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Influence of Information Sources on Farmers' Knowledge of Livestock Drugs and Vaccines in Isin Local Government Area, Kwara State, Nigeria

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ABSTRACT

This research work was carried out to examine the influence of information sources on farmers' knowledge of livestock drugs and vaccines in Isin Local Government Area, Kwara State, Nigeria. This research was guided by the Health Belief Model (HBM). Four research questions and one hypothesis were raised to guide the study. Descriptive survey research design was employed. Study population comprised 110 livestock farmers in the LGA. Yamane Sampling formula was used to sample 86 farmers. Questionnaire titled "Influence of Information Sources on Farmers' Knowledge of Livestock Drugs and Vaccines Questionnaire, (IISFKLDVQ, α = .812) was used for data collection. Data was analysed using frequency, percentages and Pearson product moment correlation. Results showed that majority of the farmers (56.8%) have good knowledge of livestock drugs and vaccines; major sources of information for farmers on livestock drugs and vaccines are researchers/consultants such as veterinary doctors (75.6%) followed by fellow farmers (70.9%) followed by internet (68.6%) and radio (61.2%), seminars/workshops (62.8%) and books (55.8%). It also showed that constraints to the accessibility of information on livestock drugs and vaccines include poor power supply (68.6%) followed by No/poor internet access (57.0%), lack of NGOs (54.7%) and lack of extension services (51.2%). Lastly, information sources such as researchers/consultants such as veterinary doctors ($r = .324$, $p<0.05$), seminars and workshops ($r = .308$, $p<0.05$), books ($r = .297$, $p<0.05$), internet ($r = .313$, $p<0.05$), extension services ($r = .299$, $p<0.05$), fellow farmers ($r = .317$, $p<0.05$), and family/friends ($r = .301$, $p<0.05$) all had significant positive correlation on farmers' knowledge of livestock drugs and vaccines. It was concluded that information sources significantly influence farmers' knowledge of livestock drugs and vaccines. It was recommended amongst others that farmers should be given more access to information to boost their knowledge of livestock drugs and vaccines

Keywords: Information Sources, Farmers' Knowledge, Livestock Drugs and Vaccines

INTRODUCTION

The livestock sector universally is greatly dynamic, contributes 40% of the universal value of agricultural output, and support the livelihoods and food security of almost a billion people (Zelalem et al., 2019). In Nigeria, Livestock constitutes one third of the nation's agricultural GDP. It gives income, food, employment, farm energy, fuel, manure and transport. Livestock is also a primary source of government revenue (Oluwole, et al., 2019). The livestock sector is thus irreplaceable in the livelihood of the populace as a source of meat, milk, drought power, and income. The amount of people in the universe is increasing exponentially and is projected to get to 9.8 billion by the year 2050, and there has been a corresponding, unprecedented expansion and growth of food animal production to meet the increasing protein demand to support human nutrition requirements (Lewis & Roth, 2020). This increased demand has driven the trend towards high volume, animal dense systems that provide many opportunities for the rapid spread of disease in both developed and developing countries of the world (Adugna et al., 2022).

The death of an animal as a result of disease can have huge consequences on vulnerable households by reducing their ability to withstand and/or overcome food challenges and to emerge from poverty (Comfort et al., 2018).

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This can greatly affect the gross economy of a nation, most importantly, developing countries like Nigeria which is still facing high poverty level (Oluwole, et al., 2019). Hence, there is need for proper drugs and vaccines administration. Vaccination of the livestock is a key constituent of disease prevention and control strategies in the universe. Therefore, vaccinations are an effective way in which to promote both good animal health, good animal welfare, and economic stability for the farmers and the communities (Samrawit et al., 2020). Livestock farmers also need to have knowledge of vaccines and drugs used in livestock farming so as to prevent losses both present and future. With a better understanding of farmers' perceptions of the veterinarian and animal vaccination might be used to overcome the drawback of antimicrobial resistance (AMR) of the infectious diseases of the animals by implementing proper vaccination programme (Richens, 2015).

Despite the importance of farmers' knowledge of livestock drugs and vaccines to the health, growth and development of livestock and prevention of losses, there is however a growing concern on the low to average level of knowledge of drugs and vaccines among livestock farmers in Nigeria. Mayaki and Talabi (2015) showed poor knowledge of equine vaccination among horse owners in Kano, Northern Nigeria. Al-Mustapha et al. (2020) showed that poultry farmers have average knowledge level of the risk perceptions of antibiotic usage and resistance in Kwara State, Nigeria. Salisu et al. (2024) showed that over 60% of Livestock Farmers have poor knowledge of Antimicrobial Usage and Antimicrobial Resistance (AMR) in Katsina State, Nigeria. The implication of the above findings is evident in low productivity of farm animals which impose significant economic losses due to mortality, morbidity, loss of weight, poor growth rate, and poor fertility, and reduced animal draft power (Adugna et al., 2022). Perhaps, the information sources for farmers' knowledge of drugs and vaccines could be a determining factor.

