

Impact of Additional Duties on the Livestock Extension Services in Punjab: A Veterinary Field Staff Perspective

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Abstract

This study investigates the impact of additional duties of veterinary field staff on the delivery of livestock extension services. The current study was conducted in Punjab province. Administratively, this province consists of nine divisions. All veterinary officers (VOs) and veterinary assistants (VAs) of Punjab were considered as the population of the study. A complete list of veterinary field staff was collected from the Punjab Livestock and Dairy Development Department office. The sample size was calculated with the help of the online sample size calculator www.surveysystem.com with a 5% confidence interval and 95% confidence level. The sample size was drawn through a proportionate simple random sampling technique from two population subgroups, i.e., VOs and VAs. The study results revealed that 85.1% of respondents said they disliked performing the additional duties. About 93% of the respondents reported that the livestock department should have considered their will before assigning additional duties. Additional duties negatively affect the working efficiency of the field staff, as reported by 87.8% of VOs and 93.5% of VAs. Most respondents (58.8%) reported that they have to suspend their routine departmental services upon additional duties. It means, the assignment of additional duties seriously affects the departmental routine extension services. It is suggested that Livestock and Dairy Development, Punjab, should employ exceptional field staff for such additional duties to reduce the extra and irrelevant work burden on veterinary field staff.

Keywords: Livestock Extension, Veterinary Field Staff, Additional Duties, Field Services.

Introduction

The livestock sector plays a pivotal role in ensuring the well-being of humans. It emerged as the largest subsector in agriculture, with a maximum contribution to the country's economy. It contributed 62.68% to agriculture and 14.36% to the GDP during the fiscal year 2022-23 and also played an essential role in developing rural areas in Pakistan (GoP, 2023). Livestock farming is the socioeconomic function of rural families and mainly contributes to improving the livelihood of the farm families (Moyo *et al.*, 2010). As per reports, 46% of the direct and 67% indirect labour force are engaged in the livestock sector in Pakistan (GoP, 2017).

Livestock extension involves communicating with livestock owners in a systematic and organized manner. Extension services contribute to increasing the farmers' knowledge and decision power. It

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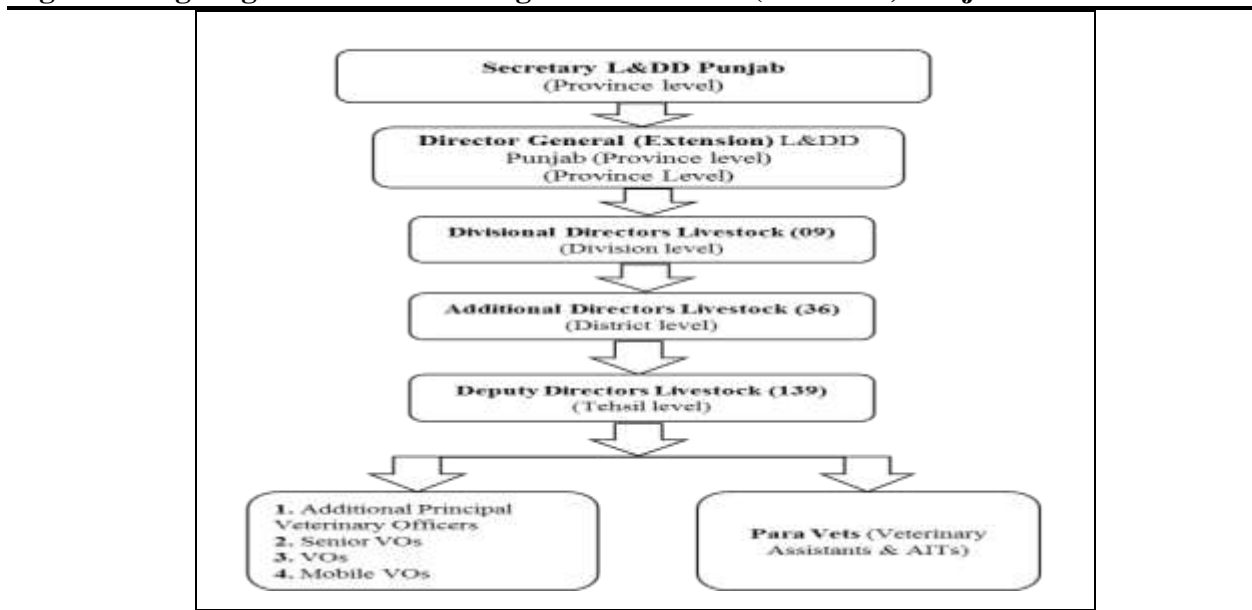
also had extraordinary assistance in technological adoptions and diversifying farming activities to increase farm output (Baiyegunhi *et al.*, 2019). These services increase investors' interest in investing in the livestock industry, speed up the adoption, and ultimately raise dairy farmers' income and living standards (Khan *et al.*, 2018). Such services are essential for developing the dairy industry in developing nations and aim to equip rural populations with research-based knowledge, leading to poverty reduction, rural development, and sustainable and resilient lives (Warriach *et al.*, 2018; Swanson, 2008; Zwane, 2012).

