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A CRITICAL ANALYSIS ON ICT UTILIZATION AMONG FIELD VETERINARIANS OF ANDHRA PRADESH

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ABSTRACT

An ex-post-facto research study was carried out in purposively selected districts of Andhra Pradesh with an objective to analyze the ICT utilization among field veterinarians. The data was collected from 120 field veterinarians through structured interview schedule and ICT utilization index and the same was coded, tabulated and was subjected to appropriate statistical tools. The results revealed that, most of the field veterinarians were using ICT tools in their day-to-day life at medium extent followed by low and high extent of utilization. This could be due to medium access to the latest ICT tools and nature of profession. A focus on infrastructure development and capacity building in ICT tools certainly improves the standards as well as extent of utilization of latest ICT tools among field veterinarians, which will further help out them to render timely and quality service to the farming community.

KEY WORDS: Andhra Pradesh, Animal Husbandry Department, ICT, VAS and Veterinarian

INTRODUCTION

Global livestock scenario is changing and so do the information needs of the livestock farmers. The need for latest information and sophisticated technologies is of paramount importance in the eyes of the progressive livestock farmers. To cater their dynamic needs and to get updated with the latest technologies from time to time, wherein the field veterinarians must equip with global information sources for which he/she is inevitably reliant on the Information Communication Technology (ICT). In this dynamic information era, several robust ICT tools were developed which have the capacity to reduce wastage of time and cost. In order to reduce the work burden and to carry on the multidimensional role, the veterinarians are expected to harness the ICT tools for the very benefit of livestock farmer and for the development of livestock sector.

Several studies on harnessing of ICTs were conducted taking farmers as center of the investigation, but no traceable number of investigations were focused on the utilization aspects of these ICT tools keeping the Field Veterinarians at the center stage.

Keeping this in view a study entitled “A Critical Analysis on ICT Utilization among Field Veterinarians of Andhra Pradesh” was systematically planned and conducted.

METHODOLOGY

Ex-post-facto research design was followed in the present study. Andhra Pradesh was purposively selected for carrying out the study and three districts namely, Srikakulam, Guntur and Chittoor representing northern most, central and

southern most parts of the state were purposively selected. List of Veterinary Assistant Surgeons (VASs)working in A.H. Department was prepared and 40 VASs using ICT tools were selected randomly from each district thus, to constitute a sample of 120 for the study. An ICT utilization index was developed based on the ratings provided by the experts in extension, veterinary sciences and stakeholders in Animal Husbandry Department along with pretested structured interview schedule was administered for collecting the data. To avoid gender bias, a ratio of 3:1 was maintained for selections of males and females respectively which was almost proportionate to the gender ratio of VASs in the selected districts.

RESULTS AND DISCUSSION

Utilization of ICT Tools among Field Veterinarians

Table 1: Distribution of the Respondents According to ICT Utilization

			N = 120
S.No	ICT utilization	Frequency	Percentage
1.	Low	24	20.00
2.	Medium	80	66.67
3.	High	16	13.33
Total		120	100.00
MEAN = 69.21			SD = 10.52

Table 1 indicated that majority (66.67%) of the respondents had medium level of ICT utilization, followed by low and high level of ICT utilization with 20.00 and 13.33 per cent, respectively. It is apparent that, highly educated and information oriented group of veterinarians were supposed to possess high level of ICT usage or at least high to medium level in ICT utilization. But the present situation was quite contrasting and suggests that there was a lack of ICT facilities, technical failure in maintenance of ICTs and internet connectivity problems at the level of VAS (Raghava and Punna Rao, 2014; Verma and Sharma, 2013; Adetumbi *et al.,* 2013; and Matthews-Njoku *et al.,* 2007).

Relationship between independent Variables and ICT utilization among Field Veterinarians

Table 2: Relationship between Independent Variables and ICT Utilization

S. No.	Independent Variable	Correlation Coefficient (r)
1.	Age	-0.036 NS
2.	Gender	-0.255 **
3.	Work experience	-0.089 NS
4.	Background	0.137 NS
5.	Schooling	0.175 NS
6.	Social participation	0.540 **
7.	Innovativeness	0.246 **
8.	Management orientation	0.209 *
9.	Mass media exposure	0.345 **
10.	Extent of knowledge	0.757 **
11.	Familiarity	0.724 **
12.	Information Management Behaviour	0.485**
13.	Trainings Acquired	0.14 NS
*	: Significant at 0.05 level of probability	
**	: Significant at 0.01 level of probability	
NS	: Non-significant	

The coefficient of correlation was worked out to find out relationship between independent variables of the respondents with their ICT utilization. It was apparent from Table 2 that the correlation between independent variables and ICT utilization has shown significant trend as explained below.

The independent variables Age and Work experience were non-significantly in negative correlation with ICT utilization similar to the findings of Khamoushi and Gupta (2015). The possible reason for age trend might be due to the exposure of various ICT tools to the younger generations that the elder generations. Since evolution of ICTs took place at the end of 20th century, the younger generations had more opportunity to get exposed to the novice technologies. While, Work experience trend supported the fact than less experienced veterinarians would have more ICT utilization. This might be due to the exposure and enthusiasm of the less experienced young veterinarians to the modern ICTs which were more easily available during the end of 20th century and in the beginning of 21st century till date.