Information sources are avenues through which livestock farmers can get relevant, timely, accurate, cost effective, reliable and usable information on drugs and vaccines for livestock farming. These information sources include but not limited to radio, seminars and workshops, books, internet, extension services, Researchers/Consultants such as Veterinary Doctors, and so on and forth (Ajala et al., 2018; Okoedo-Okojie & Osabuohien, 2016). Although a closely related study by Okoedo-Okojie and Osabuohien (2016) showed that all the information sources identified except campaign, exhibition, and workshop/seminar significantly influenced farmers' knowledge of poultry drugs in Delta state, Nigeria. There however remains scarcity of studies and significant gap in our understanding of the influence of various information sources on livestock farmers' knowledge of drugs and vaccines in Nigeria. This study was therefore carried out to examine the influence of information sources on farmers' knowledge of livestock drugs and vaccines in Isin Local Government Area, Kwara State, Nigeria.

Statement of the Problem

Low to average level of knowledge of drugs and vaccines among livestock farmers have been observed in Nigeria. In support of this observation, studies have shown poor to average level of knowledge of farmers on equine vaccine, antibiotic and antimicrobial usage and resistance in various parts of Nigeria (Al-Mustapha et al., 2020; Mayaki & Talabi, 2015; Salisu et al., 2024). Perhaps, information sources for livestock drugs and vaccines may be responsible. However, a thorough search of literature confirms that little or no work has been done on the influence of information sources on livestock farmers' knowledge of drugs and vaccines. Although a closely related study by Okoedo-Okojie and Osabuohien (2016) showed that all the information sources identified except campaign, exhibition, and workshop/seminar significantly influenced farmers' knowledge of poultry drugs in Delta state, Nigeria. The study however focused on only drugs ignoring vaccines and also only poultry ignoring general livestock. This identified gap made carrying out this study necessary. To this end, this study investigated the extent to which information sources influence farmers' knowledge of livestock drugs and vaccines using Isin Local Government Area, Kwara State, Nigeria as case study.

Aim and Objectives of the Study

The aim of this study was to investigate the influence of information sources on farmers' knowledge of livestock drugs and vaccines in Isin Local Government Area, Kwara State, Nigeria. The objectives were to:

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1. ascertain the level of farmers' knowledge of livestock drugs and vaccines in Isin Local Government Area, Kwara State, Nigeria;

2. find out the information sources for farmers' knowledge of livestock drugs and vaccines in Isin Local Government Area, Kwara State, Nigeria;

3. examine the constraints to the accessibility of information on livestock drugs and vaccines in Isin Local Government Area, Kwara State, Nigeria; and

4. examine the relationship between information sources and farmers' knowledge of livestock drugs and vaccines in Isin Local Government Area, Kwara State, Nigeria.

Research Questions

1. What is the level of farmers' knowledge of livestock drugs and vaccines in Isin Local Government Area, Kwara State, Nigeria?

2. What are the information sources for farmers' knowledge of livestock drugs and vaccines in Isin Local Government Area, Kwara State, Nigeria?

3. What are the constraints to the accessibility of information on livestock drugs and vaccines in Isin Local Government Area, Kwara State, Nigeria?

4. Is there any relationship between information sources and farmers' knowledge of livestock drugs and vaccines in Isin Local Government Area, Kwara State, Nigeria?

Hypothesis

The null hypothesis below was tested at 0.05 level of significance.

$H_0$1: There will be no significant relationship between information sources and farmers' knowledge of livestock drugs and vaccines in Isin Local Government Area, Kwara State, Nigeria.

Significance of the Study

This study would create awareness on the subject matter. It would be of immense benefit to agricultural students and teachers, farmers, ministry of education, and researchers. To the students, the findings would equip them with the necessary insights to design effective educational programs, improve communication strategies, and promote evidence-based practices, ultimately contributing to the sustainable development of the agricultural sector. To the teachers, the results will ensure accurate and up-to-date information, promote responsible practices, encourage critical thinking and decision-making skills, address knowledge gaps, and facilitate collaboration between teachers and farmers. Teachers can better educate their students and contribute to a more sustainable and productive agricultural sector. Farmers can use the findings to promote informed decision-making, improve livestock health and welfare, prevent and control diseases, ensure compliance with regulations, and optimize the utilization of resources within the agricultural sector. Researchers can use the findings of this study as a point of reference for subsequent studies in the line of endeavour.

Scope of the Study

The scope of this study strictly centred on the influence of information sources on farmers' knowledge of livestock drugs and vaccines in Isin Local Government Area, Kwara State, Nigeria. The variable scope covered one independent variable (information sources) and one dependent variable (farmers' knowledge of livestock drugs and vaccines). The geographical scope covered all livestock farming in Isin Local Government Area, Kwara State, Nigeria. The population scope covered all the livestock farmers in Isin Local Government Area, Kwara State, Nigeria.

