



Management Practices Followed by Caravan Dog Owners and their Perceived Opinion Towards Dog Behaviour

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Received: February 03, 2023

Published: March 08, 2023

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Abstract

In the present study, Caravan dog owners (219) were interviewed using a pre-tested schedule to assess their socio-economic status, management practices, and perceived opinion towards dog behaviour. The study revealed that majority of respondents kept Caravan dog for guarding/hunting purpose. Profit intended dog owners used higher extent of management practices and share of dog's income in their family annual gross income was two-fold higher than their counterparts. Overall, Caravan dogs were reared without much use of scientific housing, management, feeding, breeding, and health practices. Majority respondents perceived that Caravan dog is aggressive, obedient, easy to train, easy to restrain, having chasing type herding behaviour with barking behaviour towards strangers with high pitch. Caravan dog has a greater utility in fulfilling companion, social and economic needs of human being. Caravan dog owners needs to be educated about management practices. Institutional efforts are needed to conserve and popularize this breed.

Keywords: Caravan dog; Management practices; socio-economic profile; perceived opinion

Introduction

India is known for its domestic animal diversity which is reflected in the form of various breeds and varieties. Presently, NBAGR has registered total number of indigenous breeds in the country as 202, including 50 for cattle, 19 for buffalo, 34 for goat, 44 for sheep, 7 for horses and ponies, 9 for camel, 10 for pig, 3 for donkey, 1 for yak, 19 for chicken, 2 for duck, 1 for geese, and 3 for dogs (www.nbagr.in). Rajapalayam, Chippiparai and Mudhol hound are the registered dog breeds in India. Caravan hound, Combai, Rampur hound, Kanni, Himalayan sheep dog and Bhutia sheep dogs are also few popular dog breeds (9) spread in different geo-spatial region. Caravan dog breed is one of the most popular dog breeds distributed in southern western part of the Maharashtra. This breed is most densely found in Latur, Osmanabad, Nanded and Parbhani districts of Marathwada region. It can withstand rigorous winter, hot summer and difficult terrain. This breed is highly intelligent, keen hunter and aggressive [5] Caravan dog are generally use for guarding and hunting purposes. Caravan dog and these dog keeping populations yet untouched through any scientific investigation. Keeping this in view, the present study was undertaken to study

socio-economic profile of Caravan dog owners, management practices and explore perceived opinion of owners towards this dog behaviour.

Material and Method

The present *ex-post facto* study was conducted in purposively selected Latur, Osmanabad, Nanded and Parbhani districts in Marathwada region of Maharashtra state with an intent to assess socio-economic status of Caravan dog owners, ascertain management practices followed and their perceived opinion towards Caravan dogs. Purposively 219 Caravan dog owners in Latur (69), Osmanabad (40), Nanded (56) and Parbhani (54) were personally contacted and data were collected using pre-tested interview schedule. The respondents were classified according their purpose of Caravan dog keeping in two groups' viz. 'profit making' and 'guarding/hunting' purpose groups for further analysis. To ascertain socio-economic profile 11 variables including age, family size, social group, education, land holding, occupation, income etc. were included. In interview schedule, 15 management practices were incorporated in the areas of housing, management, breeding, feeding, health etc. identified through review of literature and in consulta-

tion of experts with maximum obtainable score of 25 and minimum 6 score. Indices were calculated using following formula

$$\text{Adoption Index} = \frac{\text{Total adoption score obtained by respondent}}{\text{Maximum obtainable adoption score by respondent}} \times 100$$

Extent of adoption was classified in low, medium and high using cumulative square root frequency rule. Opinion of dog owners towards Caravan dog’s behaviour was examined using index. The data were analysed using statistical tools viz. frequency, percent, mean, standard deviation, chi-square test and independent sample ‘t’ test.

