

CHAPTER: 07

LIVELIHOOD MANAGEMENT FOR INCLUSIVE DEVELOPMENT: CASE OF AJEEVIKA PASU SAKHI PROGRAMME OF JHARKHAND

HEMANTA KUMAR MISHRA
hemant@ihmr.edu.in

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ABSTRACT

Ajeevika Pashu Sakhi (APS) is a unique platform for women which helps to increase the economic growth of the village as well as family. The current study implemented in the Khutpani block of the Jharkhand aimed to understand the current situation of the livestock management in a selected village and explore the existing gap. The specific objective of this study was to analyse the status, satisfactory level, and economic growth achieved through the Pashu Sakhi. The study was conducted in one village of Khunpani block which comprised of total 115 villages. The cross-sectional study with explorative nature was administered with pre-designed questionnaire and focus group discussions. Sample of 40 farmers i.e. 20 from general farmer and 20 from APS farmer were contacted through simple random sampling where list of the farmers was obtained from the JSLPS office. Findings revealed that 55.0 per cent APS worker were satisfied with their work, and continue this service for future also, 30.0 percent of APS worker has increased their income through involving themselves in the program. The study also claimed that 60.0 percent of livestock has increased among the studied population however issues such as availability of treatment kits, veterinary hospitals, and medicines, are still playing a barrier against inclusive development and sustainability.

Keywords: *Inclusive development, Self-help Group, Ajeevika Pashu Sakhi, Animal husbandry, Jharkhand*

INTRODUCTION

A change which transforms growth, progress, positive social change in addition to the physical, economic, environmental, social, and demographic components, is called as development. However, in society, development is not uniform and bring inequality among the countries and communities due to lack

of administration of effective policies, and more on social inclusiveness. Many academicians and researchers had worked to bring equity and equality in society and community on different issues; however, the differences in development exist till now. The United Nations (UN) Sustainable Development Goals (SDGs) talks about development in three dimensions i.e., social, ecological, and political (Gupta and Vegelin, 2016). In this context, the ecological and political development is not seen hence, government tried to bring equity in the society by promoting ecological and political development. Livestock is one of the key sources of Indian economy and is contributing to the income sources primarily in rural India.

Animal Husbandry provides a relatively stable and secure income as opposed to the risk-ridden and sporadic agricultural income (Vir, 2023). This has been practiced as a secondary source of income for small and marginal farmers across India. It is also reported that 11.6 per cent i.e., 20.5 million of people, total working population of worlds working in the livestock sector are residing in India and this sector is contributing 4.10 per cent to the gross domestic product of the country (Brindha, 2017). Apart from being a secondary source of income, livestock are also important sources of nutrition through the milk they provide, and an equally significant savings mechanism. Farmers who run into bouts of money report purchasing land and livestock as a popular way of investing their money into productive assets. The second aspect of the livelihood management is the mortality of the animals. Many literatures and discussion with local community revealed that mortality rates among the animals belongs to small and backward farmers, especially in the tribal area is high, due to improper feed and shed management practices. One of the possible reasons for this problem is unavailability of veterinary services and fluctuating fodder availability and lack of information. Thus, mortality risks in livestock do not just result in income reduction, but in lowering of nutrition and capacity of risk absorption for small and marginal farmer household members too. Third, it was also seen that women of the regions are also not empowered economically, and some intervention may help the women to generate some income for their families and they can also fulfill their need of the nutrition, which very impotent for small and marginal families.

Jharkhand state is having tribal dominated people and majority of them depend on dry-land agriculture. Many times, these population faced food insecurity. Likewise, Khutpani block of Chaibasa district in Jharkhand is also no exception to this tradition. The households were involved in mixed farming which encompasses crop cultivation, livestock rearing and poultry farming. Due to this, the socio-economic conditions of the households (HHs) are not contributing significantly to their social status. Keeping this rational in view, Government of Jharkhand (GoJ) promoted Ajeevika Pashu Sakhi (APS) programme with an aim to build sustainable livelihood practices among the community to ensure income and balance in the society in terms of women empowerment and equity-based income generation.