Gender was significantly in negative correlation with ICT utilization at 1 per cent level of significance as in the studies of Raghava and Punna Rao (*loc.cit*). It implied that male veterinarians were having higher level of ICT utilization when compared to lady veterinarians. This explained the scope of importance to be given to gender while improving ICT utilization among veterinarians.

Social participation, Innovativeness, Mass Media Exposure, Extent of knowledge, Familiarity and Information Management Behaviour were found to have positive correlation with ICT utilization at 1 per cent level of significance and were in accordance with Jha *et al* (2014) and Woreta *et al* (2013). The trend of Social participation might be due to the exposure of the respondents while using the modern ICT tools and social networking applications like Facebook and WhatsApp which became a part of daily life. Even the non-ICT Based social participation also provided effects positively to improve ICT utilization by updating the participants in the aspects of technology. Innovativeness is associated with individual's eagerness in trying new technologies. Innovators were considered as the first of all the adopter categories in the process of adoption of a new technology. It was clear from the trend of Mass Media Exposure that in order to use certain mass media channels like internet, one has to use ICT tools without which it would be impossible to use such channels. Similarly, watching news in Television and listening to various Radio programmes would compel the user to utilize the various ICT tools. As a cumulative effect of all these there would be an improvement in ICT utilization. The trend of Extent of knowledge suggested that higher the extent of knowledge, more would be the extent of ICT utilization. Knowledge in ICT tools will make the individuals to try them and use them at greater ease. As the respondents become well versed with the technology and know how to use it, their level of utilization will also be more. It could also be considered that Information Management Behaviour was a cumulative effect of information acquisition, processing, storing and retrieval and information dissemination behaviours of the respondents on their ICT utilization. So, variation in any of these four factors would create significant variation in ICT utilization of the respondents. That too, in order to get information, comparing it with other sources, storing and to disseminate the information it is necessary for the individual to use the ICT tools. For information acquisition, apart from traditional ways veterinarians were also using the modern ICT tools like, internet, WhatsApp, Facebook, e-mail, etc. For preserving the information Digital Storage Devices like, Pendrives, Hard disks and SD cards were being used. At the same time, for dissemination of information they were using telephone calls, WhatsApp discussions, Facebook discussions, sms, etc., which were popular then.

Management orientation was in positive correlation at 5 per cent level while, Background, Schooling and Trainings acquired were found to be non-significantly in positive correlation with the dependent variable showing their resemblance with the investigation findings of Woreta *et al* (*loc.cit*). The variable Background indicated the importance to be given to rural areas while implementing projects and programmes in ICTs. Rural people should be made more exposed to ICTs for improving the ICT utilization in future. While, schooling suggested that private schooling provided more ICT

utilization compared to that of public schools. It implied that the respondents from public schools were getting less exposure to ICT tools due to lack of computer education in those schools. This could be countered by providing computer education similar to that of e-techno schools in the urban environment. Coming to the independent variable Trainings acquired, it was clear that more trained respondents would utilize the ICT tools to a greater extent. This explained the importance of training in improving ICT utilization. Thus, capacity building trainings would improve ICT utilization of the veterinarians by imparting knowledge and making them familiar with ICT tools and their application in the field level.

Combined effect of independent variables on ICT utilization of the respondents

In order to determine the combined effect of independent variables in explaining the variation in ICT utilization of the respondents, Multiple Linear Regression analysis was carried out. The coefficient of determination (R^2) value, partial regression coefficient (b) values and their corresponding 't' values are given in Table 3.

The 'R^2' value of 0.672 indicated that all the independent variables put together explained about 67.2 per cent of variation in ICT utilization among the VASs.

The partial regression coefficients presented in Table 3 revealed that the independent variables viz; extent of knowledge and familiarity were found positively significant as evident from their significant 't' values. This implied that extent of knowledge and familiarity had positively and more significantly influenced most of the variation in the ICT utilization of the respondents.

Table 3: Multiple Linear Regression Analysis of Independent Variables with ICT Utilization of the Respondents.

S.No.	Independent Variable	Partial Regression Coefficient Value(b)	't' value
1.	Age	0.412	1.449
2.	Gender	-0.108	-1.607
3.	Work experience	-0.418	-1.485
4.	Background	0.033	0.545
5.	Schooling	-0.001	-0.011
6.	Social participation	0.084	1.173
7.	Innovativeness	0.094	1.433
8.	Management orientation	0.038	0.593
9.	Mass media exposure	-0.009	-0.130
10.	Extent of knowledge	0.403	3.960 **
11.	Familiarity	0.263	2.413 **
12.	Information management behaviour	0.079	1.031
13.	Trainings Acquired	0.067	1.099
**** : Significant at 0.01 level of significance**			**R^2 = 0.672**

CONCLUSIONS

The critical analysis among field veterinarians in connection with ICT utilization had concluded that majority of the field veterinarians were using latest ICT tools in their day-to-day life and the same was attributed to their social participation, innovativeness, management orientation, mass media exposure, extent of knowledge, familiarity with ICT tools. A focus on infrastructure development, capacity building and maintenance facilities for ICTs will further improve the utilization of ICT tools among field veterinarians.

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