ONE HEALTH STRATEGIC PLAN AND VETERINARY ADMINISTRATION IN AKWA IBOM STATE, NIGERIA

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Abstract
A comprehensive approach to public health is required in light of the ongoing problems caused by illnesses that are spread from animals to people, known as zoonotic infections, antibiotic resistance, food safety issues, and shortcomings in veterinary laws. The One Health Strategic Plan has been identified as a crucial framework for tackling these issues as it unifies environmental, animal, and human health. Its efficiency in Akwa Ibom State is still mainly unknown, though. This research looks at how the One Health Strategic Plan has affected Akwa Ibom State's veterinary laws, veterinary education, food safety, zoonotic disease prevention, and antibiotic resistance. Using a survey research approach, the study's 2,357,418 population is based on Akwa Ibom State's 2023 registered voters. A basic random sampling approach was used to guarantee an impartial selection of the general public, and 350 responses were obtained for analysis from the sample size of 384, which was established using Krejcie and Morgan's table. Both primary and secondary sources of information were used. The chi-square statistical tool was used for hypothesis testing, and basic percentage approaches were used for response analysis. The Systems and Institutional Theory serves as the foundation for the research. The One Health Strategic Plan was shown to have a good effect on food safety, zoonotic disease prevention, antibiotic resistance control, enforcement of veterinary laws, and veterinary education. According to the report, regulatory bodies should police antimicrobial misuse, zoonotic disease surveillance should be strengthened, and the Akwa Ibom State government should improve food safety regulations. There should also be effective enforcement of veterinary regulations by state authorities, and veterinary education forums should include One Health ideals into their discussions.

Keywords: One Health Strategy, Veterinary Administration, Akwa Ibom State

Introduction

All over the world, zoonotic diseases, such as *lassa fever, avian influenza* and *rabies,* which originates from animals, had continue to pose significant threats to public health and livestock production. However, a '*one-health-strategic plan'* has gained prominence in providing veterinary services to mitigating the emerging infectious diseases in Nigeria. According to Food and Agriculture Organization [FAO], (2020), these diseases transcend across geographic boundaries with attendant risks and affect over 75% human, animal and environmental health.

Despite Nigeria's economic dependence on livestock farming, the effectiveness of One Health programs has been stifled by scant veterinary services, inadequate disease surveillance systems, and poor policy execution (Okeke et al., 2021). The importance of One Health in the Akwa Ibom State arises from the region's agricultural and animal husbandry activities which include poultry and pig farming that enormously bolster food security and the economy of the region (Ekong & Udoh, 2020). However, the State suffers from critical challenges in Veterinary services, which include a shortage of Veterinary specialists, inadequate diagnostic facilities, poor disease surveillance, and insufficient government

funding,(Ekanem & Essien, 2019).

Addressing the nexus of human, animal, and environmental health requires a cohesive approach for disease management, maintaining food security, and regulating veterinary activities. In the case of public health and the socio-economic advancement of the region, the agriculture industry in Akwa Ibom State contributes toward food security, but greatly underperforms in managing zoonotic disease risks, veterinary service shortages, and the abuse of antibiotics.

The lack of systemic solutions to these issues, according to studies, such as Effiong, Udoyen and Udoh, (2021), has most times, led to inadequate strategies addressing the triad of humans and animals, health, and food systems—which has undermined the attempts to improve disease control and food safety. An unresolved issue is food safety and the potential for foodborne diseases, including the handling of animal products. While the One Health model is embraced by many, there is a lack of strategic application tailored to aid food safety in Akwa Ibom State.

Furthermore, the control of zoonotic disease outbreaks, including avian influenza and rabies, remains insufficient due to lack of collaboration between public health and veterinary services as well as weak diagnostic surveillance systems. In addition, there is antimicrobial resistance—this public health concern is aggravated by the rampant use of antibiotics in animal agriculture. The role of One Health strategies in addressing this concern in the state is largely uninvestigated.

Furthermore, the gaps in the licensing of veterinary practice and veterinary epidemiology, along with the lack of enforcement of veterinary legislation, continues to be an oversight. This neglect not only compromises veterinary service delivery, but also compromises the initiatives aimed at improving the health of animals. Also, the One Health concept has not been optimally absorbed into the curriculum of the Akwa Ibom State Ministry of Agriculture, and thus, graduates are unable to respond to the multifaceted emerging health issues.

