A Relationship between Socio-personal Characteristics with the Extent of Accessing Different Information Sources on Dairy Husbandry Activities by Field Veterinarians in Coastal Odisha

S.M. Nanda[1], P. Swain[2], B.C. Das[2], S.K. Dash[3], K. Shweta[2], S.N. Mohapatra[2], B. Sahoo[4], S.K. Joshi[5], S. Kanungo[6]

10.18805/ajdfr.DR-1779

ABSTRACT

Background: Veterinarians in field conditions access different sources for gathering information on dairy husbandry activities. The information source used most frequently must be given due importance by the researchers and scientists to provide quality information.

Methods: The present study was conducted among 120 field veterinarians of coastal Odisha. The sources used by the respondent veterinarians were identified and analysed for the extent of usage of the sources. The mean was calculated for frequency of accessing different sources for information on dairy husbandry activities as per the data collected in a 3-point continuum scale namely Always (2), Sometimes (1) and Never (0) and ranks were assigned accordingly. The effect of different independent variables on different information sources was analysed using one way ANOVA.

Result: It was reported that usage of internet by the respondents was ranked 1st followed by WhatsApp 2nd, Personal contact 3rd, Phone calls 4th, Technical literatures 5th, books 6th, journals 7th, TV 8th, Apps 9th, SMS 10th and email 11th respectively. It was observed that the female respondent veterinarians were using books and journals significantly more than their male counterparts. Significant difference was observed in usage of books for acquiring information between the respondent veterinarians of young age group (up to 35 years) and old age group (>50 years). Significant differences were observed between the respondent veterinarians with <10 years of job experience and >20 years of experience for using personal contact method with the lower estimates for the higher experienced group.

Key words: Dairy husbandry, Field veterinarians, Information sources.

INTRODUCTION

The technical knowledge for the professionals is the strength of performance in their respective workplace. The competency and the performance of the veterinarians dealing with lives of animals, depends upon the possession of professional knowledge. They have to refresh themselves with the latest developments in veterinary medicines/health related aspects of livestock. For this, they often seek to access different information sources available around them. Saravanan (2010) in the book "ICTs for Agricultural Extension: Global Experiments, Innovations and Experiences" reported that the overall development of the livestock sector of the country was a result of the enhanced and smooth communication provided by ICTs. Ajay *et al*. (2014) in their study reported that among the mass media information sources, television (67.36%) was the most potential source followed by magazine (67.22%) in the urban area of study. However, radio (68.61%) was most important source among rural areas under study. While, on the basis of pooled result, radio was utilized up to 63.69 per cent followed by magazines which was used up to the extent of 62.08 per cent to update the knowledge in the field of livestock. A research study revealed that majority of tribal farmer respondents (84.67 per cent and 65.34 per cent) had medium contact with extension personnel in Mandla and Dindori districts of Madhya Pradesh (Sharma *et al.,* 2019).

[1]Department of Veterinary and Animal Husbandry Extension Education, Faculty of Veterinary and Animal Sciences, West Bengal University of Animal and Fishery Sciences, Kolkata-700 037, West Bengal, India.
[2]Department of Veterinary and Animal Husbandry Extension, C.V.Sc. and A.H., O.U.A.T., Bhubaneswar-751 003, Odisha, India.
[3]Department of Animal Breeding and Genetics, O.U.A.T., Bhubaneswar-751 003, Odisha, India.
[4]Department of Veterinary Epidemiology and Preventive Medicine, Faculty of Veterinary and Animal Sciences, West Bengal University of Animal and Fishery Sciences, Kolkata-700 037, West Bengal, India.
[5]Krishi Vigyan Kendra, Jharsuguda, O.U.A.T., Bhubaneswar-751 003, Odisha, India.
[6]Department of Livestock Production Management, C.V.Sc. and A.H., O.U.A.T., Bhubaneswar-751 003, Odisha, India.

Corresponding Author: S.M. Nanda, Department of Veterinary and Animal Husbandry Extension Education, Faculty of Veterinary and Animal Sciences, West Bengal University of Animal and Fishery Sciences, Kolkata-700 037, West Bengal, India.
Email: vetsubhransu14193@gmail.com

How to cite this article: Nanda, S.M., Swain, P., Das, B.C., Dash, S.K., Shweta, K., Mohapatra, S.N., Sahoo, B., Joshi, S.K., Kanungo, S. (2025). A Relationship between Socio-personal Characteristics with the Extent of Accessing Different Information Sources on Dairy Husbandry Activities by Field Veterinarians in Coastal Odisha. Asian Journal of Dairy and Food Research. 44(2): 192-197. doi: 10.18805/ajdfr.DR-1779.