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LITERATURE REVIEW

Theoretical Framework

This study was hinged on the "Health Belief Model (HBM)".

Health Belief Model (HBM)

The HBM was originally developed in the 1950s by social psychologists working at the United States Public Health Service to explain why many people did not participate in public health programs such as TB or cervical cancer screening. The theory states that people's perception about the benefits and consequences of various health programs determined their seeking information about it and/or participation in it or not (Hochbaum, 1958). The key components of the health belief model include perceived susceptibility, perceived benefits, perceived barriers, self-efficacy, and expectations (which are the product/sum of perceived benefits, barriers and self-efficacy), cues to action (Adeline et al., 2019).

Perceived Susceptibility (Risk): A person's awareness of the risk of a disease will prompt him or her to go seek information on such diseases so as to gain knowledge and adopt healthier behaviours both for himself and animals (Adeline et al., 2019; Hochbaum, 1958).

Perceived Benefits: A person's awareness of the value or usefulness of a new behaviour in decreasing the risk of developing a disease will prompt him or her to seek information so as to gain vital knowledge for decreasing the chances of developing diseases (Adeline et al., 2019; Hochbaum, 1958).

Perceived Barrier: This has to do with an individual's own evaluation of the obstacles in the way of him or her adopting a new behaviour. Of all the constructs, perceived barriers are the most significant in determining behaviour change. For information to be sought and new behaviour to be adopted, a person needs to believe or perceive that the benefits of the new behaviour outweigh the consequences of continuing the old behaviour. This enables barriers to be overcome and the new behaviour to be adopted (Adeline et al., 2019; Hochbaum, 1958).

Self-Efficacy: This has to do with the belief in one's own ability to get required information, and gain knowledge (Adeline et al., 2019). People generally do not try to seek new information unless they think they can do it (Bandura, 1997).

Action Cues: This suggests that a person will seek information and gain knowledge when stimulated by events, people, or things (Adeline et al., 2019; Hochbaum, 1958).

Relevance of Health Belief Model (HBM)

This theory renders support to the influence of information sources on farmers' knowledge of livestock drugs and vaccines. The perceived susceptibility of diseases among livestock, perceived benefits of vaccines and drugs in reducing diseases among livestock, perceived barriers to getting information on livestock vaccines and drugs, self-efficacy in acquiring livestock vaccines and drugs, and motivation from fellow farmers can enable farmers to derive information from various sources which will ultimately boost their knowledge on livestock vaccines and drugs.

Conceptual Model

The conceptual model for the study showed the relationship between the independent variable (information sources) and one dependent variable (farmers' knowledge of livestock drugs and vaccines) as depicted in figure 1:

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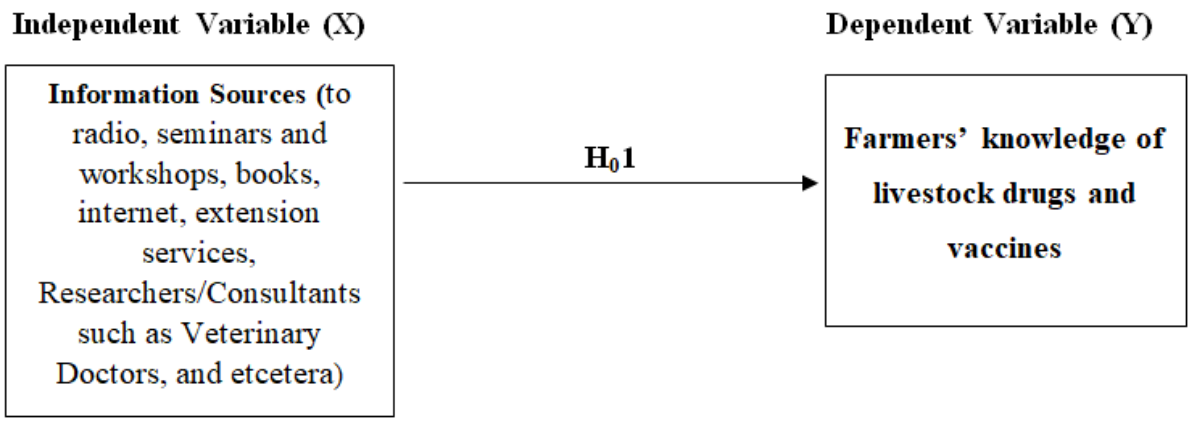

Figure 1: Conceptual Model (Source: Anifowoshe, A. A., 2024)

METHODOLOGY

This research employed the descriptive survey research design. The study population comprised one hundred and ten (110) livestock farmers in Isin Local Government Area, Kwara State, Nigeria. The Taro Yamane sample size determination formula was used to arrive at a sample size of eighty six (86) livestock farmers. The formula is as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Where **n** is the needed sample size,

N is the population size, and **e** is the level of precision.