Extension field staff also organize capacity-building training for farmers regarding different livestock aspects and disseminate information regarding improved and site-specific technologies. It positively impacted the adoption of recommended livestock production practices (Ijatuyi *et al.*, 2017). Competent extension specialists are the asset of livestock extension services, which significantly increase animal production to meet the growing demand for dairy products, compete with the rapidly growing population, and earn more foreign exchange (Idrees *et al.*, 2007).

Such organizations assist the farmers in identifying and assessing production issues (Chander *et al.*, 2010). The main goal of the extension is to enable rural families to be able to help themselves. The objective of the extension department is based on farmers' adaptation to modern technology (Galav, 2010). Farmers may have the maximum livestock production by increasing investments and experiencing a clear understanding of the concerned field staff (Mvuna, 2010).

The Livestock and Dairy Development Department was established in 1973 after the Agriculture Department started operating all veterinary issues (GoP, 2014). The Directorate General Extension's field force consists of Senior Veterinary Officers, Veterinary Officers, and Veterinary Assistants who work at the field level. In addition to field staff, additional directors, directors, deputy directors at the district and tehsil levels, and directors at the divisional level supervise the departmental activities (GoP, 2016).

Figure1: Organogram of directorate general livestock (extension) Punjab



Additional duties assigned to the veterinary field staff may disrupt their working efficiency and negatively affect their job satisfaction, leading to stress levels. Furthermore, during extra duties,

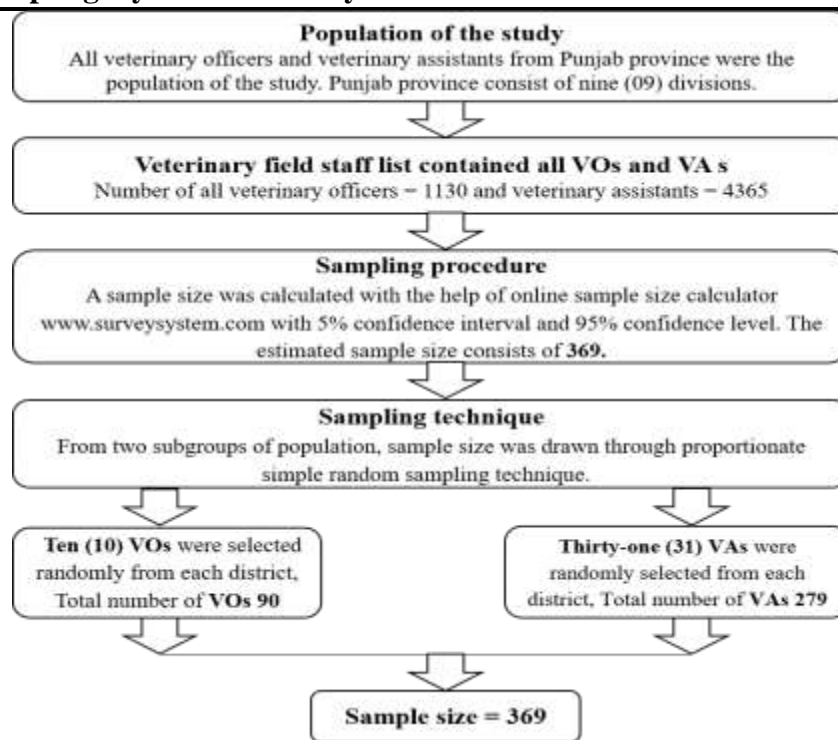
veterinary field staff lost their focus on primary duties, which resulted in less effectiveness and efficiency of the services (Amendola et al., 2011).

