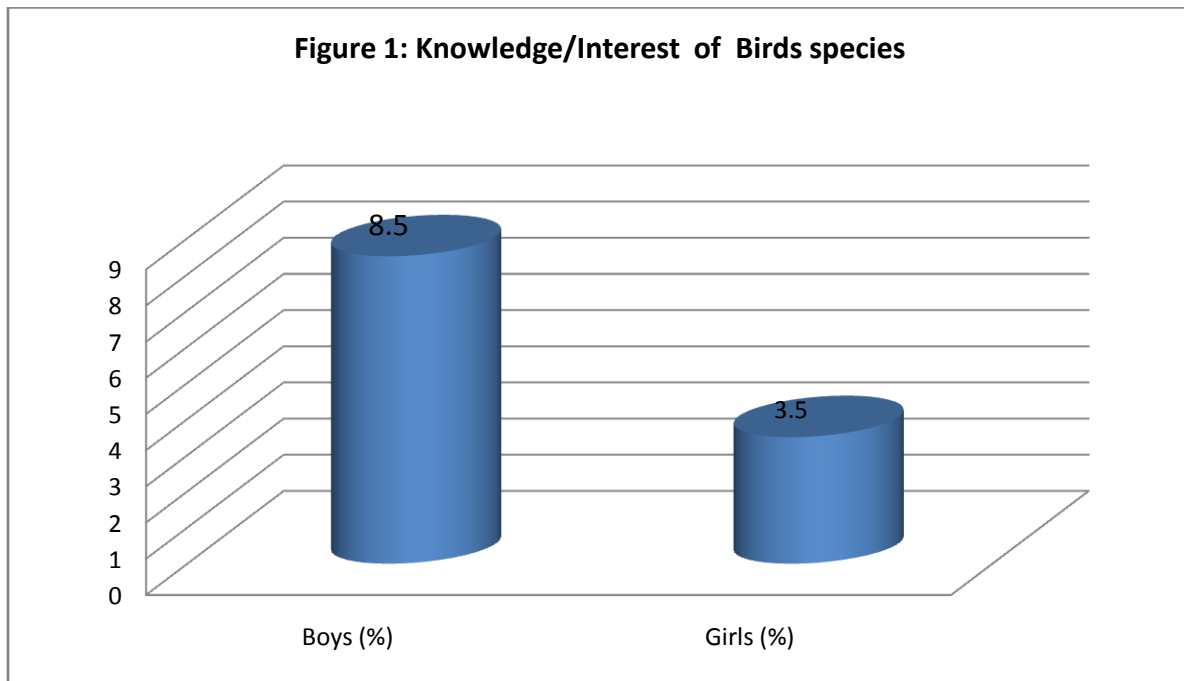
Table 4: Measures for bird conservation

| S.No. | Variable | Type | Mean ± S.D. | Decision |
|-------|----------------------------------|-------|-------------|-------------------|
| 1. | Keep least on domestic predators | Boys | 3.85 ± 0.57 | Positive attitude |
| | | Girls | 3.78 ± 0.61 | Positive attitude |
| 2. | Don't throw litter on the ground | Boys | 3.81 ± 0.49 | Positive attitude |
| | | Girls | 3.84 ± 0.52 | Positive attitude |
| 3. | Remove all traces of oil | Boys | 3.54 ± 0.82 | Positive attitude |
| | | Girls | 3.56 ± 0.73 | Positive attitude |
| 4. | Learn the etiquette of birding | Boys | 4.06 ± 0.64 | Positive attitude |
| | | Girls | 4.10 ± 0.58 | Positive attitude |

