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Cognitive Perspectives of Dog Owners about Correct Rearing Practices in Punjab, India

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A B S T R A C T

The present study was conducted in Teaching Veterinary clinical complex (TVCC) Guru Angad Dev Veterinary and Animal Sciences University and in different districts of Punjab on randomly selected 200 dog owners i.e., 100 from urban (Group I) and 100 from rural (Group II) with the help of pretested interview schedule. Various current practices followed by dog owners about dog feeding, housing, breeding and health and management were mentioned in the study. Group I dog owners were following more correct practices than their counter parts. So, the location and cognitive perspective of dog owners should be considered while organizing any extension programme. The feeding, housing, breeding and health and management practices were adopted by 50%, 56%, 27% and 49% in Group I; and 28%, 24%, 15% and 29% dog owners in Group II respectively. Unawareness was the main factor for non-adoption of correct practices, indicating the dire need of organization of more extension campaigns for creating awareness among masses about correct rearing practices.

Introduction

Dog is treated as human best and loyal friend and was domesticated earlier than 15000 years ago. The companionship of dog is increasing day by day among all categories of people. There is no demarcation between urban-rural, rich-poor and young-old for dog rearing. From the past, dogs are reared for many purposes such as hunting, defending and livestock guarding (Coppinger and Schneider, 1995). These days, the concern of dog owners regarding correct rearing practices is increasing as dog owners considers dog as their family member. Research institutes are toiling day and night for developing latest technologies. Also, the extension machinery are disseminating latest knowledge to dog owners by organizing different programmes. However, for planning and successful implementation of any extension programme, the cognitive perspective of dog owners about current rearing practices can play an important role as it apprises an extension agent about strength and weakness of a rearing system. Also, the awareness about factors affecting adoption of correct practices can help in determining the hurdles for successful implementation of an extension programme. So, the present study was planned to study

about current rearing practices followed by dog owners and factors affecting adoption of correct practice.

Materials and Methods

The present study was conducted in Teaching Veterinary clinical complex (TVCC) Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana and in different districts of Punjab. A total of 200 dog owners, belonging to urban background (Group I, n=100) and rural background (Group II, n=100) were randomly selected. Thedog owners were personally interviewed with the help of pretested interview schedule about current rearing practices such as feeding, housing, breeding, health and management. If dog owners are following correct practice then they were given score 'One' and for wrong practice 'Zero' score. The collected date was tabulated and analysed with the help of SAS 9.3 system Carry N C, USA.

Results and Discussion

Current dog rearing practices

Feeding practices

Table 1 shows that 60% of the Group I and 71% of the Group II dog owners were changing the feed abruptly. Sudden change in food causes gastric problems in dogs. 47% of the group I and 79 % of Group II dog owners were not making food separately for dog at home. However, most of Indian kitchen use onions and garlic for preparation of homemade food. Harvey *et al.,* (1985) conducted the experiment by oral administration of onion to dogs to evaluate the hematological changes in a sequence. He reported that most of the anaemic dogs had evidence of intravascular hemolysis, reticulocytosis and slight increase in methemoglobin content. Yamato *et al.,* (2005) reported almost same symptoms in male miniature schnauzer after ingesting garlic-containing food. So, presence of onion and garlic in homemade food can causes hemolytic anaemia in dogs.

Most (80%) of Group II dog owners were feeding homemade food to their dogs. Only 10% of the Group I and 5% of the Group II dog owners were feeding commercial food alone for their dogs. Both commercial and homemade foods are feeding to their dogs by 40% of the Group I and 15% of Group II dog owners. Rohlf *et al.,* (2012) reported that the percent of dog owners feeding their dogs one time and two times daily are 41.5% and 56.1% respectively. The type of food they are providing are 38.0% commercially prepared dry food, 22.7% combination of commercial food and home-prepared food, 18.1 % feeding mostly bones and meat and remaining 14.6% fed home-prepared food to their dog. Gadegaonkar *et al.,* (2014) reported that use of homemade food for growing puppy's leads to obesity in the puppies. The use of commercial pet food achieved the ideal absolute growth performance of growing puppies. So, feeding of commercial pet food lead to more uniform and healthy body development with the beneficial effect on blood parameters than homemade food.

50% of Group I and 30% of Group II were feeding two times per day. 50% of the Group II dog owners were feeding three times per day and 40% of Group I dog owners were feeding 3 times per day. Seneviratne *et al.,* (2016) reported that 51% of them fed dogs two times per day, 41% fed three times per day, 7% fed one meal per day and 1% were four meals per day.