It was calculated as shown below:

Total Population (N) = 110

$$n = \frac{N}{1 + N(e)^2} = \frac{110}{1 + 110(0.05)^2} = \frac{110}{1 + 110(.0025)}$$

$$= \frac{110}{1+ 0.275} = \frac{110}{1.275} = \mathbf{86}$$

Primary source of data was obtained through the use of a questionnaire titled: "Influence of Information Sources on Farmers' Knowledge of Livestock Drugs and Vaccines Questionnaire (IISFKLDVQ)". This questionnaire consisted of four (4) sections. The first section contained demographic data of the farmers such as gender, age, educational level, years of farming experience, major area of livestock production, Income Level Per Month, Scale of production, membership of Livestock association and membership of cooperative. The second section consisted of eight items on the level of knowledge of livestock drugs and vaccines. The third section consisted of fourteen (14) items on the information sources for knowledge of livestock drugs and vaccines. The fourth section consisted of ten items on the constraints to the accessibility of livestock drugs and vaccines. The rating technique was a two scale of Yes (2) and No (1).

The questionnaire was validated using content and face validity and subjected to Cronbach's alpha method of reliability estimation. This means that the questionnaire was administered to ten (10) farmers using a pilot study. These farmers were excluded from the final study. After retrieval, the instrument was coded and entered into the statistical package for social science (SPSS) software, IBM version 26 and Cronbach's alpha was used to obtain a reliability value of .812 which was considered reliable for the study. The instrument was made into eighty six (86) copies based on the sample size and they were administered to the sampled farmers in the local government area.

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The Livestock farmers' cooperative society meeting in Isin Local Government Area, Kwara State, Nigeria is a gathering of over hundred livestock farmers in the LGA that holds every first Saturday of the month at 10am. The researcher went to the meeting and through permission of the chairman, distributed the instrument to eighty six (86) of them. The farmers were chosen at random. The ten (10) farmers that were initially used for pilot study were excluded. Data was analysed using descriptive and inferential statistical techniques. The socio-demographic characteristics of the farmers were analysed using descriptive statistics such as frequency and percentage. Research questions were answered using frequency, percentages, mean and standard deviation while the hypothesis was tested using Pearson product moment correlation at 0.05 level of significance.

RESULTS

Socio-Demographic Characteristics

Table 1: Socio-Demographic Characteristics of Livestock Farmers (n = 86)

Socio-Demographic Characteristics		**Frequency (n)**	**Percentage (%)**
Gender	Male	49	57.0
	Female	37	43.0
Age (Years)	Less than 20	5	5.8
	21-40	25	29.1
	41-60	42	48.8
	61 and above	14	16.3
Highest Level of Education	No formal education	7	8.1
	Primary education	11	12.8
	Secondary education	22	25.6
	Tertiary education	46	53.5
Years of Farming Experience	1-10	20	23.3
	11-20	42	48.8
	21-30	18	20.9
	31 and above	6	7.0
Income Level Per Month	Less than 100,000	42	48.8
	100,000-499,999	31	36.0
	500,000 and above	13	15.1
Scale of production	Small	32	37.2
	Medium	40	46.5
	Large	14	16.3

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Membership of Livestock association	Yes	69	80.2
	No	17	19.8
Membership of cooperative	Yes	48	55.8
	No	38	44.2

Source: Field Work, 2024

Table 1 showed that 57.0% of the livestock farmers are males while 43.0% are females. It also showed that majority of the farmers (48.8%) are within 41-60 years of age which implies that they are in their mid-ages. Most of them (53.5%) have Tertiary level of education. A major fraction (48.8%) of the farmers have within 11-20 years of farming experience which is good. Most of them (48.8%) earn less than 100,000 naira per month. Majority (46.5%) are into medium scale of production. Many of the farmers (80.2%) are members of livestock association within the state or nation. Most of them (55.8%) are members of farmers' cooperative society.

Answer to Research Questions

Research Question One: What is the level of farmers' knowledge of livestock drugs and vaccines in Isin Local Government Area, Kwara State, Nigeria?

Table 2a: Farmers' Knowledge of Livestock Drugs and Vaccines (n =86)

Items	Frequency (n)	Percentage (%)
I have knowledge of all livestock vaccines and drugs		
Yes (correct)	54	62.8
No	32	37.2
Veterinary vaccines are administered by anyone		
Yes	49	57.0
No (correct)	37	43.0
Due to the absence of disease outbreaks in this area, veterinary drugs and vaccines are deemed unnecessary		
Yes	35	40.7
No (correct)	51	59.3
There have been no favourable outcomes observed with the use of veterinary drugs and vaccines		
Yes	34	39.5
No (correct)	52	60.5
Veterinary drugs and vaccines target uncommon diseases that do not impact your animals		

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Yes	41	47.7
No (correct)	45	52.3
Veterinary drugs and vaccines are utilized to prevent diseases in animals		
Yes (correct)	53	61.6
No	33	38.4
Animals can be negatively affected by veterinary drugs and vaccines		
Yes	36	41.9
No (correct)	50	58.1