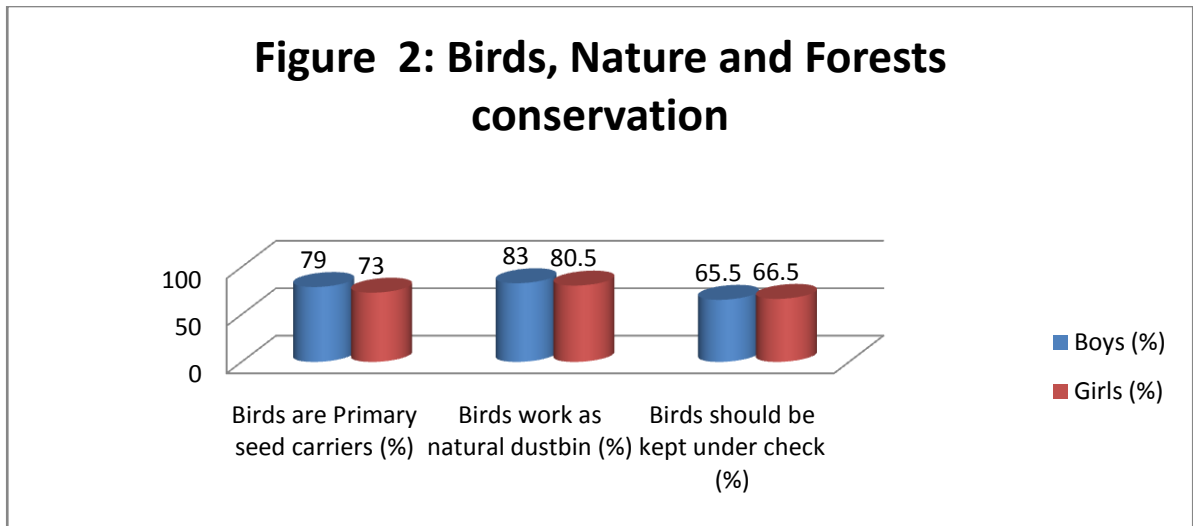
| | | | | |
|----|---|-------|-------------|-------------------|
| 5. | Participate in bird conservation programs | Boys | 3.53 ± 0.78 | Positive attitude |
| | | Girls | 3.58 ± 0.69 | Positive attitude |
| 6. | Stop buying wild birds | Boys | 3.64 ± 0.89 | Positive attitude |
| | | Girls | 3.58 ± 0.82 | Positive attitude |
| 7. | Say no to rash driving | Boys | 4.16 ± 0.54 | Positive attitude |
| | | Girls | 4.18 ± 0.51 | Positive attitude |
| 8. | Create awareness on role of birds | Boys | 3.71 ± 0.55 | Positive attitude |
| | | Girls | 3.81 ± 0.48 | Positive attitude |

(Here we use 5 point likert scale, Disagree=1, Strongly disagree=2, Neutral=3, Agree=4, Strongly disagree=5)

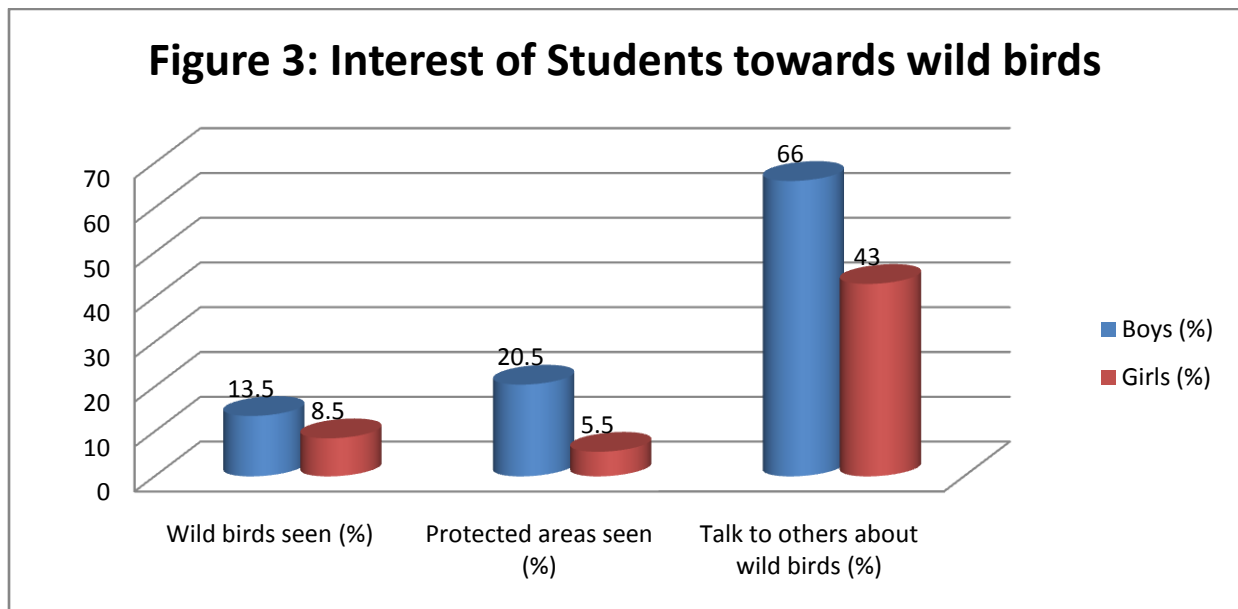
The data presented in Table 4, shows that in response to the all statements related to measures for birds conservation majority of the respondents both boys as well girls showed positive attitude towards birds conservation. statistically, there was non significant difference in the opinion of boys and girls ($p > 0.05$).