Stressful working environments predict poor mental health, and unfortunately, these environments are causing psychiatric diseases (Paterniti et al., 2002). The prevalence of both depression and workplace stress has been increasing. The extension department assesses the impact of work stress on young working staff who have been diagnosed with depression and anxiety (Melchior et al., 2007). The study showed a negative and highly significant relationship between job dedication and workplace stress (Sankar & George, 2013). The present study was conducted to determine the demographic characteristics of veterinary field staff and the impact of additional duties on extension services.

Methodology

Pakistan consists of four provinces, Punjab, Sindh, Baluchistan, and Khyber Pakhtunkhwa. The most densely populated area of Pakistan is Punjab province. Punjab province containing nine divisions that were selected for this study. All divisions of the Punjab were included in a study area of research. From each division, one district was selected randomly for data collection. From each selected district of division, ten VOs and thirty-one VAs were selected through proportionate simple random sampling technique as a sample of the study with 369 estimated sample size.

Figure 2: Sampling layout of the study



Research Instrument and Data Collection

Interview schedules were prepared technically to collect the data. Considering the study's objectives, two different comprehensive and well-designed research instruments (1. Veterinary Officers and 2. Veterinary Assistants) were developed for data collection. These research tools were designed as per the research objectives. The validity and reliability of research tools were

correctly checked to improve their effectiveness. The data was collected through face-to-face interviews with each respondent.

Data Analysis

The collected data was analyzed carefully using statistical techniques, such as SPSS (Statistical Package for Social Sciences). According to the nature of the data, a suitable inferential statistical technique/method (Pearson Correlation) was also applied to check the association among different variables.

Results and Discussion

Assessment of the demographic characteristics of veterinary field staff

Respondents with a lower demographic status usually have less access to financial, educational, social, and health resources than those with a higher demographic status (Fritschi et al., 2009; Balaban & Gunes, 2021). Demographic variables play a crucial role in data interpretation, leading to a more comprehensive understanding of the patterns and dynamics within a sample under consideration. Therefore, in the present investigation, multiple demographic characteristics, i.e., the respondents' age, education, income, job experience, and family background, were studied (table 1).

Most VOs and VAs fall into the age group of 25-45 years, while a smaller proportion was distributed in the < 25 years and > 45 years. The age of veterinary field staff can be an essential factor in the overall success and effectiveness of the profession.

Veterinary field staff play an essential role in animal welfare. Therefore, the education level of the veterinary field staff was assessed. The vast majority of VOs fall into the education group of DVM/Graduation, while a smaller proportion is distributed in the education group of Master/M.Phil. Most VAs fall into the education group of LAD (two-year diploma), while one-fourth proportion is distributed in an educational group of VA/VC (one-year diploma).

Most (92.2%) of VOs were male, while a small proportion was distributed into the female gender group (7.8%). Patel et al. (2016) stated that women often have additional responsibilities and provide more compassionate care than men. More female veterinary field staff working in the livestock sector is adequate for transferring livestock production technologies.

More experienced/skilled field staff can significantly satisfy the livestock farmers through better field services. Most (64.5%) of VOs had 5-15 years of job experience. About (38.7%) of VAs fall into the group of 5-15 years of job experience. It was recorded that most of the livestock field forces needed more experience. The results of the present study contradict Gaida et al. (2018), who demonstrated that most of the veterinary staff have five years of working experience.

Rural backgrounds provide a unique understanding of the challenges of providing veterinary care in areas with limited resources. Results demonstrated that a vast majority of veterinary field staff (77.2%) have a rural background, which is a positive indicator of livestock extension field staff. The results of the present studies are supported by the findings of Roca and McCarthy (2019), who found that the majority of the veterinary staff respondents belonged to rural family backgrounds.