Table 2b: Overall Knowledge of Livestock Farmers on Drugs and Vaccines

Variable	**Frequency**	**Percentage (%)**
Have Knowledge (Correct responses)	342	56.8
Do Not Have Knowledge (Non correct responses)	260	43.2

Source: Field Work, 2024

Table 2a showed the level of knowledge of farmers on livestock drugs and vaccines in Isin Local Government Area of Kwara State, Nigeria. More than half (62.8%) have knowledge of all livestock vaccines and drugs. Less than half (43.0%) know that veterinary vaccines are not administered by anyone. Most of the farmers (59.3%) know that even with the absence of disease outbreaks in the area, veterinary drugs and vaccines are still necessary. A major portion (60.5%) of the farmers know that there are favourable outcomes observed with the use of veterinary drugs and vaccines. The remaining responses are shown in table 2a. Overall, the knowledge level of livestock drugs and vaccines among the farmers as depicted by correct responses stood at 56.8% for correct responses (have knowledge) and 43.2% for wrong responses (do not have knowledge). This showed that majority of the farmers have good knowledge of livestock drugs and vaccines in Isin Local Government Area of Kwara State, Nigeria.

Research Question Two: What are the information sources for farmers' knowledge of livestock drugs and vaccines in Isin Local Government Area, Kwara State, Nigeria?

Table 3: Information Sources for Farmers' Knowledge of Livestock Drugs and Vaccines (n =86)

Items (I derive knowledge of livestock drugs and vaccines from……)	**Frequency (n)**	**Percentage (%)**
Radio		
Yes	42	48.8
No	44	51.2
Seminars and Workshops		
Yes	54	62.8

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No	32	37.2
Books		
Yes	48	55.8
No	38	44.2
Internet		
Yes	59	68.6
No	27	31.4
Television		
Yes	31	36.0
No	55	64.0
Researchers/Consultants such as Veterinary Doctors		
Yes	65	75.6
No	21	24.4

Items (I derive knowledge of livestock drugs and vaccines from……)	**Frequency (n)**	**Percentage (%)**
Leaflets/Newspapers		
Yes	26	30.2
No	60	69.8
Extension services		
Yes	47	54.7
No	39	45.3
Fellow Farmers		
Yes	61	70.9
No	25	29.1
Family/Friends		
Yes	41	47.7
No	45	52.3
Exhibition		
Yes	18	20.9
No	68	79.1

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Campaigns		
Yes	27	31.4
No	59	68.6
Others not listed above		
Yes	42	48.8
No	44	51.2

Source: Fieldwork, 2024

Table 3 showed that the major sources of information for farmers on livestock drugs and vaccines are researchers/consultants such as veterinary doctors (75.6%) followed by fellow farmers (70.9%) followed by internet (68.6%) and radio (61.2%), seminars/workshops (62.8%) and books (55.8%). The least sources of information for farmers on livestock drugs and vaccines include exhibition (79.1%) followed by leaflets/newspapers (69.8%), campaigns (68.6%) and television (64.0%).

Research Question Three: What are the constraints to the accessibility of information on livestock drugs and vaccines in Isin Local Government Area, Kwara State, Nigeria?

Table 4: Constraints to the Accessibility of Information on Livestock Drugs and Vaccines (n =86)

Items	Frequency (n)	Percentage (%)
Lack of extension services		
Yes	44	51.2
No	42	48.8
Lack of access roads for easy visit of extension workers		
Yes	38	44.2
No	48	55.8
Lack of NGOs		
Yes	47	54.7
No	39	45.3
Agricultural information is not broadcast on radio and television in Yoruba dialect at all times		
Yes	35	40.7
No	51	59.3
Computer illiteracy		
Yes	34	39.5
No	52	60.5
Inability to read and write (illiteracy)		

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Yes	36	41.9
No	50	58.1
Poor power supply		
Yes	59	68.6
No	27	31.4
Inadequate information from family/friends/neighbours		
Yes	37	43.0
No	49	57.0
Agricultural information on radio and television is always aired at odd hours when farmers who desire such information have gone to their farms		
Yes	45	52.3
No	41	47.7
No/poor internet access		
Yes	49	57.0
No	37	43.0

Source: Fieldwork, 2024

Table 4 showed that the constraints to the accessibility of information on livestock drugs and vaccines include poor power supply (68.6%) followed by No/poor internet access (57.0%), lack of NGOs (54.7%) and lack of extension services (51.2%).

Research Question Four: Is there any relationship between information sources and farmers' knowledge of livestock drugs and vaccines in Isin Local Government Area, Kwara State, Nigeria?