Submitted: 03-07-2021 **Accepted:** 25-09-2021 **Online:** 27-10-2021

A study conducted by Nanda *et al.* (2020) revealed that field veterinarians of urban areas in coastal Odisha required significantly more information on normal health parameters of dairy animals compared to rural areas. The sources used by the veterinarians of coastal Odisha were analysed in this study.

MATERIALS AND METHODS

This research study was conducted in the month of February, 2020 at Department of Veterinary and Animal Husbandry Extension, College of Veterinary Science and Animal Husbandry, Odisha University of Agriculture and Technology, Bhubaneswar, Odisha, India with 120 veterinarians from the coastal districts of Odisha namely Ganjam, Puri, Kendrapara, Jagatsinghpur, Bhadrak and Balasore. Twenty field veterinarians per district were chosen at a random with a minimum of one year of experience in field condition. The data were collected were collected using a structured interview schedule duly vetted by the experts. The frequency of accessing different sources were collected in a 3-point continuum scale namely Always (2), Sometimes (1) and Never (0). The mean was calculated for each source and ranks were assigned accordingly. The effect on independent variables on the dependent variable was analysed. The age of respondent veterinarians was categorized based on the number of years completed as on the date of interview as expressed by them. One way ANOVA was conducted for various groups as per the method suggested by Snedecor and Cochran (1990).

RESULTS AND DISCUSSION

Sources accessed for acquiring knowledge

The use of internet by the respondents was ranked 1st followed by WhatsApp 2nd, Personal contact 3rd, Phone calls 4th, Technical literatures 5th, books 6th, journals 7th, TV 8th, Apps 9th, SMS 10th and email 11^{th,} respectively. The reason might be the veterinarians were having android mobiles with internet connectivity facility. The reason for maximum use of personal contact might be their accessibility to the fellow vets working nearby. Use of WhatsApp for accessing the information was also ranked 2nd the reason being availability of android mobiles with all the respondents and easy to access the source. The reason of the least accessing to TV, email and journal sources for acquiring information might be the less interest of veterinarians the above sources. It can be inferred that the use of ICT has become a trend among the veterinarians working even in the rural situations. The reason might be availability of internet facilities and penetration of different ICT providing companies into the rural areas. A research stated that the usage of internet by Extension professional for sustainable and society in sub Himalayan region was ranked II while the use of mobile phones was ranked I (Vara Prasad *et al*., 2019).

Effect of gender on usage of different sources

As observed in Table 1, the mean estimates for the usage of books for male and female respondents are 0.96±0.08 and 1.41±0.12 with significant difference between them. Similar trend in result is obtained in case of usage of journals with mean estimates of 0.67±0.06 and 1.04±0.14 for male and female respondent veterinarians respectively. This shows that female respondent veterinarians were using books and journals more than their male counterparts. Moreover, higher estimates were observed for males in case of information acquiring sources like Television, SMS, e-mail and Apps and higher estimates for females were seen in cases of personal contact, Technical literature, phone calls, WhatsApp and Internet. A study conducted at the University of Zimbabwe revealed that most used information sources by veterinary students include books, lecture notes, handouts, internet and projects (Chikonzo and Aina, 2006).

Effect of age on usage of different sources

Table 2 reveals that significant difference was observed in usage of books for acquiring information between the respondent veterinarians of young age group (up to 35 years) and old age group (>50 years). Moreover, it was also observed that numerically, the estimates were higher to lower from young age group to old age group in

Table 1: Effect of Gender on usage of different sources for accessing information.

Source of information gathering	Overall (120)	Gender	Mean±SE	t-value
Personal contact	1.42±0.06	M (98)	1.37±0.07	3.077
		F (22)	1.64±0.10	
Books	1.04±0.07	M (98)	0.96±0.08	6.390*
		F (22)	1.41±0.12	
Journals	0.74±0.05	M (98)	0.67±0.06	7.242*
		F (22)	1.04±0.14	
Technical literatures	1.08±0.06	M (98)	1.04±0.06	2.580
		F (22)	1.27±0.09	
TV	0.69±0.04	M (98)	0.72±0.04	2.342
		F (22)	0.54±0.11	
Phone calls	1.21±0.07	M (98)	1.18±0.07	0.604
		F (22)	1.32±0.15	
SMS	0.42±0.04	M (98)	0.46±0.05	2.568
		F (22)	0.27±0.09	
WhatsApp	1.50±0.04	M (98)	1.49±0.05	0.219
		F (22)	1.54±0.11	
e-mail	0.21±0.04	M (98)	0.24±0.05	1.799
		F (22)	0.09±0.06	
Apps	0.59±0.07	M (98)	0.61±0.08	0.367
		F (22)	0.50±0.16	
Internet	1.51±0.04	M (98)	1.47±0.05	3.279
		F (22)	1.68±0.10	