Results and Discussion

Socio-economic profile of Caravan dog owners

Study revealed that the maximum proportion (68.95%) of dog owners kept Caravan dog for guarding/hunting purposes. About 31 percent of respondents in the study area reported the profit-making purpose behind keeping Caravan dogs. All respondents were cent percent male with an average age of 34.45 years, having average family size of 4.31 members in their family, holding 2.52 acres of agricultural land, bearing herd size of 2.59 cattle equivalent score, keeping 1.83 number of Caravan dogs, and having 3.79 years’ experience in dog keeping (Table 1). Age, education, pack size, experience in dog keeping, and extension agency contacts of Caravan dog owners, who keep dogs for making a profit, had statistically higher mean values than their counterparts. Applying an independent sample t-test assuming equal variances revealed significant ($p < 0.05$) mean differences in age, education, pack size, experience and extension agency contact between guarding/hunting and profit-making purpose group of Caravan dog keepers. However, Caravan dog owners in both groups were similar in family size, social group, landholding, herd size, mass media use and dog-related training participation [2,4,6,7]. Table 2 revealed that crop cultivation was the primary income source among both groups with a share of 35.56 percent in overall average gross family income of ₹ 52589, followed by dairy farming (₹ 31324, 21.78 %) and Caravan dog keeping (₹ 29554, 20.55%). Caravan dog owners having a purpose of making profit through dog rearing had generated significantly ($p < 0.05$) higher gross annual average income of ₹ 49867 through dog rearing and also the share of dogs in their family gross annual income was two-fold (30.72%) higher in compared

to dog owners who had kept dogs for guarding or hunting purpose (₹ 20407, 15.06%). The majority of dog keepers (52.94%) who had profit purpose in Caravan dog keeping generated high gross annual family income ranging between ₹ 1,50,000 to ₹ 4,45,000, followed by medium (45.59%) extent of income (Table 3). In comparison, mainstream among guarding/hunting purpose dog keepers (54.97%) had generated a medium extent of gross annual family income ranging between ₹ 1 lakh to ₹ 1.50 lakh. Merely one percent of Caravan dog owners having profit making as a purpose of dog keeping had gross annual family income below one lakh, i.e., low extent. A chi-square test of independence was performed to assess the relationship between the purpose of dog keeping and the extent of gross annual family income. There was a significant relationship ($\chi^2 = 22.707, p < 0.05$) between the purpose of dog keeping and the gross annual family income of Caravan dog keepers. The proportion of high to the medium extent of gross annual family income was around 99 percent among Caravan dog keepers those holding profit-making purposes.

Management practices followed by Caravan dog owners

Study showed that overall, more than 95 percent owners kept dog in their own dwelling, sometimes loose and about 91 percent had provided bedding material to their dogs. Cent percent of owners were offered homemade food [3,11] and followed natural mating [10] in their Caravan dog but not following deworming practice. Overall, most of the dog owners (99.54%) were not using vaccination and record keeping practices [4]. The maximum proportion of Caravan dog owners used combing (86.30%) and bathing (91.32%) for Caravan dog. A chi-square test showed a significant association ($\chi^2 = 7.195, p < 0.05$) between the purpose of dog keeping and the use of combing, which implied that relatively a greater proportion of profit-purposive dog owners (95.59%) had followed combing practice. About 26 percent of ‘pooled’ dog owners had followed nail cutting and mouth cleaning in Caravan dogs, whereas, almost 40 percent of respondents were cleaning ears. The frequency of feeding Caravan dogs was twice daily [3] among the majority (70.78%) of dog owners, while 28.31 percent of owners feed dogs thrice a day. About 98 percent of dog owners offered both vegetarian and non-vegetarian food to their dogs.