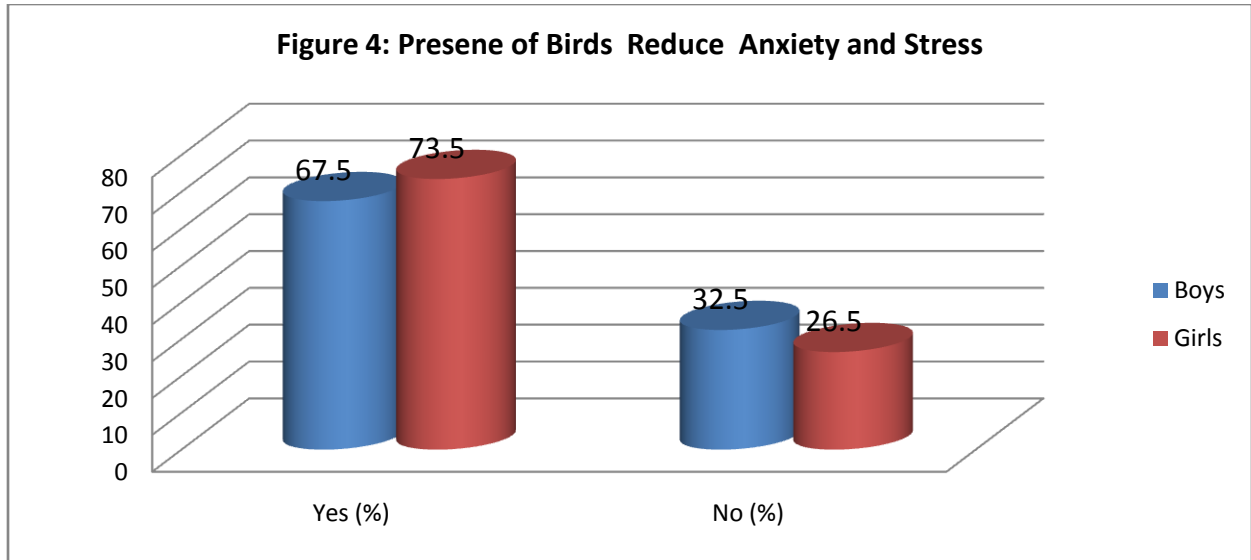
The data presented in Figure 1, reveals that 8.5% boys and 3.5% girls showed good interest towards birds and recognize the local bird species.



