



Information Source Utilization Pattern of Pack Animal (Equine) Owners in Uttarakhand State of India

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Abstract

The present study was conducted purposively in Chamoli and Uttarkashi districts of Uttarakhand state of India because of the dependency of local people on Equine rearing. A total of 80 pack animal (equine) owners were selected, using snowball sampling technique, 40 from each district and their information source utilization pattern was studied. The most preferred information sources and their level of utilization are important to know for the effective and speedy transfer of information to the equine owners. The information sources were categorised as informal, formal and mass media sources. The results revealed that the respondents contacted family members, neighbours, relatives, medical shop owners and other pack animal owners only 'rarely' or 'sometimes'. Among the formal sources, the Veterinary Officer, Livestock Extension Officer and *Panchayat* personnel were contacted 'rarely' or 'sometimes' for information regarding pack animal rearing. Bank personnel were never contacted. Among the mass media sources, radio, television and mobile phones were 'sometimes' used whereas *Kisan melas*, exhibitions, *kisan call* centres were 'rarely' or 'never' used by the pack animal owners. The level of informal informational source utilization by pack animal owners was 'medium' and that of formal and mass media sources was found to be 'low'. Independent sample 't' test analysis reveals that there was highly significant difference between mass media source utilization by pack animal owners in the two districts.

Keywords: Information sources, utilization pattern, pack animal owners, Uttarakhand

1. Introduction

Information is an input required in every step of the decision-making process, i.e. goal formulation, problem recognition, problem formulation, pre-selection of alternative actions, and in more general terms in uncertainty reduction (Timko and Loyns, 1989; Ohlmer, 1992). Today there are a number of sources through which newly developed technologies could be provided to the end users (Meena and Meena, 2012). However, only 5.1% of the farmer households in India are able to access any information on animal husbandry (NSSO, 2005). The dissemination of information on livestock production has rarely been a priority for centralized extension services in developing countries (Morton and Matthewman, 1996). Meena and Meena (2012) said that majority of farmers' still use traditional or public extension media for exchange idea

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and innovation. An effective livestock extension programme will lead to rapid transformation of innovative techniques (Okummadewa, 1999) and farmers would have prompt access to information about the availability of facilities and incentives for production in order to achieve the desired change.

Good communication does not only consist of giving only information but also helping farmers to improve their activities (Adekun and Agbelemoge, 2002). The preferred mass media sources by farmers include radio, television and newspaper, contact with extension agents or workers and with other farmers (Adams, 1982) and the identification of most preferred information sources by livestock farmers will be helpful for extension agencies and persons engaged in transfer of technology programmes. This would help in selection of appropriate information sources for effective and rapid transfer of new animal husbandry technologies (Sharma et al., 2008). Therefore, the present study was conducted specifically attempting to know the i) different sources of information available in the area, ii) the preferred information source utilized by the equine owners, and iii) level of utilization of information.

2. Materials and Methods

The study was carried out purposively in Uttarakhand state due to dependency of farmers on equines during 2015. A list was prepared of the five districts having the highest population of pack animals (horses, mules and donkeys). Out of the list, two districts, Chamoli and Uttarkashi, were purposively selected as they had the highest pack animal population. 40 respondents from each district were selected using snowball sampling technique, making the total sample size of 80. Data was collected using a pretested semi-structured interview schedule. The information sources were divided into three headings: informal source, formal source and mass media sources. The informal sources included family members, neighbours, medical shops/ feed shops, other pack animal owners and relatives. Formal source had Veterinary Officer (V.O.), Livestock Extension Officer (L.E.O), Non-Government Organisation (NGO) personnel, Krishi Vigyan Kendras (KVK) personnel, Bank personnel, Cooperative personnel, *Panchayat* personnel. Mass Media sources contained radio, newspaper, television (T.V.), *Kisan* melas, exhibition, mobile phones, mobile advisory, *kisan* call centres.

The use of information sources were classified and scoring was done as 'frequently (3)', 'sometimes (2)', 'rarely (1)' and 'never (0)'. Mean, percentage and student t test were applied and level of utilisation was analysed.