Socio-economic attributes	Guarding/hunting (N = 151)	Profit making (N = 68)	Pooled (N = 219)	't' test	'p'
Age (years)	33.94 ± 5.10	35.59 ± 4.79	34.45 ± 5.06	-2.252*	0.025
Family size (No.)	4.34 ± 1.14	4.24 ± 0.98	4.31 ± 1.09	0.641	0.522
Social group (Gen1, OBC2, SC3, ST4, NT5, VJNT6.)	3.50 ± 2.11	3.50 ± 2.15	3.50 ± 2.12	-0.011	0.991
Education (Illiterate1, Primary 2, Middle 3, Secondary 4, Higher secondary 5, Degree 6)	3.56 ± 1.30	4.07 ± 1.27	3.72 ± 1.31	-2.735*	0.007
Land holding (in acres)	2.53 ± 1.79	2.49 ± 1.49	2.52 ± 1.70	0.179	0.858
Herd size (cattle equivalent score)	2.60 ± 1.21	2.59 ± 1.09	2.59 ± 1.17	0.045	0.964
Pack size (no.)	1.56 ± 0.83	2.43 ± 0.87	1.83 ± 0.93	-7.024*	0.000
Experience in dog keeping (years)	3.61 ± 1.32	4.18 ± 1.58	3.79 ± 1.43	-2.760*	0.006
Extension agency contact (score)	6.60 ± 0.49	6.78 ± 0.42	6.65 ± 0.48	-2.669*	0.008
Mass media use (score)	6.03 ± 0.31	6.06 ± 0.24	6.04 ± 0.29	-0.601	0.548
Participation in dog related training (yes1, no0)	0.01 ± 0.11	0.00 ± 0.00	0.01 ± 0.09	0.951	0.343

Table 1: Socio-economic characteristics of Caravan dog owner.

*Significantly different at 5% level (p < 0.05).

Family sources of income	Guarding/hobby (N = 151)		Profit making (N = 68)		't' test	p value
	Mean (₹)	Share (%)	Mean (₹)	Share (%)		
Agricultural crops	51523	38.02	54955	33.86	-0.696	0.487
Dairy farming	30066	22.19	34117	21.02	-1.151	0.251
Goat farming	22013	16.25	19558	12.05	0.814	0.416
Sheep farming	4337	3.20	1764	1.09	1.614	0.108
Dog keeping	20407	15.06	49867	30.72	-11.329*	0.000
Service (Govt/Pvt.)	4503	3.32	2058	1.27	0.576	0.565
Trading	2649	1.95	0	0.00	1.481	0.140
Total	135500	100.00	162323	100.00	-4.065*	0.000

Table 2: Income sources of Caravan dog owners.

*Significantly different at 5% level (p < 0.05).

Extent of gross family income (Rs./annum)		Guarding/hunting(N = 151)		Profit making (N = 68)		Pooled (N = 219)		χ²
Levels	Class	Freq.	%	Freq.	%	Freq.	%	
Low	Rs. 65000 to One lakh	30	19.87	1	1.47	31	14.2	22.71*
Medium	Rs. 100001 to Rs. 1,50,000	83	54.97	31	45.59	114	52.1	
High	Rs. 1,50,000 to Rs. 4,45,000	38	25.17	36	52.94	74	33.8	

Table 3: Extent of gross annual family income (₹).

*Significantly different at 5% level (p < 0.05).

Result presented in table 4, elicited that a larger proportion (59.82%) of Caravan dog owners had medium extent (score 13 to 14) use of management practices, followed by high (31.96%) and low (8.22%) levels. About 89 and 97 percent of dog owners who had guarding/hunting and profit-making purpose in dog keeping, respectively, used medium to high extent of management practices

for rearing the Caravan dogs. Statistically, mean score values of management practices used in both comparative groups showed a significant ($p < 0.05$) difference according to their purpose of dog keeping. It implies that dog keepers, who had a profit-making intention, used higher management practices for rearing the Caravan dogs.

Extent of practices followed	Guarding/hunting (n = 151)		Profit making (n = 68)		Pooled (N = 219)	
	Freq.	%	Freq.	%	Freq.	%
Low (Score 10 to 12)	16	10.60	2	2.94	18	8.22
Medium (Score 13 to 14)	91	60.26	40	58.82	131	59.82
High (Score 15 to 18)	44	29.14	26	38.24	70	31.96
Mean ± SD	13.79 ± 1.45		14.29 ± 1.53			

Table 4: Extent of management practices followed by Caravan dog owners.