25% of the Group II dog owners were keeping food on the floor for dogs. Murphy *et al.,* (2012) reported that the incidence of canine obesity appears to be increasing dramatically

and understanding factors impacting the amount of food pet owners provide to their dogs may improve weight management. It emphasizes the need for owner to use standard measuring cups for feeding 60% of the Group I dog owners and 20% of the Group II dog owners are using additional feed supplements in dog food. Only 10% of the Group I and 10% of Group II dog owners are providing fresh and clean water thrice a day.

Housing practices

A perusal of Table 2 indicates that regarding shelter for dog, 38% of the Group I dog owners were providing kennel, 60% keeping the dog in their own house and 2% are keeping dogs in animal shed. 30% of Group II dog owners were not providing shelters to dog, 25% providing kennels, 30% keeping their dogs in their own house and 15% in animal shed.

Areas of sleeping for dog in urban areas were kennel (35%), owner house (17%), owner bed (25%) and anywhere 20%. In rural areas 25% of dogs sleep in the kennel, 30% in owner house, 2% on owner bed, and 45% anywhere. Ramirez and Hernandez (2014) collected data from 602 individuals from Mexico, after analysis it showed that during night times, most of the dogs (67.4 %) sleep in the yard or garbage and others i.e., 15.4% sleep inside the house, 9% sleep in the owner bedroom, 6.9% sleep on bed with owner, and 1.3% sleep in other areas.

Breeding practices

Table 3 shows that 70% of the Group I dog owners and 50% of the Group II dog owners were crossing their dog two times. 30% of the Group I dog owners and 5 % of Group II dog owners were going for neutering their dog. 60% of the Group I dog owners and 55% of the Group II dog owners were crossing their dogs at the age of 2 years. Only 30% of Group I and 20% of Group II dog owners are weaning pups at correct age. Jokinen *et al.,* (2017) reported that dogs homed at 6 -7 weeks, 8 weeks, 9-12 weeks, and 13-16 weeks are 31%, 41%, 23%, and 5% respectively. Dogs, which are homed, more than 8 weeks old showed more aggressive behaviour than others did.

Health and management practices

Table 4 depicts that 85% of group II dog owners are not maintaining health records. Only 10 % of Group II dog owners were following regular vaccination, remaining 40% doing irregularly and 50 % were not vaccinating their dogs.

Jayakumar *et al.,* (1998) reported that among previously vaccinated dogs, the percentage of dogs vaccinated regularly and irregularly were 25.12% and 74.88%.Only 35% of the Group I and 10 % of Group II dog owners were following regular deworming.

Combing increases the blood supply to skin and makes the dog's hair coat more lustrous. But only 25% of Group II dog owners were combing their dogs.

From this most of Group II dog owners i.e., 70% were using human comb rather than dog comb. From 25%, only 10% of Group II the dog owner are combing twice per day.

There is no fixed place for grooming of dog said by 40% of the Group I and 50% of the Group II dog owners. Rohlf *et al.,* (2012) reported that most of the dog owners i.e. 78.8 % go for regular grooming, but frequency of grooming differs and 10.3% go for grooming at least once a day. Most of the dog owners agreed that grooming was important (76.6%), necessary (75.3%) and good for the dog's health (83.4%), important necessary.

Table.1 Current dog feeding practices adopted by dog owners

Practice	Category	Group I (n=100)	Group II (n=100)	Over all (n=90)
Change in diet	**Abrupt**	60(60)	71(71)	131(65.5)
	Gradual	40(40)	29(29)	69(34.5)
Making food separately for dog at home	**No**	47(47)	79(79)	126(63)
	Yes	53(53)	21(21)	63(31.5)
Food	**Home made**	50(50)	80(80)	130(65)
	Commercial	10(10)	5(5)	15(7.5)
	Both	40(40)	15(15)	55(27.5)
Time allowed for eating food	**Less than 5 minutes**	10(10)	5(5)	15(7.5)
	5- <10minutes	15(15)	16(16)	31(15.5)
	10 -15 minutes	35(35)	10(10)	45(22.5)
	More than15 minutes	50(50)	69(69)	119(59.5)
Removal of feeding bowl	**In free time**	80(80)	95(95)	175(87.5)
	Immediately after feeding	20(20)	5(5)	25(12.5)
Frequency of meal per day	**Two times**	50(50)	30(30)	80(40)
	Three times	40(40)	50(50)	90(45)
	Four times	8(8)	10(10)	18(9)
	Adlib	2(2)	10(10)	12(6)
Where food is placed	**Floor**	0(0)	25(25)	25(12.5)
	Bowl	100(100)	75(75)	175(87.5)
Addition of supplements in food	**No**	40(40)	20(20)	60(30)
	Yes	60(60)	20(80)	140(70)
Providing fresh and clean water	**One time**	30(30)	70(70)	100(50)
	Two times	60(60)	20(20)	80(40)
	Three times	10(10)	10(10)	20(10)