THE APS PROGRAMME AND IT'S APPROACH

The APS is a CASP project, launched in the state of Jharkhand, where female farmers have been engaged in technical training and handholding support for livestock management through a participatory livestock extension service to reduce morbidity and mortality of goats, cow, sheep, poultry pigs etc. The outcome of the intervention brought empowered women who are contributing towards family's requirement to some extent. Under the project, female group members have been given the responsibility to

led livestock extension service and taken the accountability of monitoring and support service. These females are popularly known as “Pashu Sakhi”. These Pashu Sakhi were visited every household to check the status of animals every day and keep the updated records. They also provide handholding support to the families engaged in livestock management and facilitate them in income generating activities. Indirectly, this has helped to look after then animal in a better manner and chances of reduce to the mortality rate of the animal.

Discussion from different literature shows that death rate of goats reduced by 30 per cent and more than 58000 cattle and goat were reared due the project and community engaged in these projects are happy. This is also important to note that Pashu Sakhi are associated with Sakhi Mandal who live in the village itself. Being from the same village, they not only ease the problem of cattle rearers, but they also immediately reach for treatment if needed. It was also seen that the doctor who came from the city to treat the goats charged a high amount of money were now replaced by these Pashu Sakhi were treated those animals with a very low cost of five to ten rupees.

Keeping this rational of empowerment, social inclusiveness, and sustainable economic development, this paper tried to answer few questions such as whether the APS project really contributed to the effectiveness of development of the involved community and what are the barriers faced by the Pashu Sakhi in implementing the project at grassroot level. This study would contribute to how farm-based livelihood intervention could improve the economic growth of the community and bring overall sustainable development.

METHODOLOGY

The cross-sectional and explorative study was conducted with 40 farmers of the block i.e. 20 number of farmers who were exposed to the APS training and 20 farmers who were not exposed to the APS training programme of Khutpani block of Chaibasa district by simple random sampling. The study was of blended in nature and data was collected from the period of 20th February to 21st March 2020 through a structured schedule consisting of socio-demographic profile, vaccination timings, animal mortality period, and monitoring. Data were collected in CS-pro software to bring quality data by incorporating checks and checks. Bivariate analysis was done in Statistical package for social sciences (SPSS) 22nd version. Prior to collection of the data, ethical concern was taken from the respondent in the form of informed consent.



Figure 7.1: Map of the study area

THE STUDY AREA

The study was conducted in one of the selected villages of the Khutpani block of Chaibasa district of Jharkhand state (Fig. 7.1). The block consists of 115 villages where tribal population dominated the habitation. Chaibasa is one of the oldest blocks of 24 districts of Jharkhand, located in the Southern part of newly created Jharkhand state and is the largest district of state, lies between 21°58' and 23° 36' north latitudes and 85° 0' and 86° 54' East longitude. The Geographical area of Chaibasa district spread across 140 km towards south of state capital Ranchi, 25 km from Chakradharpur, and 65 km from Jamshedpur. The population of the district is 69,565 of which 36,273 are males while 33,292 and females as per report released by (Census of India 2011).

Geographically the district is not a compact unit and consists of two widely dissimilar tracts of expansive and impartially open country spot with tree-clad isolated peaks, vast inaccessible forests, extensive river valleys and mountainous terrain. Broadly speaking, it is an undulating table and of different elevations broken up by rugged hill ranges and cut up by torrential hill streams and the rivers like south Koel River, South Karo river, Koina river. Still then more than 60% of the people earn their livelihood from agriculture & allied sector. The district is full of hills alternating with valleys, steep mountains, and deep forests on the mountain slopes. The district contains one of the best Sal forests and the SARANDA (seven hundred hills) forest area is known world over. Scenically it is beautiful with water holes and contains wildlife like Elephants, Bison, rarely found tigers & panthers, bear, wild dogs, wild pigs. Sambhar, deer, and spotted deer are also found but their numbers are decreasing in the forests adjoining habitation.

KEY FINDINGS

The findings of the study are presented in this article on three broad aspect such as (i) socio-demographic status, (ii) livestock disease and their management practices, and (iii) economic status and challenges of the APS.

(i) Socio- economic profile of the respondent

The selected village has total population of 534 people of which male and female population were 46.2 per cent and 53.8 per cent, respectively. 88.01 per cent of the total population were belongs to Scheduled Tribe (ST) community. Male literacy in the Khutpani village is 70.35% and among women it stands for 54.46%. Total geographical area of the village is 241 hectares. There is total 115 villages come under Khutpani block. The communities residing in the villages are engaged in agriculture, business, goats rearing, many households practice, forest, farming etc.