't' test value -2.317*, $P = 0.021$.

Perceived opinion towards Caravan dog behaviour

The majority of owners (76.26%) opined that their Caravan dog had an aggressive type of general behaviour (Table 5). Chasing type herding behaviour of Caravan dog was reported by more than half of owners (56.62%), at the same time one-third opined herding behaviour of giving eye type. The behaviour of barking towards strangers was observed by the mainstream of owners (79.00%), while 14.16 percent of owners reported attacking type behaviour

of their Caravan dogs towards strangers. About 81 percent of owners believed that their Caravan dog is very obedient. Most of the dog owners thought that Caravan dogs were easy to train (96.80%) and easy to restrain (94.52%). Regarding barking behaviour, the maximum proportion of owners (70.78%) recorded the Caravan dog's high pitch barking ability. Perceived opinion of owners towards behavioural aspects of Caravan dog was similar across both groups.

Items	Class (code used)	Guarding/hunting (N = 151)		Profit making (N = 68)		Pooled (N = 219)		χ^2	P value
		Freq.	Percent	Freq.	Percent	Freq.	Percent		
General behaviour	Aggressive (1)	119	78.81	48	70.59	167	76.26	3.187	0.203
	Playful (2)	30	19.87	20	29.41	50	22.83		
	Docile (3)	2	1.32	0	0.00	2	0.91		
Herding behaviour	Giving eye (1)	47	31.13	26	38.24	73	33.33	1.093	0.579
	Stacking (2)	16	10.60	6	8.82	22	10.05		
	Chasing (3)	88	58.28	36	52.94	124	56.62		
Behaviour with stranger	Polite (1)	12	7.95	3	4.41	15	6.85	2.390	0.303
	Attacks (2)	24	15.89	7	10.29	31	14.16		
	Barks (3)	115	76.16	58	85.29	173	79.00		
Obedience	Disobedient (1)	2	1.32	2	2.94	4	1.83	5.475	0.065
	Good (2)	32	21.19	6	8.82	38	17.35		
	Very good (3)	117	77.48	60	88.24	177	80.82		
Trainability	Difficult to train (1)	4	2.65	3	4.41	7	3.20	0.471	0.493
	Easy to train (2)	147	97.35	65	95.59	212	96.80		
Barking	Low pitch (1)	3	1.99	1	1.47	4	1.83	1.546	0.462
	Medium pitch (2)	45	29.80	15	22.06	60	27.40		
	High pitch (3)	103	68.21	52	76.47	155	70.78		
Restraint	Easy to restrain (1)	140	92.72	67	98.53	207	94.52	3.060	0.080
	Not easy to restrain (2)	11	7.28	1	1.47	12	5.48		

Table 5: Perceived opinion towards behaviour of Caravan dog.

Conclusion

In conclusion, majority of Caravan dog owners kept dog for guarding/hunting purposes. Caravan dog owners who had profit making purpose in dog keeping had significantly higher mean age, education, pack size, experience and extension contacts than guarding/hunting purposive dog keepers. Profit intended dog owners had generated significantly higher gross annual average income through dog rearing and share of dog's income in their family gross income was two-fold higher than their counterparts. Overall, majority of Caravan dog owners used medium extent of management practices. However, dog keepers, who had a profit-making intention, used higher management practices in rearing Caravan dogs. In general, Caravan dogs are reared using less inputs without scientific housing, management, feeding, breeding, and health practices. The majority of owners felt that Caravan dog had aggressive, chasing type herding, having high pitched barking and barking behaviour towards strangers. Maximum perceived that this breed of Caravan dog is obedient, easy to train and easy to restraint. Caravan dog has a potential to fulfil social and economic needs. Dog owners needs to be aware and educated toward scientific management practices.

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