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Type of the Article	Short Research Article

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p>Compulsory REVISION comments</p> <p>1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript)</p> <p>2. Is the title of the article suitable? (If not please suggest an alternative title)</p> <p>3. Is the abstract of the article comprehensive?</p> <p>4. Are subsections and structure of the manuscript appropriate?</p> <p>5. Do you think the manuscript is scientifically correct?</p> <p>6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</p> <p>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>	
<p>Minor REVISION comments</p> <p>1. Is language/English quality of the article suitable for scholarly communications?</p>		
<p>Optional/General comments</p>	<p>Challenges encountered by Veterinarians and Dairy Farmers in the context of animal healthcare services in Kashmir</p> <p>Abstract</p> <p>The present study was purposely carried out in the Kashmir Division of Jammu and Kashmir based on the availability of records for data collection at respective governments, Veterinary Healthcare Centres. The main aim of the study was to achieve knowledge of knowledge about various challenges encountered by 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) and 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.</p> <p>Key Words: Constraints, Veterinarians, Farmers. Healthcare, Services</p> <p>INTRODUCTION</p> <p>The 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 the livestock census 2012 which has added up to a bovine populace of 302.79 million that incorporates 192.49 million cattle and 109.85 million buffaloes (20th livestock census). The development rate of this sector has been relentless and is around four to five percent in</p>	

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	<p>spite of receiving less investment compared to the manufacturing and service sectors (Shanmathy et al., 2018). 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 (Anonymous, 2014). This sector is developing in India at a CAGR (Compound Annual Growth Rate) 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 (2006-07) to 127.9 million tons at the end of the eleventh plan (2011-12). Milk production throughout (2017-18) and (2018-19) is 176.3 million tons and 187.7 million tons respectively, an annual bloom of 6.47 percent. With respect to meat and wool production in India, the total production is 8.14 million tons and 45 million Kg, respectively (Anonymous, 2019-20). Despite its indispensable contribution to the national economy, the current level of productivity of cattle in India remains a matter of concern indispensable given circumstances when put next therewith of developed components of the globe (Ahuja et al., 2008). The output and profitability stays low on a per livestock head basis, which is mainly due to poor genetic character, low quality of nutrition, unscientific animal husbandry practices; lack of proper know-how about farm animal rearing, managing risks, market facilities, disease control and drug resistance and the prevalent animal healthcare delivery system (Shah, 2001).</p> <p>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 (Mirajkar et al., 2011). Animal health is directly 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 (Swallow 2000). 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 programmes cannot presumably succeed without well organized animal health services (Karthikeyan et al., 2018). The Department of Animal Husbandry in 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. This Paper summarizes the different obstacles faced by Veterinary Professionals and Dairy farmers in terms of animal healthcare services in the Valley.</p> <p>MATERIALS AND METHODS</p> <p>The Kashmir Division of Jammu and Kashmir (UT) consists 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, Incharge 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.</p> <p>With respect to the 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 centres at the village level) and ten dairy farmers, centres availing services from each of these five centres randomly selected for interviewing thus making a total of one hundred and fifty respondents for the study.</p> <p>RESULTS AND DISCUSSION</p> <p>Constraints faced by Veterinary Professionals in delivering animal healthcare services to Livestock farmers</p> <p>Veterinarians are regarded as one of the most practical options for increasing the accessibility of animal healthcare services in the rural areas of many developing nations. 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 of 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 constraint Index of</p>	
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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 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 veterinary'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 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 **to the** findings of Verma et al., (2020) who found that the main constraint in **delivering** animal health services in Haryana and Punjab states was lack of participation of Veterinary Officers in various policy making and **planning**, and similar in findings of Alafiatayo et al., 2022 who 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.

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*
Inadequate manpower	27 (42.19)	33 (51.56)	4 (6.25)	2.35	0.78
More area of coverage	12 (18.75)	29 (45.31)	23 (35.94)	1.82	0.60
Delay in bringing animals for treatment	60 (93.75)	4 (6.25)	0 (0.00)	2.93	0.97
Inadequate finance	36 (56.25)	21 (32.81)	7 (10.94)	2.45	0.81
Lack of sufficient supply of vaccines and drugs at veterinary hospitals	4 (6.25)	38 (59.38)	22 (34.38)	1.71	0.57
Ignorance of farmers	48 (75.00)	11 (17.19)	5 (7.81)	2.67	0.89
Absence of efficient diagnostic laboratories with sufficient infrastructure in veterinary dispensaries	64 (100.00)	0 (0.00)	0 (0.00)	3.00	1.00
Lack of adequate training for animal healthcare services	11 (17.19)	9 (14.06)	44 (68.75)	1.48	0.49

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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

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 face in accessing animal health services. The table 2 given below 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 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 animal healthcare services. The results are contrary to the findings of Neeraj and Kumar (2018) who 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 the department of Animal Husbandry, Kashmir.

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

Constraints	Constraint faced			Average Rating	Const index
	High	Medium	Low		
Far distance of Veterinary dispensaries from the villages	113 (75.33)	8 (5.33)	29 (19.33)	2.56	0.8
Inadequate veterinary staff	90 (60.00)	39 (26.00)	21 (14.00)	2.46	0.8
Non availability of Animal healthcare services round the clock	119 (79.33)	23 (15.33)	8 (5.33)	2.74	0.9
Inadequate availability of drugs and vaccines at veterinary hospitals	48 (32.00)	27 (18.00)	75 (50.00)	1.82	0.6
Lack of timely availability of vaccines at veterinary hospitals	59 (39.33)	72 (48.00)	19 (12.67)	2.27	0.7
Lack of facilities for conducting PM and laboratory diagnosis in rural areas	111 (74.00)	35 (23.33)	4 (2.67)	2.71	0.9
Poor supply of inputs	133 (88.67)	15 (10.00)	2 (1.33)	2.87	0.9
Difficulty in availing Veterinary emergency services	124 (82.67)	18 (12.00)	8 (5.33)	2.77	0.9

(Figure in parenthesis indicate percentage)

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	<p>*Index for each constraint obtained by dividing the average rating for that constraint with the maximum obtainable rating</p> <p>CONCLUSION</p> <p>The study's 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.</p>	
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PART 2:

	Reviewer's comment	Author's comment <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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