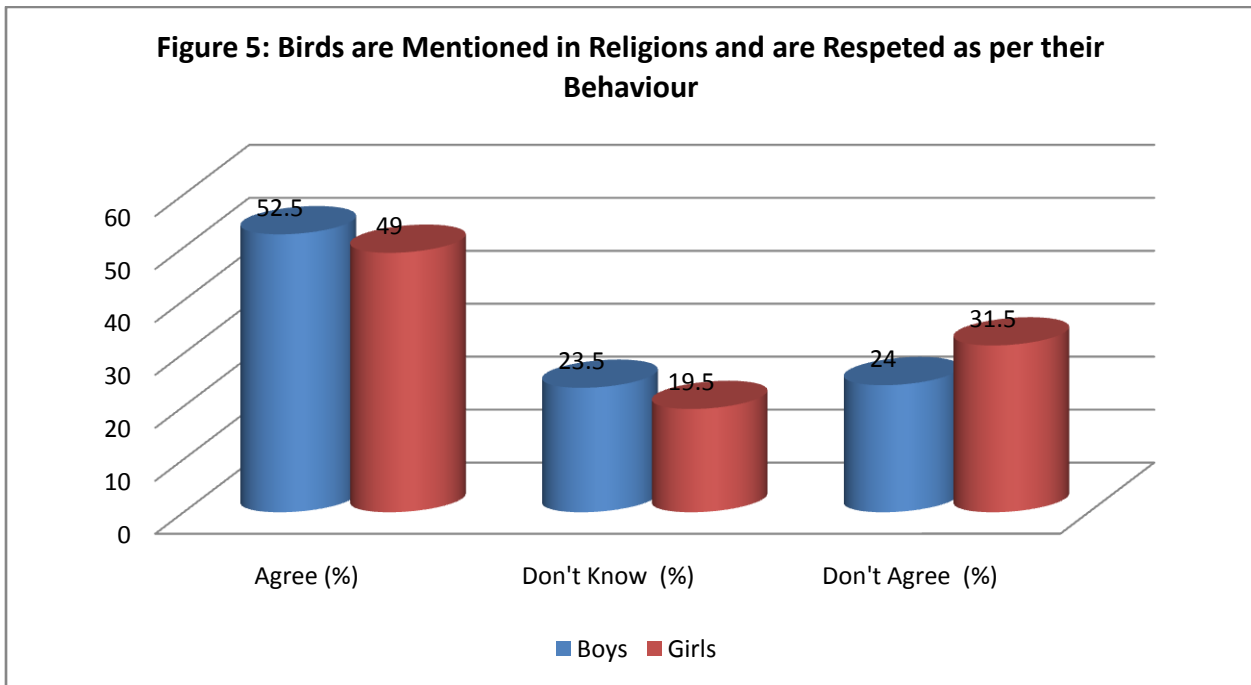
The data presented in Figure 2, reveals that in response to statement that birds are primary seed carriers 79% boys and 73% girls are aware. In response to statement, birds work as natural dustbin 83% boys and 80.5% girls are aware. Further, in response to statement that birds should be kept under check 65.5% boys and 66.5% girls are aware about the importance of keeping birds under check



The data presented in Figure 3, reveals that in response to statement, wild birds seen, 13.5% boys and 8.5% girls told that they have seen wild birds. In response to statement, protected areas seen, 20.5% boys and 5.5% girls told that they have seen the protected areas. Further, in response to statement that respondent talk to others about wild birds, 66% boys and 43% girls told that they talk about nature, birds and animals with friends.