Table 7.1: Demographic profile of the Khutpani block of Chaibasa district, Jharkhand, India

Particular	Total	Male	Female
Total numbers of houses	101	-	-
Total population	534	247 (46.25%)	287 (53.75%)
Children (0-5 Years)	122	48 9 (39.34%)	74 (60.66)
Schedule Caste (SC)	0	0	0
Schedule Tribe (ST)	470	210 (46.68%)	260 (55.32%)

Source: Secondary Data

The study tried to understand the socioeconomic status of the selected respondents and concluded that majority of the HHs were of nuclear in nature as 75 percent of the farmers who were trained on APS had family members of less than 5 persons compared to the general farmers who were not trained on APS project. The proportion of the family members belongs to less than equal to eight to ten members were reported to be higher among the general farmers i.e. ten percent. It further shows that majority of the farmers who were trained belongs to Schedule tribe and rest belongs to other backward class. The land holding capacity of the farmers were up to one to two acres and more than two to three acres. Proportion of upto 1 acre were less among the general farmers who were not trained under APS project. As the economic condition of the farmers are not good, the housing condition was reported to be not so much improved, and they reside in Kachha houses in majority. Only 15 per cent of the farmers who were received as training had Pucca houses and semi pucca houses, respectively (Table 7.2).

Table 7.2: Distribution of respondents' opinion on Household size, caste, and types of houses in the studied village of Khutpani Block

Indicators	APS Farmers (n=20)	General Farmers (n=20)
Family Size		
Less than equal to 5	75%	45%
Less than equal to 5-8	20%	55%
Less than equal to 8-10	5%	10%
Caste		
Schedule Tribe	85%	95%
Schedule Caste	0%	0%
Other Back ward Class	15%	5%
Land in Acre		
Up-to 1 Acre	10%	5%
Up-to 1-2 Acres	30%	10%
Up-to 2-3 Acres	20%	55%
Up-to .4 Acres	45%	5%
More than 5 Acres	5%	30%
Type of Houses		
Kaccha House	70%	80%
Pacca House	15%	0%
Semi Pacca house	15%	20%

(ii) Livestock diseases and their management practices

Livestock management is an important component to increase the income of a household in tribal societies as they are practicing it more compared to rest community in the state. At current study village, community nurture goat, cow, poultry, and other livestock but knowledge of proper nurturing lacks with them. This leads to death of the animals and brings the HHs to viscous cycle of poverty many times. To avoid the death rate of the animals, under APS project, government provides treatment facility and diagnosis of the disease through Pashu Sakhi who were trained by the government on various dimension of

animal husbandry who charged very nominally to provide their services. Not only this, but the Pasu Sakhi also provide the farmers on how to nurture the animal by providing proper fodder which could help to grow.

Figure 7.2 below shows that 10 percent of the farmers who were trained on APS had less than 2 numbers of goat compared to 30 percent of general farmers. Similarly, it was also seen that proportion of farmers who had more than 10 goats been belongs to APS were 40 percent which was more than the general farmers.

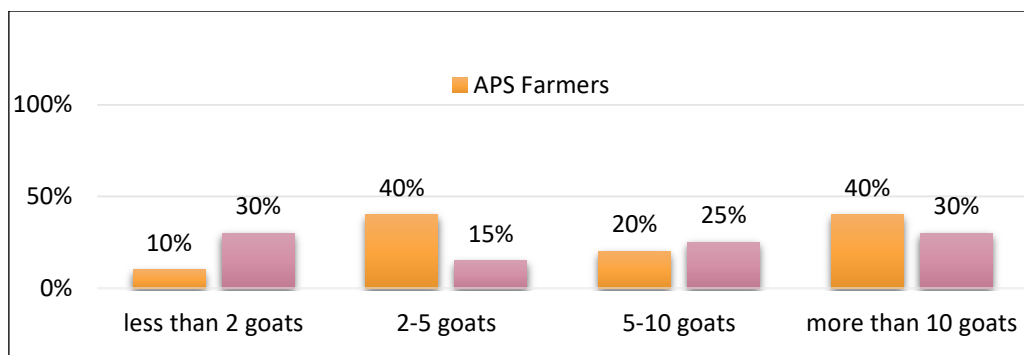


Figure 7.2: Availability of goats in household among APS Farmers (n=20) and general Farmers (n=20)

(iii) Economic status of the farmers after APS intervention

Any intervention gives some result and is expected that it contributes to the inclusive growth of the community by ensuring participation. In context to this view, the author tried to see the changes in income generation due to APS project and result is shown in the Figure 4. The figure depicts that 20 percent of APS farmers generate income of more than 60,000 in the financial year when compared to the general farmers. The trend is similar for generating income of more than INR of 40,000 to 60,000. In contrast to this, the income of the APS farmers was less for categories of income less than 20,000 and 40,000 INR per annum (Fig. 7.2). On discussion made with the APS farmers and general farmers they opined that medicines prescribed by the Pashu Sakhi were not available at the time of treatment and leads to mortality of the animals. This is an operational concern for the project and logistic a supply management issue needs to be taken care of. However, this current paper has not included this mentioned aspect.