*Significant at p<0.05, M-Male and F-Female.

case of information sources like personal contact, journals, phone calls, whatsapp and apps. The reason might be due to advancement of age, of senior veterinarians and their busy administrative and other responsibilities did not find enough time to read books for acquiring information. In a study conducted in US, it was concluded that the veterinary practitioners used journals, books, colleagues and continuing education courses to help them keep updated (Pelzer and Leysen, 1991).

Effect of education on usage of different sources

The findings in Table 3 say that, the respondent veterinarians with M.V.Sc. and above degree devote more time for reading books and journals, differing significantly from the respondents with B.V.Sc. and AH degree. The reason might be the veterinarians with higher qualifications are more exposed towards the scientific literature and therefore, they tend to acquire latest information for further enhancing their knowledge. Moreover, estimates as observed to be numerically higher for respondents with B.V.Sc. and AH qualification towards the information acquiring sources like personal contact, television, SMS, e-mail, apps and internet. The reason might be the younger veterinarians are more conversant with use of digital communication tools than the aged veterinarians. It was concluded from a research that the students of veterinary medicine in a Nigerian university usually visited library, surfed in the internet and consulted their personal collections for meeting their information needs (Mabera and Sadiku, 2021).

Table 2: Effect of Age on usage of different sources for accessing information.

Source of gathering information	Overall (120)	No of trainings attended	Mean±SE	f-value
Personal contact	1.42±0.06	Up to 35 years (33)	1.57±0.09	1.393
		36-50 years (71)	1.37±0.08	
		>50 years (16)	1.31±0.22	
Books	1.04±0.07	Up to 35 years (33)	1.27^{b}±0.13	3.339*
		36-50 years (71)	1.01^{ab}±0.09	
		>50 years (16)	0.69^{a}±0.22	
Journals	0.74±0.05	Up to 35 years (33)	0.88±0.10	1.305
		36-50 years (71)	0.70±0.07	
		>50 years (16)	0.62±0.15	
Technical literatures	1.08±0.06	Up to 35 years (33)	1.30±0.09	3.101
		36-50 years (71)	0.98±0.07	
		>50 years (16)	1.06±0.17	
TV	0.69±0.04	Up to 35 years (33)	0.67±0.08	1.254
		36-50 years (71)	0.66±0.06	
		>50 years (16)	0.87±0.12	
Phone calls	1.21±0.07	Up to 35 years (33)	1.27±0.12	0.792
		36-50 years (71)	1.22±0.08	
		>50 years (16)	1.00±0.20	
SMS	0.42±0.04	Up to 35 years (33)	0.45±0.09	0.372
		36-50 years (71)	0.39±0.06	
		>50 years (16)	0.50±0.13	
WhatsApp	1.50±0.04	Up to 35 years (33)	1.57±0.09	0.558
		36-50 years (71)	1.48±0.06	
		>50 years (16)	1.44±0.13	
e-mail	0.22±0.04	Up to 35 years (33)	0.12±0.06	1.016
		36-50 years (71)	0.24±0.06	
		>50 years (16)	0.31±0.15	
Apps	0.60±0.07	Up to 35 years (33)	0.73±0.15	0.705
		36-50 years (71)	0.55±0.08	
		>50 years (16)	0.50±0.20	
Internet	1.51±0.04	Up to 35 years (33)	1.42±0.08	1.050
		36-50 years (71)	1.56±0.06	
		>50 years (16)	1.44±0.13	

*Significant at $p<0.05$.

Values bearing different superscripts for individual parameters across row differ significantly.

Young age: up to 35 years, Middle age: 36-50 years, Old age: >50 years.

Effect of job experience on usage of different sources

Significant differences were observed between the respondent veterinarians with <10 years of job experience and >20 years of experience for using personal contact method with the lower estimates for the higher experienced group. Numerically, the estimates were observed to be higher to lower from less job experience (<10 years) to high job experience (>20 years) in case of information sources like Phone calls, WhatsApp and Apps. The Reverse estimates *i.e*. lower to higher from less job experience (<10 years) to high job experience (>20 years) group in case of SMS and email. This suggests that the less experienced individual tend to access the information faster through the above mentioned sources unlike the more job experienced veterinarians who handles the e-mail. With increase in experience, the veterinarians become confident enough to handle cases on their own and therefore, they seldom seek advices from their seniors. Similar trends were observed in case usage of books. The reason might be the senior veterinarians hold the administrative posts and therefore, they might not find time to read books to enrich their knowledge on Dairy Husbandry. They may be referring any other sources to gather information quickly in order to save time.