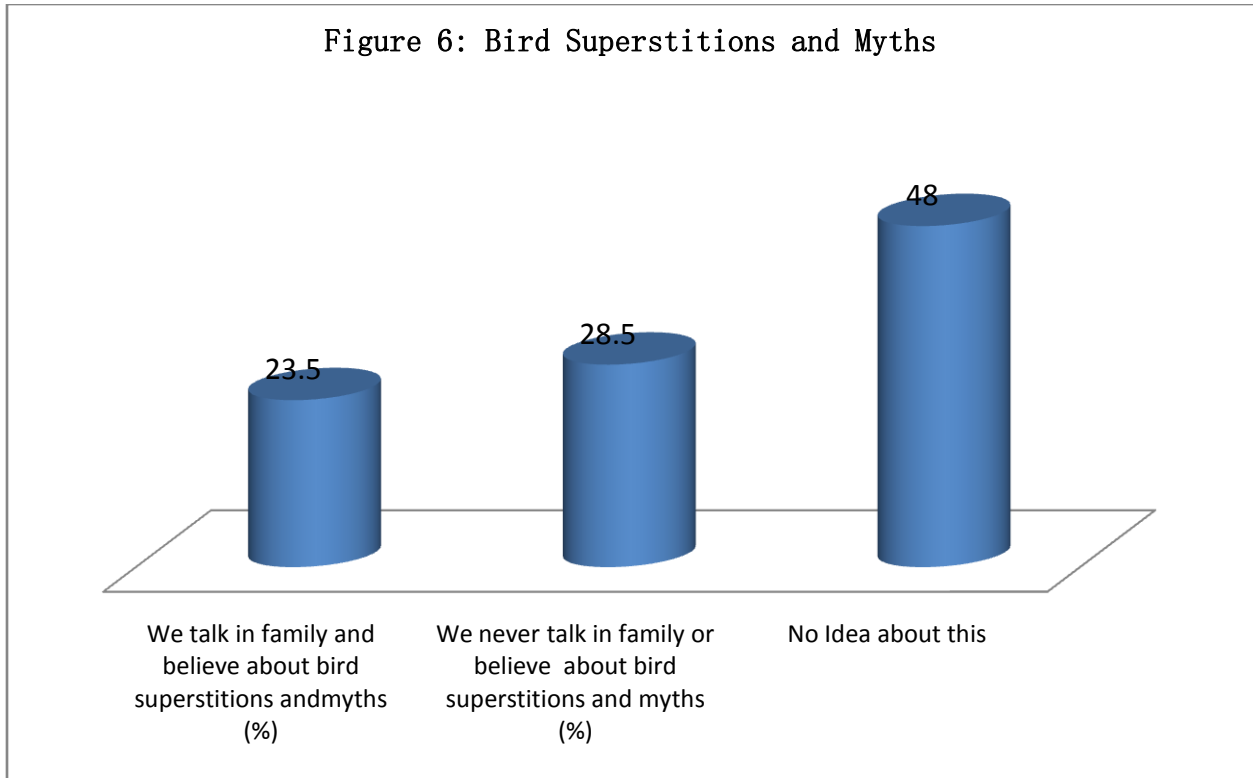


The data presented in Figure 4, shows that 67.5% boys and 73.5% girls told that they believe that presence of birds reduce anxiety and stress. While as 32.5% boys and 26.5% girls told that they don't believe that presence of birds reduce anxiety and stress. Statistically, there was non significant difference in the opinion of boys and girls ($p>0.05$).



The data presented in Figure 5, reveals that majority of the respondents boys (52.5%) as well as girls (49.0) revealed that they agree that birds are mentioned in religion and are respected as per their behavior. They narrated various stories and only few were quoted in this paper. Buddhists and Hindus are great lovers of animals and

show kindness and respect to birds and animals. Thousands of towns are named after birds and animals in the whole of India. From ant, snake to elephant, every animal is honoured and each town has a long story about them, mostly connected to Gods. Birds and Gods are close and several Hindu gods are seen carrying a bird in their hands. There are nearly 300 verses in the Holy Bible that mention birds. More than one hundred of these verses merely use the word "fowl" or "bird," leaving the reader to guess at the species. The word *bird* is mentioned in the Glorious Quran 5 times and the word birds occur in the Holy Quran 13 times. Among the *birds*, the *hoopoe* (hud-hud in Arabic) has been specifically mentioned twice in Surat An-Naml. Prophet Solomon (A.S) was a king and the ruler of Syria and Palestine whose armies consisted of troops made of men, Jinn and birds. It is possible that the birds were employed for communicating the messages, hunting and for other suitable services. There is an interesting Qurani story about birds (Ababeel) how they defended Ka'bah against an attack on it. Abraha was the king of Yemen and Ethiopia who had built a church in his city San'a and it was his wish that people must come to San'a and make its Tawaaf instead of going to Makkah Mukarramah to make Hajj. He had plans to establish a fair of Hajj. He attacked on Makkah Mukarramah and captured all their animals. Abdul Mutallib, chief of Qureish tribe ordered his people to go and take shelter in the caves of mountains and its valleys. They obeyed him on his advice after which he held onto the gate of the Holy Ka'bah and cried and made Du'a. and climbed the mountain with his people. Early in the morning, Abraha commanded his army to attack on the Holy Ka'bah. Allah (SWT) sent a flock of birds from the ocean and they all came with gravels; two in their claws and one in the beak. The flock of Ababeel began to throw the stones on Abraha's army so fiercely that his army was forced to step back and run away. The stones were small but they were the stones of Allah's torment that pierced through their bodies. Each stone thrown contained the name of its target and in this manner, the entire army of Abraha was destroyed and the Holy Ka'bah was protected. Prophet Muhammad (pbuh) guides Muslims to be kind and gentle towards animals and birds. A man once came to Prophet Muhammad (pbuh) carrying with him his belongings and a box. He said, "O Prophet! While I was passing through a jungle, I heard the voice of some bird's babies. I took them and put them in this box. The moment I did that, their mother came fluttering round my head." And the holy Prophet said, "Put them down". When the man put the box on the ground, the mother of the young birds joined them. Seeing this, the Prophet asked the man who now had a look of surprise on his face, "Are you surprised by the affection of the mother towards her young? I swear by Him (Almighty Allah) who has sent me, surely, God is more loving to his servants than the mother to these young birds. Return these baby birds to the place from where you took them, and let their mother be with them." "Fear God with regard to animals", said the Prophet of Islam, surely, there are rewards for being kind and gentle to animals, and for giving them food and water to drink.