Hypothesis One: There will be no significant relationship between information sources and farmers' knowledge of livestock drugs and vaccines in Isin Local Government Area, Kwara State, Nigeria

Table 5: Correlation Matrix (n =86)

Information Sources		**Knowledge of Drugs and Vaccines**	**Information Sources**		**Knowledge of Drugs and Vaccines**
Radio	Pearson Correlation	.284	Extension Services	Pearson Correlation	.299*
	Sig. (2-tailed)	.066		Sig. (2-tailed)	.049
	N	86		N	86
	Pearson Correlation	.308*	Fellow Farmers	Pearson Correlation	.317*

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Seminar and Workshops	Sig. (2-tailed)	.045		Sig. (2-tailed)	.039
	N	86		N	86
Books	Pearson Correlation	.297	Family/Friends	Pearson Correlation	.301*
	Sig. (2-tailed)	.050		Sig. (2-tailed)	.047
	N	86		N	86
Internet	Pearson Correlation	.313*	Exhibition	Pearson Correlation	.174
	Sig. (2-tailed)	.041		Sig. (2-tailed)	.300
	N	86		N	86
Television	Pearson Correlation	.230	Campaigns	Pearson Correlation	.189
	Sig. (2-tailed)	.113		Sig. (2-tailed)	.293
	N	86		N	86
Researchers/ Consultants such as Veterinary Doctors	Pearson Correlation	.324*	Others not listed above	Pearson Correlation	-.257
	Sig. (2-tailed)	.036		Sig. (2-tailed)	.078
	N	86		N	86
Leaflets/Newspapers	Pearson Correlation	.162			
	Sig. (2-tailed)	.310			
	N	86			

*correlation is significant at 0.05 level of significance

Fieldwork, 2024

Table 5 showed that Researchers/Consultants such as Veterinary Doctors ($r = .324$, $P<0.05$), Seminars and Workshops ($r = .308$, $P<0.05$), Books ($r = .297$, $P<0.05$), Internet ($r = .313$, $P<0.05$), Extension services ($r = .299$, $P<0.05$), Fellow farmers ($r = .317$, $P<0.05$), and family/friends ($r = .301$, $P<0.05$) all had significant positive correlation on farmers' knowledge of livestock drugs and vaccines. Since the above information sources positively affect farmers' knowledge of livestock drugs and vaccines, in real life situation, farmers should utilise more of these channels. They should regularly consult veterinarians, organise and attend seminars and workshops on livestock drugs and vaccines, buy books on livestock drugs and vaccines and seek knowledge and/or advice from extension service personnel, fellow farmers and family/friends who have relevant knowledge on livestock drugs and vaccines.

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DISCUSSION OF FINDINGS

This research work was carried out to examine the influence of information sources on farmers' knowledge of livestock drugs and vaccines in Isin Local Government Area, Kwara State, Nigeria. The finding from research question one showed that majority of the farmers have good knowledge of livestock drugs and vaccines in Isin Local Government Area of Kwara State, Nigeria. This result completely disagrees with that of Mayaki and Talabi (2015) who showed poor knowledge of equine vaccination among horse owners in Kano, Northern Nigeria. This finding is also not in line with that of Al-Mustapha et al. (2020) who revealed that majority of poultry farmers had average knowledge level of the risk perceptions of antibiotic usage and resistance in Kwara State, Nigeria. This finding do not corroborate that of Salisu et al. (2024) who showed that over 60% of livestock farmers have poor knowledge of Antimicrobial Usage and Antimicrobial Resistance (AMR) in Katsina State, Nigeria.

The finding from research question two showed that the major sources of information for farmers on livestock drugs and vaccines are researchers/consultants such as veterinary doctors (75.6%) followed by fellow farmers (70.9%) followed by internet (68.6%) and radio (61.2%), seminars/workshops (62.8%) and books (55.8%). The least sources of information for farmers on livestock drugs and vaccines include exhibition (79.1%) followed by leaflets/newspapers (69.8%), campaigns (68.6%) and television (64.0%). This finding partially agrees with that of Oyeyinka et al. (2011) who revealed that 92.7% of farmers became aware of the recommended practices through Radio and (90.3%) from Television while a very few (18.9%) were aware of the practices through veterinary doctor and feed millers. Also those who got their awareness from the extension agents are few (30.1%) in Afijio, Local Government Area, Oyo state, Nigeria. This result partially agrees with the work of Adeyemi et al. (2023) who showed that 57(36.3%), 45(28.7%), and 37(23.6%) sourced information on poultry diseases from veterinarians, fellow farmers, and during training/workshops, respectively.

This result almost completely agrees with that of Ajala et al. (2018) who showed that most farmers derive information on poultry farming from radio followed by seminars and workshops, books, internet, television and researchers/consultants in Okha Local Government Area of Edo State, Nigeria. This finding almost completely agrees with that of Oladipo et al. (2016) who noted that a higher percentage (84.9%) of poultry farmers got their information on improved management practices on poultry production through Radio, 81.7% got the information from Family members/ Friends, 76.3%) of them obtained the information through other sources of information, 64.5% through Poultry Farmers' Association and 63.4% from Extension agents. However, very few (38.7%) were informed through Seminar while few (39.8%) got their information from the Internet. This finding almost completely disagrees with that of Okoedo-Okojie and Osabuohien (2016) who revealed that farmers obtain their knowledge of poultry drug usage from Neighbours followed by Retailers/Dealers, NGOs, Group meetings/Discussions, Demonstration and Radio.