Table 1: Distribution of veterinary field staff based on demographic characteristics

Age (year)	(VOs)		(VAs)		(VOs + VAs)	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
< 25	0	0.0	19	6.8	19	5.1
25-45	71	78.9	178	63.8	249	67.5
> 45	19	21.1	82	29.4	101	27.4
Education Level						
LAD (2-years diploma)	0	0.0	177	63.4	177	48.0
VA/VC (1-year diploma)	0	0.0	72	25.8	72	19.5
SA (Six-month diploma)	0	0.0	30	10.8	30	8.1
DVM/Graduation	76	84.4	0	0.0	76	20.6
Master/M.Phil.	14	15.6	0	0.0	14	3.8
Ph.D.	0	0.0	0	0.0	0	0.0
Gender						
Male	83	92.2	279	100.0	362	98.1
Female	7	7.8	0	0.0	7	1.9
Job Experience (year)						
<5	10	11.1	70	25.1	80	21.7
5-15	58	64.5	108	38.7	166	45.0
> 15	22	24.4	101	36.2	123	33.3
Family Background						
Rural	53	58.9	232	83.2	285	77.2
Urban	37	41.1	47	16.8	84	22.8

n=369

Veterinary Field Staff Additional Duties

The additional duty for official documentation has the highest proportion of employees as 91.1% of VOs and 86.4% of VAs reported that they have been assigned such duties. The paid less overtime duties were performed by 88.9% of VOs and 86.4% of VAs. The flood duties were performed by 82.2% of veterinary officers and 79.6% of veterinary assistants. It was recorded that most of the respondents were engaged in departmental additional duties (table 2).

Table 2: Distribution of veterinary field staff based on assigned departmental additional duties

Departmental additional duties	VOs		VAs		(VOs + VAs)							
	Yes		No		Yes		No		Yes		No	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Departmental documentations duties	82	91.1	8	8.9	241	86.4	38	13.6	323	87.5	46	12.5
Paid less over time duties	80	88.9	10	11.1	241	86.4	38	13.6	321	87.0	48	13.0
Mobile data entry	77	85.6	13	14.4	237	84.9	42	15.1	314	85.1	55	14.9
Flood duties	74	82.2	16	17.8	222	79.6	57	20.4	296	80.2	73	19.8
Cattle's market duties (religious festivals)	62	68.9	28	31.1	206	73.8	73	26.2	268	72.6	101	27.4

Cattles market duties on weekly basis	35	38.9	55	61.1	82	29.4	197	70.6	117	31.7	252	68.3
Slaughterhouse duties on daily basis	22	24.4	68	75.6	5	1.8	274	98.2	27	7.3	342	92.7

Table 3: Distribution of veterinary field staff based on assigned additional duties

Non-departmental additional duties	VOs				VAs				(VOs + VAs)			
	Yes		No		Yes		No		Yes		No	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Duty for tree plantation	86	95.6	4	4.4	265	95.0	14	5.0	351	95.1	18	4.9
Ramadan Bazar duty	81	90.0	9	10.0	217	77.8	62	22.2	298	80.8	71	19.2
Duty on Elections	82	91.1	8	8.9	199	71.3	80	28.7	281	76.2	88	23.8
Duty on religious days	33	36.7	57	63.3	47	16.8	232	83.2	80	21.7	289	78.3
Market price control duty	18	20.0	72	80.0	21	7.5	258	92.5	39	10.6	330	89.4
Wheat-procurement Center duty	30	33.3	60	66.7	17	6.1	262	93.9	47	12.7	322	87.3

Table 4: Distribution of veterinary field staff based on their concerns about additional duties

Concerns about additional duties	VOs				VAs				(VOs + VAs)			
	Yes		No		Yes		No		Yes		No	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Like to perform additional duties?	17	18.9	73	81.1	38	13.6	241	86.4	55	14.9	314	85.1
Department consider my willingness prior to assigning duties	9	10.0	81	90.0	17	6.1	262	93.9	26	7.0	343	93.0
Efficiency of work suffered due to additional duties	79	87.8	11	12.2	261	93.5	18	6.5	340	92.1	29	7.9
I receive remuneration for additional duties	7	7.8	83	92.2	9	3.2	270	96.8	16	4.3	353	95.7

Table 5: Distribution of veterinary field staff based on response regarding who performing additional duties in their absence

Who performs your duties?	(VOs)		(VAs)		(VOs + VAs)	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Lower staff	66	73.3	45	16.1	111	30.1
Colleagues	4	4.4	38	13.6	42	11.4
Services suspend	20	22.2	196	70.3	216	58.5
Total	90	100.0	279	100.0	369	100.0

Table 6: Relationship of additional duties effect on Veterinary field staff (VOs and VAs) livestock extension services