Figure in parenthesis indicate percentage

Table.2 Current dog housing practices adopted by dog owners

Practice	Category	Group I (n=100)	Group II (n=100)	Over all (n=200)
Shelter place for dog	**No**	0(0)	30(30)	30(15)
	Kennel	38(38)	25(25)	63(31.5)
	Owner house	60(60)	30(30)	90(45)
	Animal shed	2(2)	15(15)	17(8.5)
Area for sleeping	**Kennel**	38(38)	25(25)	63(31.5)
	Owner house	17(17)	30(30)	47(23.5)
	Owner bed	25(25)	2(2)	27(13.5)
	Anywhere	20(20)	45(45)	65(32.5)
Roof of house	**Grill**	10(10)	20(20)	30(15)
	Plastic sheet	25(25)	20(20)	45(22.5)
	Cement (Human dwelling)	65(65)	30(30)	105(52.5)
	Nothing	0(0)	30(20)	20(10)
Floor of house	**Marble (Human dwelling)**	60(60)	25(25)	85(42.5)
	Wood	20(20)	20(20)	40(20)
	Straw	2(2)	20(20)	22(11)
	Nothing	0(0)	10(10)	10(5)
Bedding material in summer season	**Cotton cloth**	45(45)	20(20)	65(32.5)
	Nothing	55(55)	80(80)	143(71.5)
Bedding material in winter season	**Bed**	60(60)	10(10)	70(35)
	Thick woolen cloth	38(38)	70(70)	108(54)
	Straw	2(2)	20(20)	22(11)
Changing of bedding material	**No**	40(40)	80(80)	120(60)
	Yes	60(60)	20(20)	80(40)

Figure in parenthesis indicate percentage

Table.3 Current dog breeding practices adopted by dog owners

Practice	Category	Group I (n=100)	Group II (n=100)	Over all (n=200)
Frequency of mating bitch	**Once**	5(5)	2(2)	7(3.5)
	Two times	70(70)	50(50)	120(60)
	Three times	25(25)	48(48)	73(36.5)
Neutering of dog	**No**	70(70)	95(95)	165(82.5)
	Yes	30(30)	5(5)	35(17.5)
Age at first breeding	**1 year**	40(40)	45(45)	85(42.5)
	2 years	60(60)	55(55)	115(57.5)
Age of weaning pups	**One week**	25(25)	40(40)	65(32.5)
	Two weeks	25(25)	25(25)	50(25)
	One month	20(20)	15(15)	35(17.5)
	Two months	30(30)	20(20)	50(25)

Figure in parenthesis indicate percentage

Table.4 Current dog health and management practices adopted by dog owners

Practice	Category	Group I (n=100)	Group II (n=100)	Over all (n=200)
Record keeping	**No**	60(60)	85(85)	145(72.5)
	Card	25(25)	10(10)	35(17.5)
	Book/Diary	5(5)	5(5)	10(5)
	Mobile	10(10)	0(0)	10(5)
Vaccination	**No**	10(10)	50(50)	60(30)
	Regular	50(50)	10(10)	60(30)
	Irregular	40(40)	40(40)	80(40)
Deworming	**No**	20(20)	60(60)	80(40)
	Regular	35(35)	10(10)	45(22.5)
	Irregular	45(45)	30(30)	75(37.5)
Handling of dogs	**Chain**	20(20)	30(30)	50(25)
	Leash	40(40)	10(10)	50(25)
	Rope	10(10)	25(25)	35(17.5)
	Free	30(30)	35(35)	65(32.4)
Combing	**No**	55(55)	75(75)	139(65)
	Yes	45(45)	25(25)	70(35)
Bathing	**No**	51(51)	70(70)	121(60.5)
	Yes	49(49)	30(30)	79(39.5)
Nail Trimming	**No**	65(65)	85(85)	150(75)
	Yes	35(35)	15(15)	50(25)
Face cleaning	**Daily**	2(2)	5(5)	7(3.5
	Weekly	40(40)	25(25)	65(32.5)
	Monthly	58(58)	70(70)	128(64)
Area of grooming	**Inside home**	20(20)	30(30)	50(25)
	Outside home	40(40)	20(20)	60(30)
	No fixed place	40(40)	50(50)	90(45)
Use of Dog deodorants	**No**	55(55)	95(95)	150(75)
	Yes	45(45)	5(5)	50(25)
Training given to dog	**No**	75(75)	95(95)	170(85)
	Yes	25(25)	5(5)	30(15)
Training taken by dog owners	**No**	100(100)	100(100)	200(100)
	Yes	0(0)	0(0)	0(0)
Going out with dog for a walk	**No**	30(30)	50(50)	80(40)
	Yes	70(70)	50(50)	120(60)
Frequency of exercise per day	**Once per day**	40(40)	20(20)	60(30)
	Twice per day	45(45)	38(38)	83(41.5)
	Thrice per day	5(5)	0(0)	5(2.5)
	No exercise	10(10)	42(42)	52(26)
Time for exercise	**10 minutes**	15(15)	5(5)	20(10)
	20 minutes	60(60)	35(35)	95(47.5)
	30minutes	25(25)	60(60)	85(42.5)
Practice	**Category**	**Group I (n=100)**	**Group II (n=100)**	**Over all (n=200)**
Place for exercise	**Indoor**	40(40)	15(15)	55(27.5)
	Outdoor	70(70)	80(80)	150(75)
Change of exercise area	**No**	40(40)	60(60)	100(50)
	Yes	60(60)	40(40)	100(50)
Time spent with the dog	**Less than one hour per day**	20(20)	40(40)	60(30)
	One to two hours per day	30(30)	40(40)	70(35)
	More than two hours per day	50(50)	20(20)	70(35)