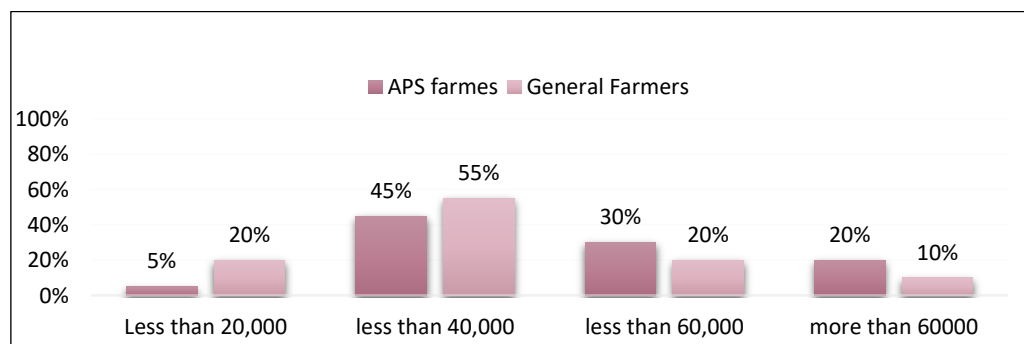


Figure 7.3: Annual income among APS farmers and general farmers after the intervention

(iv) Food and shelter for the livestock

For small landless and marginal farmers who have limited opportunity to grow crops, raising large cattle, small animals such as flocks, pig and poultry could be a source of livelihood. As per literature revealed, India placed second in the world as number of goats is concerned, third in number of sheep and seventh in poultry. Studies also shows that rearing of small animals require less expenses, space, and labour to earn more profit. Considering this as a model, APS project the shelter and fodder were provided by the APS through the Pashu Sakhi. These farmers were trained to construct fence around their shelter and provided to give green feed stand, water and granule stand. Under these techniques, food was given to them in a fixed structure where the animal can eat green food without going outside.



Figure 7.4: Goat shelter and feeding practices made by the farmers

The study also shows that very less numbers of farmers reported that they keep their livestock in a separate shed prepared by them. While, about a third of the farmers reported that their goats are kept in another shed. Only 8 per cent were keeping the livestock on separately prepared shed compared to 58.3 percent of kept their goats inside their house in a small room or in one side of a small room. 19.4 per cent farmers also tie their goats outside the house on any one side, for the night and are left to roam free during the day. This has been one of the issues in the village area where farmers do not have space for keeping livestock and they left the livestock at open space without nurturing them properly (Fig. 7.5).

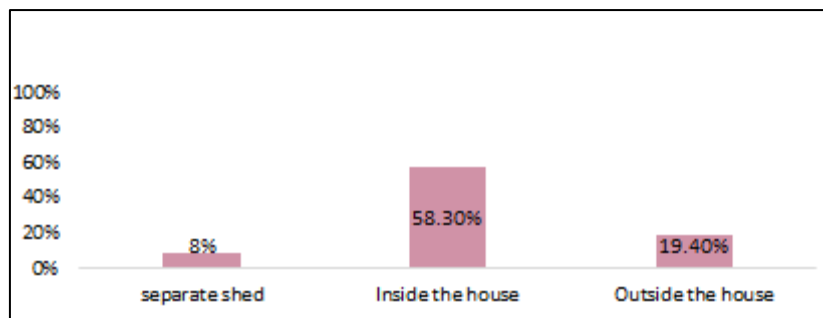


Figure 7. 5: Distribution of respondents on housing for livestock

To understand the practice of the feeding mechanism among the animals under the Project, enquiry was made among the trained farmers and untrained farmers. It was envisaged that farmers received training by APS were using the techniques more compared to the general farmers who were not trained on

the aspect. We can conclude that better income has been evident at the end of the year and their income has been improved (Fig. 7.6).