		Additional duties	Animals Services suspended	Held farmers days	Services Efficiency Suffered	Daily field visit	Fear to achieve target
Additional duties	Pearson Correlation	1	.217*	-.225*	.344**	-.325**	.223*
	Sig. (2-tailed)		.024	.033	.000	.000	.020
	N	369	369	369	369	369	369
Animals Services suspended	Pearson Correlation	.217*	1	-.218*	.327**	-.165*	.095
	Sig. (2-tailed)	.024		.024	.000	.013	.373
	N	369	369	369	369	369	369
Held farmers days	Pearson Correlation	-.225*	-.218*	1	-.020	.059	-.001
	Sig. (2-tailed)	.033	.024		.704	.254	.991
	N	369	369	369	369	369	369
Services Efficiency Suffered	Pearson Correlation	.344**	.327**	-.020	1	-.092	.161
	Sig. (2-tailed)	.000	.000	.704		.076	.129
	N	369	369	369	369	369	369
Daily field visit	Pearson Correlation	-.325**	-.265*	.059	-.092	1	-.292**
	Sig. (2-tailed)	.000	.013	.254	.076		.008
	N	369	369	369	369	369	369
Fear to achieve target	Pearson Correlation	.223*	.095	-.001	.161	-	1
	Sig. (2-tailed)	.020	.373	.991	.129	.008	
	N	369	369	369	369	369	369

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

About 95% of VAs and 95.6% of VOs participated in the work of tree plantation. Similarly, VOs and VAs also perform duties related to religious holidays, market price control, and wheat procurement. It is revealed from reported data that the overwhelming majority of respondents were involved in tree plantation, Ramadan bazaar and election duties; the additional duties can

negatively affect the field staff morale and motivation (table 3). Results are similar to the Albore et al. (2018) findings that agriculture extension services always face challenges to producing maximum farm production.

It was noticed that 85.1% of the respondents don't like to perform the additional duties. Overall, 93% of the respondents reported that the livestock and dairy development department did not consider their will before assigning duties. It means that the department enforces such duties. Additional duties negatively affect the working efficiency of the field staff, as reported by 87.8% of the veterinary officers and 93.5% of the veterinary assistants. The Department did not pay any remuneration to the field staff instead of these additional duties. Only 7.8% of veterinary officers and 3.2% of veterinary assistants reported being paid for extra work. Unpaid additional duties can potentially increase the stress level of the field staff (Table 4). The present study's findings agree with Sennuga et al. (2022) that extension services significantly influence livestock production. Most respondents (58.8%) reported that they had to suspend their routine departmental services during additional duties. About 30.1 % of the respondents reported that they handed over their departmental duties to their lower staff. A small percentage (11.4%) of the veterinary field staff gave their duties to their colleagues. Assigning additional duties seriously affects the departmental routine extension services (table 5).

Results revealed a significant positive correlation between additional duties, animal services suspended, fear of achieving targets, and service efficiency. A negative correlation was also noted between daily field visits and additional duties. This suggests that the frequency of additional duties increases resulting in decreasing daily field visits. Similarly, the negative correlation between daily field visits and fear of achieving the target was recorded. Present investigations also revealed a negative correlation between additional duties and held farmer days (table 6). The results of this study are supported by the findings of multiple studies, Belay (2014) and Bellay and Degnet (2004). Bellay (2002) studied the numerous constraints extension agents face and determined that extension services positively correlate with variable factors, including their extra activities.

Conclusion

There is a significant positive correlation between additional duties and services efficiency suffered. Additional duties limited animal field services and increased the fear in employees for achieving their targets. It is concluded that additional duties of veterinary field staff, such as flood duties, tree plantation duties, cattle market duties every week, slaughterhouse duty, price control duties in markets, Ramadan Bazar duties, wheat procurement center, and mobile data entry duties, had a negative effect on the working efficiency of the veterinary field staff.

Recommendations

It is suggested that Punjab's livestock and dairy development department should refrain from engaging their veterinary field staff in additional assignments. However, if inevitable, the staff should be given special allowance for such duties. It is recommended that the livestock and dairy development department in Punjab should employ exceptional field staff for such additional duties to reduce the extra and irrelevant work burden on veterinary field staff. The government of the Punjab should devise a policy not to assign additional duties to the field staff for their smooth and conducive working efficiency.

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