Figure in parenthesis indicate percentage.

Table.5 Adoption status among dog owners of rural and urban areas

Group	Adoption status		Correct dog rearing practice			
			Feeding practice	Housing Practice	Breeding practice	Health and management practice
G-I (n=100)	Adopted		50(50)	56(56)	27(27)	49(49)
	Non adopted	Unawareness	28(28)	16(16)	25(25)	25(25)
		Cost factor	14(14)	16(16)	8(8)	13(13)
		Lack of resource and technical service	4(4)	4(4)	5(5)	3(3)
		Complexity of technology	4(4)	6(6)	35(35)	10(10)
G-II (n=100)	Adopted		28(28)	24(24)	15(15)	29(29)
	Non adopted	Unawareness	28(28)	26(26)	30(30)	30(30)
		Cost factor	22(22)	24(24)	15(15)	20(20)
		Lack of resource and technical service	12(12)	10(10)	20(20)	11(11)
		Complexity of technology	10(10)	16(16)	20(20)	10(10)
Overall (n=200)	Adopted		40(20)	40(20)	21(10.5)	39(19.5)
	Non adopted	Unawareness	28(14)	21(10.5)	28(14)	28(14)
		Cost factor	18(9)	20(10)	12(6)	16(8)
		Lack of resource and technical service	8(4)	7(3.5)	13(6.5)	7(3.5)
		Complexity of technology	6(3)	12(6)	26(13)	10(5)

Figure in parenthesis indicate percentage

Only 25% of Group I and 5% of Group II dog owners given training to their dog. Rohlf *et al.,* (2010) conducted online survey and reported that 96% agreed that training promotes the relationship between their dog and owner, 90.6% said that it keeps dogs safe, 89.9% agreed that it reduces dogs nuisance. 88.2 % said friends and family agree to this practice, 86.6 % said it prevents harming other people and animals by and 58% perceived that it is important.

42% of the Group II dog owners were not giving any exercise to dog. Rohlf *et al.,* (2012) reported that 60.2% of dog owners said their dog received exercise at least one time daily, 20% reported five to six times exercise per week, 15.7% reported three to four times per week, and remaining 2.8% reported only once or twice per week. Some owners reported that their dog received adequate exercise but they did not. Most of the owners agreed that exercise is good for dog's health, behaviour, increase bond between dog and owner, for weight and body management.

Time spent with dog is more in case of Group I dog owners than Group II dog owners. Kobelt *et al.,* (2003) conducted their survey on 203 dog owners and reported that dogs develop excessive barking, aggression, digging, escaping, and destructiveness when they are socially isolated.

Factors affecting adoption of correct practice

Table 5 clearly represents the adoption and non-adoption level of different practices by Group I and Group II dog owners. The feeding, housing, breeding and health and management practices were adopted by 50%, 56%, 27% and 49% dog owners in Group I; and 28%, 24%, 15% and 29% dog owners in Group II respectively. Unawareness is the main factor for non-adoption of these practices. So, more extension campaigns should be organized for creating awareness among masses about correct rearing practices. Rohlf *et al.,* (2010) also reported that using educational campaigns and appropriate role models in advertisement campaigns to promote responsible dog management behaviours, including training, may provide a means to engage people in these behaviours. Cost factor also played a significant role in non-adoption of correct practice, indicating that adoption of low cost technologies is more. Similarly, Yadav and Yadav (1995) also found that level of adoption was more in zero cost practices as compared to high cost. Adoption of correct practices are more in Group I when compared to Group II.

The present study focuses on cognitive perspective of dog owners about rearing practices. Urban dog owners are following more correct practices as compared to rural dog owners. So, while planning any extension programme location of trainee and their cognitive perspective should be taken in to consideration. Unawareness is the main factor for non-adoption of correct practices. So suitable extension strategies should be followed for enhancing knowledge level of dog owners.

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