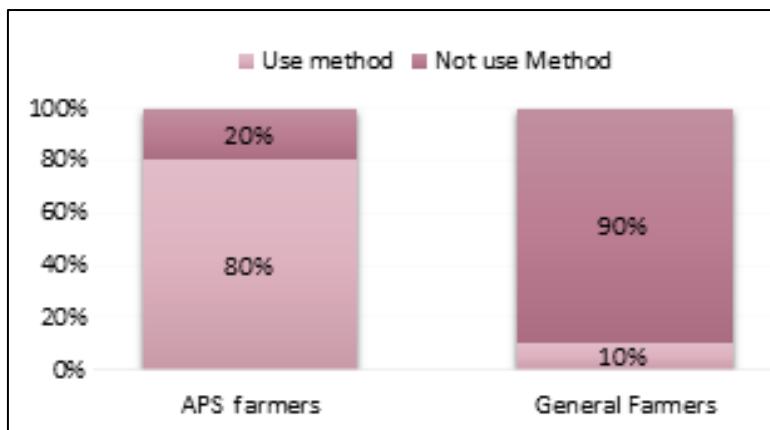


Figure 7.6: Use of goat's feeding method among APS farmers(n=20)and general farmers (n=20)

Timely vaccination helps to reduced morbidity and mortality among animals too. As per literature, among animals many diseases like, goat pox, Enterotoxaemia, Anthrax, Pneumonia, malnutrition, Infection etc infected the livestock. Therefore, the animals must be vaccinated timely to get rid of the infection. Not only this, but some diseases also required to be eliminated as it affected the animal husbandry. Below table describes the details of the vaccination to be given animals (Table 7.3).

Table 7.3: Vaccination schedule for poultry and goats under the APS project

Disease	Timetable for vaccination		Month or year for vaccination	Dose & route	Recommend ation
	Primary	Regular Vaccination			
Enterotoxaemia	Two months of age with a booster does 21 days to 1 month later. 1 does 1-2 week for born unvaccinated goats should be vaccinated.	This is for pregnant goats before lambing and a booster 1 month before lambing	December - January for pregnant animal/march to April for dry flock and male animal, repeated in sept/oct for the letter	1ml/2 ml	For decrease the livestock mortality it is necessary to Regular vaccination is along with booster,
Sheep Pox	Age of 3 month and above	Annually in case of live & biannually in case of killed vaccine	March/April	1ml/5 ml	Regular vaccination is compulsory
Goats Pox	Age of 3 month and above	Annually	March / April	1 ml	Regular vaccination is compulsory
FMD	3 & 1/2 month	Twice in a year	March to	1 ml	Regular

Disease	Timetable for vaccination			Month or year for vaccination	Dose & route	Recommendation
	Primary	Regular Vaccination				
	above			September		vaccination is compulsory
PPR	3 & 1/2 month above	Every interval	3-year	April	1ml	Regular vaccination is compulsory
ET	One does on 6 months	3 months		May/ June	1ml	Regular vaccination is compulsory

(v) Income status and challenges of APS project

Inclusive development is by ensuring community participation and hand holding. For this APS has provided hands on training to Pahu Sakhi to sustaining the project which not only empower the women but also strengthen the sustainability process of economic growth in the community. These workforces are creating demand in the community by providing animal services and creating market linkages, irrespective of several challenges.

Through community-based approach women are empowered through providing technical training or promoted for to doing some hand holding support for their household or women are take led to generating demand on their own house and provide services to livestock farmers by their financial supporting and hand holding support, Pashu Sakhi approach is stabilized. Pashu Sakhi provide knowledge sharing and improved practices by providing door to door service and counselling services for diseases and management. Additionally, they also work as monitoring and support service for the project by creating awareness and training sessions to motivate the farmers.

Hence, to measure the satisfaction level of the famers and Pashu Sakhi discussion were made, and it was envisaged that only 70 percent of the Pashu Sakhi are satisfied whereas the Pashu Sakhi's income which was ranged Rs 500 to 1200 on the 2nd year of the project. The study also shows that income generated through the approach was not sufficient and they need to generate more income to get motivated although they were satisfied by the increase of the income. The reasons include travel to a long distance, Veterinary hospitals are not near by the village and expectation of income is more than 10000 per month.

