



Challenges Encountered by Veterinarians and Dairy Farmers in the Context of Animal Healthcare Services in Kashmir

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

The present study was purposively carried out in Kashmir Division of Jammu and Kashmir based on the availability of records for data collection at respective Government, Veterinary Healthcare Centers. The aim of the study was to get a knowhow about various challenges encountered by

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veterinarians and dairy farmers while delivering animal healthcare services in Kashmir. The many challenges/obstacles that veterinarians encounter while providing animal healthcare services, was the absence of efficient diagnostic laboratories with suitable infrastructure in veterinary clinics with a constraint index of 1.00, followed by livestock farmers' delay in bringing animals in for treatment (CI =0.97), inadequate transportation facilities (CI= 0.89). whereas poor supply of inputs with a constraint index of 0.95, followed by difficulty in availing veterinary services during emergencies (CI= 0.92) and non-availability of animal healthcare services round the clock (CI=0.91) were the major constraints that majority of the livestock owners faced while availing the various animal healthcare services. The study's conclusions have given policymakers important information they need to know about the possibility of enhancing AHS in the Union Territory.

Keywords: Constraints; veterinarians; farmers. healthcare; services.

1. INTRODUCTION

Indian livestock sector is one of the largest in the world with holdings of 11.6 percent of the world. The whole animal populace of India is 535.78 million and there has been an increment of 4.6 percent over livestock census 2012 which has added up to bovine populace of 302.79 million that incorporates 192.49 million cattle and 109.85 million buffaloes (20th livestock census) [1]. The development rate of this sector has been relentless and is around four to five percent in spite of getting less investment compared to manufacturing and service sectors [2]. Its share in the total value of the output of the agricultural sector has increased from 28.2 percent to 30.1 percent during 2004-05 to 2012-13 [3]. This sector is developing in India at a (Compound Annual Growth Rate (CAGR)) of 7.9 percent during last five years. India continues to be the largest producer of milk in the world. Several measures have been initiated with the aid of the government to extend the productiveness of livestock, which has resulted in increasing the milk production significantly from the level of 102.6 million tons at the end of the tenth plan (2006-2007) to 127.9 million tons at the end of the eleventh plan (2011-2012). Milk production throughout (2017-2018) and (2018-2019) is 176.3 million tones and 187.7 million tons respectively displaying an annual increasing rate of 6.47 percent. Related to meat and wool production in India, the total production is 8.14 million tons and 45 million Kg, respectively [4]. Despite of its indispensable contribution to national economy, the current level of productivity of cattle in India remains a matter of concern underneath given circumstances when put next therewith of developed components of the globe [5]. The output and profitability remained low on per livestock head basis which is mainly due to the poor genetic character, low

quality of nutrition, unscientific animal husbandry practices; lack of proper know-how about farm animal's rearing, managing risks, market facilities, disease control and drug resistance and the prevalent animal healthcare delivery system [6].

The provision of animal health services is an abstraction that defines the manner in which animal health-related information, expertise and other resources are coordinated within an economy to provide services to animals and their keepers [7]. Animal health is directly and strong linked to productivity and safe trade levels, where animal disease is a major restriction on livestock production and on the safe use of animal products [8]. There are a number of infectious, non infectious, metabolic and deficiency diseases that have an effect on dairy farm animals and cause huge economic losses. In view of this the National Commission on Agriculture determined that livestock development programs cannot presumably succeed without well organized animal health services [9]. The Department of Animal Husbandry from Kashmir provides various animal healthcare services primarily to livestock farmers and in doing so, both the Department and dairy farmers face certain specific obstacles that seriously impede the smooth operation of the present animal health care system prevalent in the Valley. The current study summarizes the different obstacles faced by veterinary professionals and dairy farmers in terms of animal healthcare services in the Valley.