3. Results and Discussion

Information and communication are essential ingredients needed for effective transfer of technologies that are designed to boost agricultural production. For farmers to benefit from

such technologies, they must first have access to them and learn how to effectively utilize them in their farming systems and practices (Ariyo et al., 2013). Also, the services make the farmer aware of livestock management in terms of prevention and control of animal diseases (Oladele, 2016).

3.1. Awareness level of the information sources

Table 1 shows the awareness about the information sources among respondents.

Among formal information sources, cent % of the respondents

Table 1: Distribution of pack animal owners according to the awareness/ accessibility of the various formal and mass media information sources

Availability of information sources		Chamoli (n=40)	Uttarkashi (n=40)	Total (N=80)
Formal information sources				
V.O.	Present	40 (100)	40 (100)	80 (100)
L.E.O	Present	40 (100)	40 (100)	80 (100)
N.G.O. personnel	Absent	40 (100)	40 (100)	80 (100)
K.V.K. personnel	Absent	40 (100)	40 (100)	80 (100)
Bank personnel	Present	31 (77.5)	40 (100)	71 (88.75)
	Absent	9 (22.5)	0 (0)	9 (11.25)
Cooperative personnel	Absent	40 (100)	40 (100)	80 (100)
Panchayat personnel	Present	40 (100)	40 (100)	80 (100)
	Absent	0 (0)	0 (0)	0 (0)
Mass media sources				
Radio	Present	40 (100)	40 (100)	80 (100)
Newspaper	Present	40 (100)	40 (100)	80 (100)
Television	Present	25 (62.5)	12 (30)	38 (46.25)
	Absent	15 (37.5)	28 (70)	43 (53.75)
Kisanmelas	Present	26 (65)	29 (72.5)	55 (68.75)
	Absent	14 (35)	11 (27.5)	25 (31.25)
Exhibition	Present	10 (25)	8 (20)	18 (22.5)
	Absent	30 (75)	32 (80)	62 (77.5)
Mobile phones	Present	25 (62.5)	20 (50)	45 (56.25)
	Absent	15 (37.5)	20 (50)	35 (43.75)
Mobile advisory services	Absent	40 (100)	40 (100)	80 (100)
Kisan call centres	Absent	40 (100)	40 (100)	80 (100)

Figures in parenthesis indicate percentage

agreed for the awareness/accessibility to Veterinary Officers (V.O.), Livestock Extension Officers (LEO) and *Panchayat* personnel whereas 100% opined for the non-awareness/ accessibility to Non-Governmental Organisation (NGO) personnel and personnel of Krishi Vigyan Kendra (KVK) and Cooperative personnel for obtaining information about the pack animals. 88.75% respondents opined for the awareness/ accessibility to a Bank personnel.

100% pack animal owners opined for the awareness/ availability of radio and newspaper in the study area. Majority of the respondents (53.75%) opined for the non- accessibility to television because of no provision of electrical power in their villages. Therefore the possession of television is mainly in the areas supplied with electricity. Majority (68.75%) of owners opined for availability of *kisan melas* in their area whereas 77.5% respondents opined for the non-availability of the exhibition in their areas.

100% of the pack animal owners opined for the non-awareness/ accessibility of mobile advisory services and *kisan* call centres in the study area. About 56.25% of the respondents opined for the awareness/accessibility of mobile services in the area followed by the 43.75% of respondents denying the availability of mobile services.

3.2. Information sources utilization

3.2.1. Informal information sources

Table 2 reveals that among the informal interpersonal sources family members (66.5%), medical or feed shops (75%), other pack animal owners (45%) and relatives (82.5%) were used 'rarely' by majority of the respondents to get equine related information. Neighbours were 'sometimes' used by majority (47.5%) of the pack animal owners. This might be due to the reason that generally these owners move in group with their neighbours for work. Bolwell et al., 2013 said that 10% respondents used friends or other horse owners as information source. Family members, friends and technical advisors are most common personal information sources for other livestock owners (Solano et al., 2003; Ford and Babb, 1989).