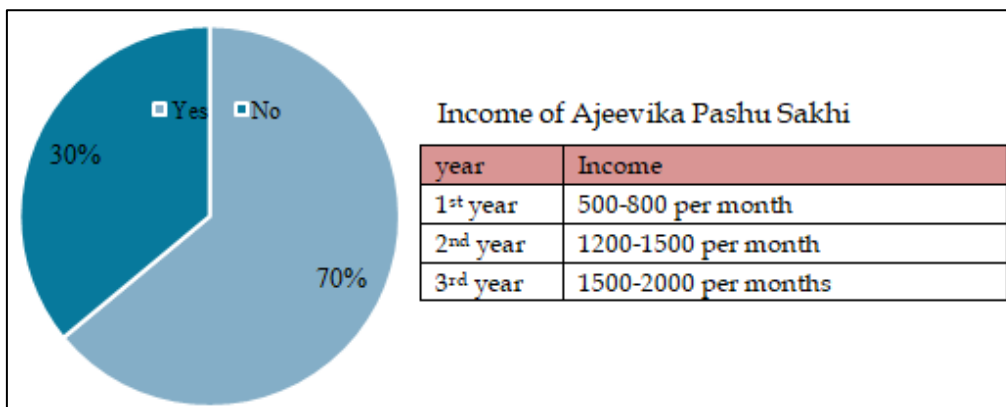


Figure 7.7: Distribution of respondents on Income increased or not through the Pashu Sakhi services

On further discussion with the Pashu Sakhi, it was revealed that Veterinary hospital is very far away from their home, and they have faced the problem to going into the market for buying treatment kit. Similarly, they added visiting the doctor also has a high cost for most of the farmers and they had to travel a larger distance which is very challenging for the women. The information also revealed that 64.0 per cent of the females need to cover 5-6 Kilometres and 11.0 per cent covers 9-10 kilometres for buying medicine. This is one of the reasons why the Pashu Sakhi are leaving the project.

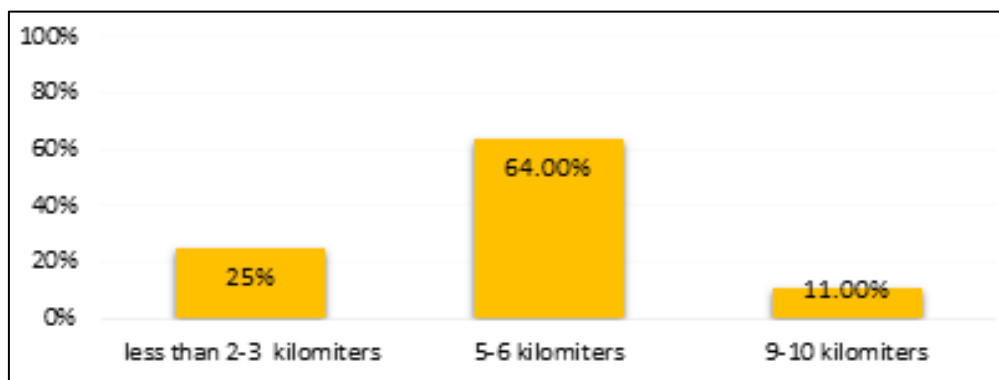


Figure 7.8: Distribution of availability of veterinary services under APS

Availability of logistic and medicines in the project area is a need for sustainability. The study also attempted to understand the source of purchase of medicines which says that 61.0 per cent of the farmers were getting medicines from the Pashu Sakhi, to whom they consult. Only 3.0 per cent of the farmers reported to be buying from the local drug like (Ayurvedic) include mixtures of Heeng (asafoetida), Haldi (turmeric), Chuna (lime), neem and young leaves of bamboo to treat the affected goats based on the symptoms. 2.0 per cent of the farmers were buying from the animal store due to lack of stores and Veterinary hospitals in the region. another constraint of the APS farmers was unawareness about the administration of medicines and non-uniform cost of the medicines (Fig. 7.9).