2. MATERIALS AND METHODS

The Kashmir Division of Jammu and Kashmir (UT) consist of 10 districts. The study was conducted in three districts namely, district Shopian, district Ganderbal and district

Baramulla based on the availability of records for data collection at respective government, veterinary healthcare centres. As per the layout of the organizational setup of Animal Husbandry Department (J&K), the top position is occupied by Chief Animal Husbandry Officer, followed by Livestock Development Officers, Superintendent, In charge ABS and Disease Investigation Officers at district level, Block Veterinary Officers at Block level and Veterinary Assistant Surgeons at field level. Proportionate random sampling of 60 percent of the total population of vets was carried out at the field level as part of the study's sampling plan.

With respect to Sampling Plan for the dairy farmers, Five Veterinary Healthcare Centres were randomly selected from each of the three selected districts, (one at district level, one at the block level, and three from the village level) and ten dairy farmers who are availing services from each of these Veterinary Healthcare Centres were randomly selected for interviewing thus making a total of one hundred and fifty respondents for the study.

3. RESULTS AND DISCUSSION

3.1 Constraints Faced by Veterinary Professionals in Delivering of Animal Healthcare Services to Livestock Farmers

Veterinarians are regarded as one of the most practical options for increasing the accessibility of animal healthcare services in the rural areas worldwide. These vets offer a variety of services to farmers and they frequently encounter difficulties/constraints that hinder their ability to perform their jobs effectively. Results from the Table 1 revealed that the lack of effective diagnostic laboratories with adequate infrastructure in veterinary dispensaries was a major constraint experienced by most veterinary professionals with a constraint index of 1.00 (Rank I). This was followed by delay in bringing animals for treatment by livestock farmers with a CI of 0.97 (Rank II) and poor transportation facilities with a constraint Index of 0.89 (Rank III). One of the most realistic alternatives for improving the accessibility of animal healthcare services in the rural areas of many developing nations is to hire veterinarians. Farmers may take use of a wide range of services provided by these veterinarians, but they regularly run across obstacles that make it difficult for them to do their

duties well. The many challenges/obstacles that veterinarians encounter while providing animal healthcare services are illustrated in this section. Table 1.1.18 revealed that a key limitation faced by the majority of veterinary professionals, (CI =1.00) was the absence of efficient diagnostic laboratories with suitable infrastructure in veterinary clinics (Rank I), followed by livestock farmers' delay in bringing animals in for treatment (CI =0.97) (Rank II) and inadequate transportation facilities (CI= 0.89) (Rank III). The foundation of a Nation's Veterinary System is its network of veterinary diagnostic laboratories. These laboratories offer consultation, import/export testing, research, quality assurance activities, and the interpretation of diagnostic data. The livestock sector is underfunded and frequently neglected because the government focuses the majority of its efforts and resources on improving human health. As a result, veterinarians find it difficult to diagnose an animal's illness state based solely on its symptoms because there aren't enough simple diagnosis kits and laboratories available. Additionally, not all districts in the research area had a disease investigation laboratory which made it quite difficult for a veterinarian to transfer samples of inquiry from remote locations to the centre for accurate investigation. The results are dissimilar in findings of Verma et al. [10] which found that the main constraint in delivering of animal health services in Haryana and Punjab states was lack of participation of Veterinary Officers in various policy making and planning process and similar in findings of Alafiatayo et al. [11] which reported that lack of suitable instruments, diagnostic tools and equipment was the most commonly cited barrier in the provision of animal healthcare services by veterinarians in Ethiopia.