3.2.2. Formal information sources

It is evident from Table 2 that among the formal interpersonal sources, V.O.(67.5%), L.E.O. (66.25%) and *panchayat* personnel (46.25%) were contacted 'rarely' as information sources. Bolwell et al., 2013, found out that after websites veterinarians (11%) were used as information sources. However it depended on the age and accessibility of the respondents. The limited use of these formal sources may be due to absence of any extension programmes exclusively meant for equine development, and limited access to the veterinarians in the study area. This was also in agreement with study of Fawole, 2006 for poultry development. Bank personnel were never contacted by the respondents. This might be due to the fact that the respondents didn't apply for any kind of loans.

3.2.3. Mass media

Under mass media category, Radio was 'sometimes' (61.25%) used for getting livestock related information. The respondents 'rarely' used newspaper (26.25%) and majority (73.75%) 'never' using it. Although majority of the respondents were literates, they do not prefer reading newspapers. Ford and Babb (1989) also demonstrated that farmers prefer the personal and service-oriented media rather than written information. Sutherland et al. (1996) also said that for the farmers, written information is often late in relation to other sources of information and of little use because it is written in general terms and is perceived as inaccurate. Television programmes were 'never' used by majority (53.75%) because of the issue of power supply in most of the regions in the study area or non-affordability of TV sets. This was in contrast of the results of Chauhan and Kansal, 2014 where preference for TV was higher in dairy farmers followed by newspapers and radio for perceiving knowledge about various animal husbandry practices. Blattman et al., 2003 also reported that 60% of the respondents report watch television, half of the respondents listened to the radio, and around 30% read the newspaper.

Kisan melas were rarely (45%) used while exhibitions were only 'sometimes' used (1.25%) which depended largely on the accessibility to respondents. According to Chauhan and Kansal, 2014, the level of preference for *Pashu Palan Mela* was higher because it covered more information and along with source of information it is one of the sources of enjoyment for dairy farmers. However, mobile phones were not used by 61.25% respondents which show that mass media sources have been inadequately utilized by the pack animal owners. Radio is the only widely used mass media source which is in agreement with study of Abubakar, 2009. Even if other sources are available, they are not within the purchasing power of the pack animal owners and other constraints such as lack of electricity, limited accessibility and maintenance of these mediums restrict the use of these sources.

3.3. Level of information utilization

3.3.1. Level of Informal interpersonal source utilization

Table 3 shows the extent of informal interpersonal source utilization by the respondents in the study area. The result depicts that mean informal informational source utilization of pack animal owners was 'medium' (i.e., 7.07). This meant that although information sources were less sought, however the utilisation was reasonably good. Independent sample 't' test analysis reveals that there was no significant difference between informal interpersonal contact of pack animal owners in two districts.

3.3.2. Level of formal interpersonal information source utilization

The mean formal informational utilization score of respondents in Chamoli and Uttarkashi were 3.27 and 3.57 respectively with pooled value of 3.42. Majority (87.5%) of the respondents



had 'low' level of formal interpersonal information source utilisation which may be due to poor relevance of information or more technical nature, not suited to their socioeconomic context followed by medium (12.5%) level of utilization.

Independent sample 't' test analysis reveals that there was no significant difference between formal interpersonal contact of equine farmers in two districts.

Table 2 Distribution of pack animal owners according to the use of information services by them