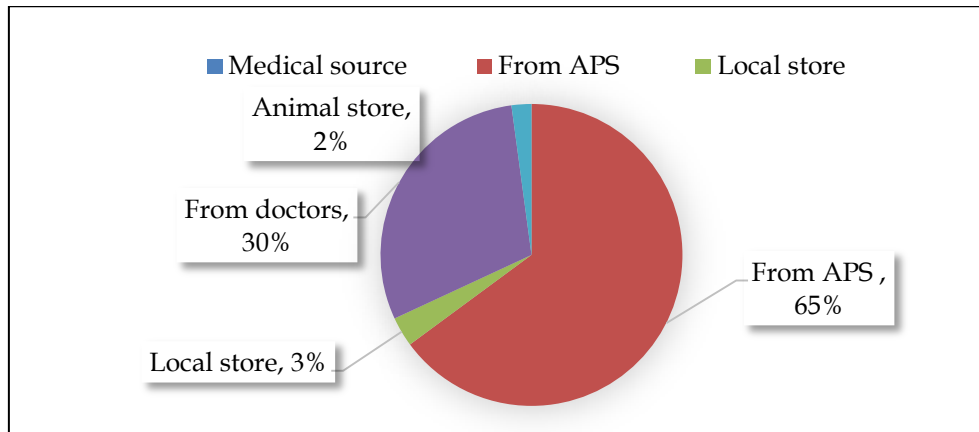


Figure 7.9: Distribution of sources for livestock checkup and treatment

DISCUSSION AND CONCLUSION

Livestock plays a crucial factor in economy of our country. Two thirds of the population in our country is dependent on this and the country has a diversified livelihood resource. In rural India, it is also considered as a main source of income. However, the rural and urban disparities remain challenging in the development scenario, currently. Aimed at this, the current study conducted at Khutpani block of Jharkhand state attempted to understand the effectiveness of the APS project and its sustainability in the state of Jharkhand to address the issue of women empowerment and income generation.

Livestock management is an important concept which is aligned with sustainable and inclusive development. In the current state efforts are being given through different government projects but challenges remain unaddressed to many extents. The APS project implemented by Jharkhand State Livelihood Promotion Society (JSLPS) has been doing good, but it needs more attention to bring sustainability and equality among the community in terms of livestock management. As per 19th livestock census, 512.06 million populations are dependent on livestock, but in recent time there is a decrease of 3.3 percent population dependency on the same (Brindha, 2017). Other reasons which argue for livestock farming is average land holding of farmer in the state is 1.17 hectares and only 35 per cent were doing agriculture from the allocated land of 3.43 million hectares (Kumar et al., 2020).

Livestock is a very important part for the village, and farmers always link with the livestock with agricultural practices. The discussion with key stakeholders reported that due to the role of Pashu Sakhi intervention, mortality rate has been declined and it saved nearly 8,600 goats every year now. This has been evident from the study that satisfaction level of APS farmers is 70 per cent and farmers are purchasing medicines from the Pashu Sakhi for treating their goats. In few cases unavailability of kit and medicines are being creating challenges for the Pashu Sakhi for providing quality services and generating demand. Further the study also reflects that income of the APS farmers are increased over the period and are getting return upto three times over a period of 2-3 years (Raj et al., 2018). To achieve this income and increasing it further on, intervention such as green feeder mechanism, timely treatment during illness and training to the farmers are key (Mazumder et al., 2014). It also concludes that now livestock farmers are not going outside

for vaccination of animals in the project area as morbidity and mortality has been reduced. Pashu Sakhi continuously visited their HHs every week and provide services as per their need. Farmers are satisfied with the Pashu Sakhi workers as income is increasing (Ponnusamy et al., 2017). On challenge part, still in the region many people are unaware of this programme's benefit, and therefore, government must scale up this by providing handholding support and creating awareness. Reasons such as non-availability of medicine shop in the area, unavailability of Veterinary hospitals, lack of awareness and poor market fit for livestock product are key reasons (Kisku and Singh, 2022). This could be reduced and eliminated by establishing market for livestock exchange hubs in the local area and generating demand for livestock resource purchasing and sell (Rathore et al., 2020). This would not only empower the tribal and rural community but also strengthen the economic condition of the community by inculcating inclusive development (Jadoun et al., 2021). Modern training practices could be facilitated to bridge the existing gaps to by reaching to the larger number of communities and livestock farmers.

LIMITATIONS OF THE STUDY

The study recorded certain limitation when the article is being written and recommended others to continue more research on this issue. One of the limitations of this study is lesser number of participants and limited study area. Second, as it belongs to schedule tribe area, communities are not willing to share regarding their income and assets. Despite having more assets at home, many farmers were declaring their annual income less, due to which the author faced some difficulties in getting the right information.

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DISCLOSURE STATEMENT

This article is produced from a primary study conducted by the MBA Rural Management student of IIHMR University and did not involve any financial support from any individuals or institutions.