3.2 Constraints Faced by Livestock Farmers While Availing Animal Healthcare Services from Department of Animal Husbandry, J&K

In order to ensure that veterinary professionals provide high quality animal healthcare services, it was very important to analyze the challenges that rural people confront in accessing animal health services. The Table 2 gives a gist of various constraints faced by livestock farmers in availing services from the department of Animal Husbandry, J&K. The findings depicts that poor supply of inputs with a CI of 0.95, followed by

Table 1. Distribution of veterinary professionals as per the constraints experienced by them in delivering of animal healthcare services

Problems/constraints	More serious	Serious	Less serious	Average rating	Constraint index*	Rank
Inadequate manpower	27 (42.19)	33 (51.56)	4(6.25)	2.35	0.78	VI
More area of coverage	12 (18.75)	29 (45.31)	23 (35.94)	1.82	0.60	VIII
Delay in bringing animals for treatment	60 (93.75)	4 (6.25)	0 (0.00)	2.93	0.97	II
Inadequate finance	36 (56.25)	21 (32.81)	7 (10.94)	2.45	0.81	V
Lack of sufficient supply of vaccines and drugs at veterinary hospitals	4 (6.25)	38 (59.38)	22 (34.38)	1.71	0.57	IX
Ignorance of farmers	48 (75.00)	11 (17.19)	5 (7.81)	2.67	0.89	IV
Absence of efficient diagnostic laboratories with sufficient infrastructure in veterinary dispensaries	64 (100.00)	0 (0.00)	0 (0.00)	3.00	1.00	I
Lack of adequate training for animal healthcare services	11 (17.19)	9 (14.06)	44 (68.75)	1.48	0.49	XI
Lack of pharmaceutical shops at village level	11 (17.19)	45 (70.31)	8 (12.50)	2.04	0.68	VII
Lack of insurance and risk allowance coverage to vets	13(20.31)	18 (28.13)	33 (51.56)	1.68	0.56	X
Poor transportation facilities	44 (68.75)	20 (31.25)	0(0.00)	2.68	0.89	III

(Figures in parenthesis indicates percentage)

*Index for each constraint obtained by dividing the average rating for that constraint with the maximum obtainable rating

Table 2. Distribution of respondents according to the constraints faced by them while availing animal healthcare services from DAH

Constraints	Constraint faced			Average rating	Constraint index (CI)	Rank
	High	Medium	Low			
Far distance of Veterinary dispensaries from the villages	113(75.33)	8(5.33)	29(19.33)	2.56	0.85	V
Inadequate veterinary staff	90(60.00)	39(26.00)	21(14.00)	2.46	0.82	VI
Non availability of Animal healthcare services round the clock	119(79.33)	23(15.33)	8(5.33)	2.74	0.91	III
Inadequate availability of drugs and vaccines at veterinary hospitals	48(32.00)	27(18.00)	75(50.00)	1.82	0.60	VII
Lack of timely availability of vaccines at veterinary hospitals	59(39.33)	72(48.00)	19(12.67)	2.27	0.75	VIII
Lack of facilities for conducting PM and laboratory diagnosis in rural areas	111(74.00)	35(23.33)	4(2.67)	2.71	0.90	IV
Poor supply of inputs	133(88.67)	15(10.00)	2(1.33)	2.87	0.95	I
Difficulty in availing Veterinary emergency services	124(82.67)	18(12.00)	8(5.33)	2.77	0.92	II

(Figure in parenthesis indicate percentage)

*Index for each constraint obtained by dividing the average rating for that constraint with the maximum obtainable rating

difficulty in availing veterinary services during emergencies (CI= 0.92) and non availability of animal healthcare services round the clock (CI=0.91) were the major constraints that majority of the livestock owners faced while availing the animal healthcare services. The results are contrary to findings of Neeraj and Kumar [12] which reported the non-availability of round-the-clock extension consulting services" as one of the biggest "severe" issues that livestock producers had to deal with while availing animal healthcare services from department of Animal Husbandry, Kashmir.

4. CONCLUSION

These findings highlight the need to remove the major roadblocks that officials face when doing their duties and the need for the department to take reasonable precautions to avoid issues of this sort. Officials from the Animal Husbandry Department should provide a variety of solutions for the healthcare services in order to help them overcome present challenges and deliver these services successfully and efficiently. Additionally, dairy producers' demands and concerns should be taken into account in order to make Kashmir's animal healthcare service among the best in the nation.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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