The finding from research question three showed that the constraints to the accessibility of information on livestock drugs and vaccines include poor power supply (68.6%) followed by No/poor internet access (57.0%), lack of NGOs (54.7%) and lack of extension services (51.2%). This finding almost partially agrees with that of Ajala et al. (2018) who showed that constraints to the accessibility of poultry information include Lack of access roads for easy visit of extension workers followed by Lack of extension services, Lack of NGOs, Agricultural information is not broadcast on radio and television in Yoruba dialect at all times and Computer illiteracy in Okha Local Government Area of Edo State, Nigeria. This finding is supported by that of Obidike (2011) who showed that constraints to farmers' access to agricultural information in Nsukka Local Government Area of Enugu State, Nigeria include lack of access roads in their communities followed by poor public relation of extension workers, poor radio and television signals, none availability of electricity/constant power interruptions in most Nsukka villages, poor financial power to purchase newsletters, leaflets that publish relevant agricultural information, illiteracy and agricultural information not being broadcast on radio and television in native Nsukka dialect.

The finding from research question four and hypothesis one showed that researchers/consultants such as veterinary doctors, seminars and workshops, books, internet, extension services, fellow farmers, and family/friends all had significant positive correlation on farmers' knowledge of livestock drugs and vaccines. This result almost completely agrees with that of Okoedo-Okojie and Osabuohien (2016) who revealed that all the information sources identified (Radio, Television, Extension Agencies, Newspaper, Neighbours, Farmers'

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Cooperatives, Manufacturers (Labels) Retailers (dealers), Agric Journals, Bulletins, posters, Phone calls, Demonstration, Group meeting/discussion and Ministry of Agriculture) except campaign, exhibition, and workshop/seminar were significantly related to farmers' knowledge of poultry drugs in Delta state, Nigeria.

CONCLUSION

It can be concluded that information sources such as researchers/consultants such as veterinary doctors, seminars and workshops, books, internet, extension services, fellow farmers, and family/friends significantly and positively influence farmers' knowledge of livestock drugs and vaccines in Isin Local Government Area, Kwara State, Nigeria.

RECOMMENDATIONS

1. The findings revealed that two major constraints facing farmers' accessibility to information are poor power supply and poor/limited internet access. The first constraint which is poor power supply has been a major issue facing the entire nation for a long period of time and this situation has negatively affected business owners including livestock farmers. It is therefore recommended that the livestock farmers should find alternative sources of power such as the use of solar energy (panels), inverters and/or batteries to power their farms and electronic devices so they can have access to vital information especially on livestock drugs and vaccines. Those who do not have enough money to get alternative source of power may need to access loans from their cooperative society or the government so that they are able to power their devices and gain access to vital information.

2. The other constraint facing the farmers' accessibility to information is poor/limited internet access. Some farmers site their livestock farms far away from the city to avoid animal pollution. In some cases, these areas usually have poor network. It is thus recommended that farmers with poor or limited internet access should be willing to utilise other sources of information that have little or nothing to do with the internet such as veterinary doctors, books, extension services, fellow farmers, family/friends and etcetera. They can also decide to site or relocate their farms to areas with better internet or network supply.

3. The finding of this study also showed that information sources such as researchers/consultants such as veterinary doctors, seminars and workshops, books, internet, extension services, fellow farmers, and family/friends significantly and positively influence farmers' knowledge of livestock drugs and vaccines. In real life situation, farmers in the LGA should focus more on the above sources of information for their knowledge of livestock drugs and vaccines. They should regularly consult veterinarians, organise and attend seminars and workshops on livestock drugs and vaccines, buy books on livestock drugs and vaccines, surf the internet to get useful knowledge on livestock drugs and vaccination, and seek knowledge and/or advice from extension service personnel, fellow farmers and family/friends who have relevant knowledge on livestock drugs and vaccines.

REFERENCES

1. Adeline, N., Ojiakor, I. C., & Onovo, J. C. (2019). Awareness, knowledge and perception of female genital mutilation and cutting (fgm/c) radio campaign and practice among women in Imo State. Archives of Current Research International, 16(4), 1-11. DOI:10.9734/acri/2019/v16i430095
2. Adeyemi, O. O., Idowu, E. T., Akinsanya, B., & Jatau, I. D. (2023). Knowledge, attitude, and practices of poultry farmers regarding the control of chicken coccidiosis in Lagos State, Nigeria. Pan African Journal of Life Sciences, 7(1), 561-571
3. Adugna, G., Chimdesa, W., Ararsa, B., Dekeba, T., Habte, G., Diriba, G., Tesfaye, C., & Mahendra, P. (2022). Assessment of farmers' knowledge and attitude on vaccination of livestock and its implications in Ejere District of West Shewa Zone, Oromia, Ethiopia. Acta Scientific Microbiology, 5(12), 03-11.
4. Ajala, A. O., Adeyonu, A. G., Faseyi, S. A., Oyedokun, O. M., Alabi, O. O. & Omoruyi, E. F. (2018). Information needs of poultry farmers in Okha Local Government Area of Edo State, Nigeria. Moor Journal of Agricultural Research, 19, 140-150.