	Chamoli (n=40)							Uttarkashi (n=40)		
	F	S	R	N	MaS	MOS	%	F	S	R
<u>Informal interpersonal</u>										
Family members	3 (7.5)	6 (15)	31 (77.5)	0 (0)	3	1.3	43.33	0 (0)	18 (45)	22 (55)
Neighbours	2 (5)	19 (47.5)	19 (47.5)	0 (0)	3	1.575	52.5	3 (7.5)	19 (47.5)	18 (45)
Medical shops/feed shops	1 (2.5)	6 (15)	33 (82.5)	0 (0)	3	1.2	40	0 (0)	13 (32.5)	27 (67.5)
Other pack animal owners	4 (10)	14 (35)	22 (55)	0 (0)	3	1.55	51.67	11 (27.5)	15 (37.5)	14 (35)
Relatives	0 (0)	3 (7.5)	36 (90)	1 (2.5)	3	1.05	35	0 (0)	8 (20)	30 (75)
Total	10 (5)	48 (24)	141 (70.5)	1 (0.5)	15	6.675	44.5	14 (7)	73 (36.5)	111 (55.5)
<u>Formal interpersonal</u>										
V.O.	0 (0)	5 (12.5)	27 (67.5)	8 (20)	3	0.93	30.83	0 (0)	0 (0)	27 (67.5)
L.E.O.	0 (0)	7 (17.5)	27 (67.5)	6 (15)	3	1.03	34.16	0 (0)	6 (15)	26 (65)
Bank personnel	0 (0)	0 (0)	0 (0)	40 (100)	3	0	0	0 (0)	0 (0)	0 (0)
Panchayat personnel	0 (0)	13 (32.5)	27 (67.5)	0 (0)	3	1.32	44.167	8 (20)	22 (55)	10 (25)
Total	0 (0)	25 (15.63)	81 (50.625)	54 (33.75)	12	3.27	27.29	8 (5)	28 (17.5)	63 (39.37)
<u>Mass media sources</u>										
Radio	1 (2.5)	28 (70)	7 (17.5)	4 (10)	3	1.65	55	4 (10)	21 (52.5)	15 (37.5)
Newspaper	0 (0)	0 (0)	6 (15)	34 (85)	3	0.15	5	0 (0)	0 (0)	15 (37.5)
Television	8 (20)	17 (42.5)	0 (0)	15 (37.5)	3	1.45	48.33	0 (0)	5 (12.5)	7 (17.5)
Kisanmelas	0 (0)	9 (22.5)	17 (42.5)	14 (35)	3	0.875	29.167	0 (0)	10 (25)	19 (47.5)
Exhibition	0 (0)	1 (2.5)	0 (0)	39 (97.5)	3	0.05	1.67	0 (0)	0 (0)	0 (0)
Mobile service	7 (17.5)	8 (20)	6 (15)	19 (47.5)	3	1.075	35.83	0 (0)	5 (12.5)	5 (12.5)
Total	16 (6.67)	63 (26.25)	36 (15)	125 (52.08)	18	5.225	29.027	4 (1.67)	41 (17.08)	61 (25.41)
Grand total	26 (4.33)	136 (22.67)	258 (43)	180 (30)	45	15.175	33.72	26 (4.33)	142 (23.67)	235 (39.16)

Table 2: Continue...



	Uttarkashi (n=40)					Total (n=80)					
	N	MaS	MOS	%	F	S	R	N	MaS	MOS	%
Informal interpersonal											
Family members	0 (0)	3	1.45	48.33	3 (3.75)	24 (30)	53 (66.25)	0 (0)	3	1.37	45.83
Neighbours	0 (0)	3	1.625	54.167	5 (6.25)	38 (47.5)	37 (46.25)	0 (0)	3	1.6	53.33
Medical shops/feed shops	0 (0)	3	1.325	44.167	1 (1.25)	19 (23.75)	60 (75)	0 (0)	3	1.26	42.06
Other pack animal owners	0 (0)	3	1.925	64.167	15 (18.75)	29 (36.25)	36 (45)	0 (0)	3	1.73	57.9
Relatives	2 (5)	3	1.15	38.33	0 (0)	11 (13.75)	66 (82.5)	6 (7.5)	3	1.1	36.67
Total	2 (1)	15	7.475	49.83	24 (6)	121 (30.25)	252 (63)	6 (1.5)	15	7.075	47.167
Formal interpersonal											
V.O.	13 (32.5)	3	0.675	22.5	0 (0)	5 (6.25)	54 (67.5)	21 (26.25)	3	0.8	26.67
L.E.O.	8 (20)	3	0.95	31.67	0 (0)	13 (16.25)	53 (66.25)	14 (17.5)	3	0.98	32.91
Bank personnel	40 (100)	3	0	0	0 (0)	0 (0)	0 (0)	80 (100)	3	0	0
Panchayat personnel	0 (0)	3	1.95	65	8 (10)	35 (43.75)	37 (46.25)	0 (0)	3	1.63	54.58
Total	61 (38.125)	12	3.575	29.79	8 (2.5)	53 (16.56)	144 (45)	115 (36)	12	3.43	28.54
Mass media sources											
Radio	0 (0)	3	1.725	57.5	5 (6.25)	49 (61.25)	22 (27.5)	4 (5)	3	1.6875	56.23
Newspaper	25 (62.5)	3	0.375	12.5	0 (0)	0 (0)	21 (26.25)	59 (73.75)	3	0.2625	8.75
Television	28 (70)	3	0.425	14.167	8 (10)	22 (27.5)	7 (8.725)	43 (53.75)	3	0.9375	31.25
Kisanmelas	11 (27.5)	3	0.975	32.5	0 (0)	19 (23.75)	36 (45)	25 (31.25)	3	0.925	30.83
Exhibition	40 (100)	3	0	0	0 (0)	1 (1.25)	0 (0)	79 (98.75)	3	0.025	0.8
Mobile service	30 (75)	3	0.375	12.5	7 (8.75)	13 (16.25)	11 (13.75)	49 (61.25)	3	0.725	24.167
Total	134 (55.83)	18	3.575	19.86	20 (4.16)	104 (21.67)	97 (20.21)	259 (53.95)	18	4.5625	25.35
Grand total	197 (32.83)	45	14.625	32.5	52 (4.33)	278 (23.167)	493 (41.08)	380 (31.67)	45	15.06	33.47