Effect of trainings on usage of different sources

The Table 4 shows that significant difference was observed in usage of personal contact, books and TV between the veterinarians who have attended less than 10 trainings with the veterinarians who have attended more than 20 trainings on Dairy Husbandry. Numerically, estimates observed to be in a higher to lower manner for respondents who have attended <10, 10-20 and >20 number of trainings were for journals, technical literature, phone calls, apps and internet. The reason might be that attending more training might have empowered them with more knowledge on management of dairy animals for which the result depicts lower estimate. The mean estimates for usage of books for acquiring information is found out to be 1.37±0.13, 0.95±0.09 and 0.93±0.15 for respondent veterinarians who have less than 10 trainings, between 10 and 20 trainings and more than 20 trainings respectively with significant difference between the first group with the other two separately. The reason might be the veterinarians with less training experience tend to read books more to gather knowledge which is generally imparted in the trainings for the other two groups.

It was also observed from the results that significant difference was observed for the usage of TV for acquiring information on Dairy Husbandry between the veterinarians with less than 10 number of training experience and the respondents who have attended trainings between 10 and 20 in number. The reason might be the former group remains busy with a lot of work like treatments, report making and maintaining records that they hardly find time to watch TV, while the latter group remains more involved in implementation of the schemes and treatment and therefore, they find it interesting to gather

Table 3: Effect of Education on usage of different sources for accessing information.

Source of gathering information	Overall (120)	Education	Mean±SE	t-value
Personal contact	1.42±0.06	B.V.Sc. and AH(67)	1.42±0.07	0.001
		M.V.Sc. and above (53)	1.41±0.09	
Books	1.04±0.07	BVSc and AH(67)	0.91±0.09	4.521*
		M.V.Sc. and above (53)	1.21±0.10	
Journals	0.74±0.05	B.V.Sc. and AH(67)	0.62±0.07	5.755*
		M.V.Sc. and above (53)	0.89±0.08	
Technical literatures	1.08±0.06	B.V.Sc. and AH(67)	1.03±0.08	1.145
		M.V.Sc. and above (53)	1.15±0.08	
TV	0.70±0.04	BVSc and AH(67)	0.76±0.06	2.998
		M.V.Sc. and above (53)	0.60±0.07	
Phone calls	1.21±0.07	BVSc and AH(67)	1.21±0.07	0.000
		M.V.Sc. and above (53)	1.21±0.09	
SMS	0.42±0.04	B.V.Sc. and AH(67)	0.48±0.06	1.714
		M.V.Sc. and above (53)	0.36±0.07	
WhatsApp	1.50±0.04	BVSc and AH(67)	1.49±0.06	0.033
		M.V.Sc. and above (53)	1.51±0.07	
e-mail	0.22±0.04	B.V.Sc. and AH(67)	0.27±0.06	1.731
		M.V.Sc. and above (53)	0.15±0.05	
Apps	0.59±0.07	B.V.Sc. and AH(67)	0.60±0.09	0.007
		M.V.Sc. and above (53)	0.58±0.10	
Internet	1.51±0.04	B.V.Sc. and AH(67)	1.54±0.06	0.503
		M.V.Sc. and above (53)	1.47±0.69	

*Significant at p<0.05.

Table 4: Effect of trainings on usage of different sources for accessing information.