5. Al-Mustapha, A. I., Adetunji, V. O., & Heikinheimo, A. (2020). Risk perceptions of antibiotic usage and resistance: A cross-sectional survey of poultry farmers in Kwara State, Nigeria. Antibiotics, 9(7), 1-10. https://doi.org/10.3390/antibiotics9070378
6. Bandura, A. (1997). Self-Efficacy. New York, NY: W. H. Freeman and Company. https://doi.org/10.4278/0890-1171-12.1.8.
7. Comfort, O. A., Adebowale, I. A., John, O. A., & Daniel, O. O. (2018). Prevalence of porcine reproductive and respiratory syndrome virus and porcine parvovirus antibodies in commercial pigs, Southwest, Nigeria. Beni – Suef University Journal of Basic and Applied Sciences, 7(1), 80 -83.
8. Hochbaum, G. M. (1958). Public participation in medical screening programs: A socio-psychological study. (Public Health Service, PHS Publication 572), U. S. Government Printing Office: Washington, DC. 1958, 1-23. https://search.library.wisc.edu/catalog/999694547302121
9. Lewis, C. E., & Roth, J. A. (2020). Challenges in having vaccines available to control transboundary diseases of livestock. Current Issues Molecular Biology, 42, 1-40.
10. Mayaki, A. M., & Talabi, A. O. (2015). Knowledge, attitude and practice of equine vaccination among horse owners in Kano, Northern Nigeria. Nigerian Journal of Animal Production, 42(2), 282–287. https://doi.org/10.51791/njap.v42i2.2688
11. Obidike, N. A. (2011). Rural farmers' problems accessing agricultural information: A case study of Nsukka Local Government Area of Enugu State, Nigeria. Library Philosophy and Practice (e-journal), 660, 1-12. https://digitalcommons.unl.edu/libphilprac/660
12. Okoedo-Okojie, D. U., & Osabuohien, J. I. (2016). Influence of information sources on farmers' knowledge of poultry drugs in Delta state, Nigeria: Implication for rural community development. Journal of Agriculture and Social Research, 16(1), 67 -74
13. Oladipo, F. O., Fawole, B. E. & Akinyemi, M. (2016). Adoption of improved management practices among poultry farmers in Katsina State, Nigeria. Journal of Agriculture and Environment, 12(2), 37-45 ISSN 1595-465X
14. Oluwole, O. R., Efunwoye, O. O., & Adeeko, A. (2019). Vaccination in livestock production: A veritable tool in the campaign for food security in Nigeria. A Review. Nigerian Society for Animal Production, 44th Annual Conference – ABUJA 2019 Book of Proceedings, 110-114.
15. Oyeyinka, R. A., Raheem, W. K., Ayanda, I. F., & Abiona, B. G. (2011). Poultry farmers' awareness and knowledge of improved production practices in Afijio, Local Government Area, Oyo state, Nigeria. Journal of Agricultural Research and Development, 1(1), 001-008. http://www.e3journals.org/EJARD
16. Richens, I. F. (2015). Farmers' perception of the role of veterinary surgeons in vaccination strategies on British dairy farm. Veterinary Record, 77(18), 1-11. doi: 10.1136/vr.103415
17. Salisu, U., Ladan, S., Abdullahi, S. M., Cook, P. A., Haruna, Z. S., Koguna, M. M., Umar, S., & Kabir, I. (2024). Awareness of antimicrobial usage and antimicrobial resistance (amr) among livestock farmers in Katsina State, Nigeria. Direct Research Journal of Veterinary Medicine and Animal Science, 9(1), 52-64. https://doi.org/10.26765/ DRJVMAS5318913900
18. Samrawit, Y., Bashahun, G. M., & Waktole, Y. (2020). Assessment on handling, storage, transport and utilization of veterinary vaccines in selected districts of Sidama Zone, Southern Ethiopia. Dairy and Vet Sci J., 14(4), 1-8. DOI: 10.19080/JDVS.2020.14.555895
19. Zelalem, A., Tadele, K., Dereje, A., & Getachew, A. (2019). Survey on distribution, associated factors of lumpy skin disease occurrence and its vaccine efficacy in selected Districts of East Wollega Zone, Western Oromia. Biomedical Journal of Science and Technique Research, 13(2), 1-10. DOI: 10.26717/BJSTR.2019.13.002385