The data shown in Figure 6, reveals that 48.0% respondents told that they do not have any idea about the bird superstitions and myth, whereas 28.5% respondents told that they never talk in family or believe about bird superstitions and myth and 23.5% respondents believe about bird superstitions and myth. There are a number of myths and superstitions around the world concerning birds. For example, it is believed that if a bird that flies into our house signifies that an important message is on its way. The message can be good or bad depending upon the bird, its colour and its direction. Doves have always been seen as significant religious and spiritual symbols. They are thought to be the one bird that the Devil cannot change himself into, and the one bird that is immune to the Devil's curses. The dove is also the Christian symbol for the Holy Spirit and nowadays, it is also regarded as a symbol of international peace. Dove are also very much associated with lovers, and some couples have white doves released when they celebrate their weddings. This may be because doves are supposed to mate for life and be devoted to each other. Doves were regarded as the messengers of the Roman goddess of love Venus, and Indians look upon killing a dove as unlucky. Sailors used to believe that if an albatross flew around their ship in the middle of the voyage, then this meant bad weather and windy conditions to come. Similarly there are so many myths about birds.

CONCLUSIONS AND RECOMMENDATIONS

The days are gone when there were countless numbers of birds in existence and it was hard to believe life without birds. At present, it is unusual for us to hear the beautiful and fascinating sounds of birds which at one time fill the air. Walter R. Lawrence (1895) in his famous book "The Valley of Kashmir" recorded that valley of Kashmir is not an exception as it was also rich in ornithological diversity more than 100 years ago. Kashmiris were tagged as Bird lovers though with little know how about these creatures. Many birds common during Dogra regime have gone either rare or extinct e.g., Blue Heron, Breg was known to be very common during mid and late 1800 A.D are now rarely watched by people of Kashmir. Samar chand Koul (1939) compiled native bird fauna of Kashmir and is known to have given the proper nomenclature to these birds. The aim of this study was to investigate students perception towards birds and their approach towards conservation of bird species in Kashmir valley of J&K State. The results indicated that the majority of students interviewed had not good knowledge of local birds, although they were aware about the importance of birds in our lives. Further, the knowledge of birds of conservation interest did not vary with the respondents' gender. The results of our study indicate that on interacting with respondents, they know a little about the natural resource management and conservation. The results of our study draw attention to the need for public education, especially about species that are of conservation status and/or are threatened with extinction. The researchers recommend that education programmes be introduced among the students/people to increase awareness and bird identification skills. Our results may help to guide the development of education programmes, allowing for a design that fits particular groups. The education programmes should include learning to recognise bird species, the conservation status of the species, threats to the species and how to mitigate the threats. These programmes should involve knowledge of biodiversity conservation as an important long-term survival tool for the wildlife. These programmes should also include bringing wildlife conservation and management into school curricula and the creating of wildlife information centres in localities. It is concluded from our study that we should take care of birds as good humans as every religion tells us that there are rewards for being kind and gentle to animals.

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CORRESPONDING AUTHOR



Dr. Bilal Ahmad Bhat is presently working as Associate Professor (Statistics) in Faculty of Fisheries, SKUAST-Kashmir. Dr Bilal Ahmad was earlier working in Mathematics & Statistics Dept University of Kashmir and in SKUAST-Jammu as Assistant Professor (Statistics) before joining SKUAST-Kashmir. He has participated and presented a number of research papers in various national/international conferences. He has more than 15 years of experience in teaching/research, published more than 130 research papers in various National/International Journals of repute and has guided a number of research scholars for their PhD programme. His field of research is probability theory, information theory and applied statistics.