Source of gathering information	Overall (120)	No of trainings attended	Mean±SE	f-value
Personal contact	1.42±0.06	<10 (27)	1.63^{b}±0.09	4.138*
		10-20 (65)	1.45^{ab}±0.07	
		>20 (28)	1.14^{a}±0.16	
Books	1.04±0.07	<10 (27)	1.37^{b}±0.13	3.297*
		10-20 (65)	0.95^{a}±0.09	
		>20 (28)	0.93^{a}±0.15	
Journals	0.74±0.05	<10(27)	0.96^{b}±0.12	2.711
		10-20 (65)	0.71^{ab}±0.07	
		>20 (28)	0.61^{a}±0.11	
Technical literatures	1.08±0.06	<10 (27)	1.22±0.11	0.983
		10-20 (65)	1.06±0.07	
		>20 (28)	1.00±0.12	
TV	0.69±0.04	<10 (27)	0.48^{a}±0.09	3.340*
		10-20 (65)	0.77^{b}±0.06	
		>20 (28)	0.71^{ab}±0.10	
Phone calls	1.21±0.07	<10 (27)	1.29±0.11	0.307
		10-20 (65)	1.20±0.09	
		>20 (28)	1.14±0.15	
SMS	0.42±0.04	<10 (27)	0.33±0.09	0.603
		10-20 (65)	0.45±0.06	
		>20 (28)	0.46±0.09	
WhatsApp	1.50±0.04	<10 (27)	1.60±0.09	0.646
		10-20 (65)	1.46±0.06	
		>20 (28)	1.50±0.04	
e-mail	0.22±0.04	<10 (27)	0.07±0.05	1.504
		10-20 (65)	0.26±0.07	
		>20 (28)	0.25±0.09	
Apps	0.59±0.07	<10 (27)	0.74±0.05	0.704
		10-20 (65)	0.57±0.09	
		>20 (28)	0.50±0.15	
Internet	1.51±0.04	<10 (27)	1.59±0.09	0.73
		10-20 (65)	1.51±0.06	
		>20 (28)	1.43±0.09	

*Significant at p<0.05.

Values bearing different superscripts for individual parameters across row differ significantly.

information from TV programmes pertaining to dairy husbandry.

Effect of working area on usage of different sources

The mean score for the usage of journals for acquiring information on dairy husbandry is found out to be 0.96±0.11, 0.62±0.06 and 0.84±0.15 for veterinarians posted in rural, semi-urban and urban areas, respectively with significant difference between the veterinarians in rural and semi-urban areas with higher estimates for rural areas. Moreover, it was also observed that, numerically higher to lower estimates were obtained from rural areas to urban areas in referring books, journal, technical literature, phone calls WhatsApp, apps, the reason being more number of young veterinarians are posted in the rural area in their first posting and are assigned the field duties for which they tried to keep them abreast with the latest developments through the electronic/digital gadgets.

CONCLUSION

It was reported from the study that the respondent veterinarians were using internet for accessing information on dairy husbandry. Internet was the most accessed information source but the usage of android apps stands at ninth number. Thus, it can be concluded that proper amount of android apps are not available in dairy husbandry sector. ICT tools such as android apps, blogs may be developed to provide required information to the field veterinarians. This will enable them to enhance their professional knowledge at regular intervals, which in turn will help the livestock farmers to get enhanced

service, which may help in improving their socio-economic conditions.

ACKNOWLEDGEMENT

The authors would like to thank the field Veterinarians of the coastal districts of Odisha under study for their cooperation during the collection of data for this research work.

Conflict of interest

All authors declare that they have no conflict of interest.

REFERENCES

Chikonzo, A.C. and Aina, L.O. (2006). Information needs and sources of information used by veterinary students at the University of Zimbabwe. Quarterly Bulletin International Association of Agricultural Information Specialists (IAALD). 46(1-2): 24-28.

Kumar, A., Chauhan, J., Meena, B.S. and Ajrawat, B. (2014). Information Sources Utilized Livestock Owners in Muzaffarnagar, Uttar Pradesh. Indian Research Journal of Extension Education. 14(2): 104-106.

Mabera, S.U. and Sadiku, S.A. (2021). Information needs and search behaviour of students of veterinary medicine in a Nigerian University. Journal of Library Services and Technologies. 3(1): 1-12.

Nanda, S.M., Swain, P., Das, B.C., Dash, S.K. and Shweta, K. (2020). Information needs of field veterinarians of coastal Odisha on dairy husbandry activities. Journal of Entomology and Zoological Studies. 8(6): 1193-1197.

Pelzer, N.L. and Leysen, J.M. (1991). Use of information resources by veterinary practitioners. Bulletin of the Medical Library Association. 79(1): 10-17.

Saravanan, R. (2010). ICTs for Agricultural Extension: Global Experiments, Innovations and Experiences. New India Publishing Agency, New Delhi.

Sharma, A. and Khare, N.K. (2019). Assessment of Information Sources Used by Tribal Farmers of Agricultural Technology Management Agency (ATMA) in Madhya Pradesh, India. International Journal of Current Microbiology and Applied Science, Special Issue-8: 14-21.

Snecodor, G.W. and Cochran, W.G. (1990). Statistical Methods. Indian edition (Revised). Oxford and IBH Publishing Co. New Delhi. pp. 345.

Vara Prasad, C. and Pradhan, K. (2019). Assessing the Extent of ICT usage by extension professional for sustainable agriculture and society in Sub Himalayan region. International Journal of Current Microbiology and Applied Science. 8(7): 142-151.