Figures in parenthesis indicate percentage; F: frequently, S: sometimes, R: rarely, N: never; MaS: maximum score; MOS: mean obtained score; %: percentage to the maximum score

Table 3: Distribution of pack animal owners according to the level of information source utilization

Informal informational source utilization	Chamoli (n=40)	Uttarkashi (n=40)	Total (n=80)
Low (0-5)	12 (30)	7 (17.5)	19 (23.75)
Medium (6-10)	25 (62.5)	32 (80)	57 (71.25)
High (11-15)	3 (7.5)	1 (2.5)	4 (5)
Mean±S.D.	6.675±2.141	7.475±1.710	7.075±1.966
t test value	1.84		
Formal informational source	Chamoli (n=40)	Uttarkashi (n=40)	Total (n=80)
Low (0-4)	37 (92.5)	33 (82.5)	70 (87.5)
Medium (5-8)	3 (7.5)	7 (17.5)	10 (12.5)
High (9-12)	0 (0)	0 (0)	0 (0)
Mean± S.D.	3.275±1.176	3.575±0.903	3.425±1.053
t test value	1.28		
Mass media	Chamoli (n=40)	Uttarkashi (n=40)	Total (n=80)
Low (0-6)	23 (57.5)	37 (92.5)	60 (75)
Medium (7-12)	17 (42.5)	3 (7.5)	20 (25)
High (13-18)	0 (0)	0 (0)	0 (0)
Mean±S.D.	5.225±2.787	3.575±1.567	4.4±2.395
t test value	3.264**		

Figures in parenthesis indicate percentage (** $p < 0.01$)

3.3.3. Level of mass media utilization (MMU)

Table 3 depicts that the mean mass media source utilization of pack animal owners in Chamoli and Uttarkashi was 5.22 and 3.57 respectively with the pooled value of 4.4. Majority of the overall respondents (75%) had low level (0-6) of mass media source utilization score followed by 25% respondents having medium score (7-12). Independent sample 't' test analysis reveals that there was highly significant difference between mass media source utilization by pack animal owners in two districts. The owners in Chamoli were having higher mass media sources utilization as compared to Uttarkashi. This might be dependent on the availability of the mass media sources in the two areas.

4. Conclusion

Despite being aware of the information sources, the level of utilization was found to be low to medium. There was no or very limited availability of informational/ extension services. While the extension programs of other countries when use social media (Martinson et al., 2011) for disseminating information, pack animal owners have a long way to go. There is a need for promotion of NGOs, KVKs and Government schemes relevant with equine development.

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