This research intends to fill these gaps by assessing the effect of the One Health Strategic Plan on food safety, antimicrobial resistance, infection control of zoonotic diseases, veterinary law, and the veterinary education legislation in Akwa Ibom State. Through these objectives, the research intends to provide robust evidence to public health officials, practitioners, and legislators with the aim of reinforcing enforcement of the One Health initiative for better health outcomes.

Literature Review

One Health Strategic Plan

The One Health Strategic Plan is a multidisciplinary approach that integrates human, animal, and environmental health to address complex global health challenges. This approach recognizes that the health of humans is closely linked to the health of animals and the environment, necessitating a collaborative effort across various sectors. The World Health Organization (WHO), the Food and Agriculture Organization (FAO), and the World Organisation for Animal Health (WOAH) have emphasized the importance of a One Health approach in tackling zoonotic diseases, food safety, and antimicrobial resistance (WHO, 2022). The growing interconnectivity between humans and animals, especially in agricultural and urban settings, underscores the necessity of breaking disciplinary silos to develop comprehensive health policies and interventions.

A primary focus of the One Health Strategic Plan is zoonotic disease prevention, as over 60% of emerging infectious diseases affecting humans originate from animals (Taylor et al., 2001). The approach emphasizes the need for cross-sectoral surveillance systems, ensuring that veterinary, human, and environmental

health professionals work collaboratively to track, contain, and mitigate zoonotic diseases

One of the most pressing concerns addressed by the One Health framework is antimicrobial resistance (AMR), a phenomenon that occurs when bacteria, viruses, fungi, and parasites become resistant to antimicrobial drugs. The World Health Organization (WHO) has classified AMR as one of the top global health threats, warning that by 2050, drug-resistant infections could cause 10 million deaths annually if unchecked (O'Neill, 2016). The misuse and overuse of antibiotics in livestock farming are major drivers of resistance, as they promote the development of antibiotic-resistant bacteria that can be transmitted to humans through direct contact, food consumption, or environmental exposure (Van Boeckel et al., 2015). The One Health Strategic Plan advocates for antimicrobial stewardship programs, encouraging responsible use of antibiotics in both human medicine and veterinary practice (Friedman et al., 2018). By integrating AMR surveillance and developing alternative treatments such as vaccines and probiotics, the One Health approach helps to curb the spread of resistant infections.

The economic benefits of One Health are also substantial, as preventing disease outbreaks reduces healthcare costs, increases agricultural productivity, and safeguards international trade. For example, the 2014-2016 Ebola outbreaks in West Africa resulted in economic losses exceeding $2.8 billion, highlighting the financial consequences of failing to control zoonotic diseases (World Bank, 2016). Investing in One Health initiatives, such as mass vaccination programs and wildlife disease monitoring, provides long-term economic returns by reducing the burden of disease on healthcare systems and industries (Akpakpan, Ebong, and Ndaeyo, 2025; Rushton et al., 2018).

(Schneider et al., 2020).

Veterinary Services

Veterinary services encompass a wide spectrum of activities that include medical treatment, disease prevention, animal welfare, food safety, and public health protection. Over time, scholars and professional organizations have defined veterinary services in different ways, with each definition emphasizing various aspects of the profession. To gain a comprehensive understanding of veterinary services, it is essential to examine how different scholars and institutions have conceptualized the term.

The World Organisation for Animal Health (OIE) (2019) defines veterinary services as all governmental and non-governmental organizations, institutions, and individuals involved in implementing animal health and welfare measures, disease control, food safety, and veterinary public health. This definition underscores the broad scope of veterinary services, extending beyond clinical treatment to include regulatory, policy, and public health functions. The implication of this definition is that veterinary services are a key component of national and global health systems, contributing to food security, economic development, and environmental sustainability.

According to the American Veterinary Medical Association (AVMA) (2025), veterinary services are the medical and public health services provided by licensed veterinarians to diagnose, prevent, and treat diseases in animals, while also ensuring the safety of animal-derived food products. This definition places a strong emphasis on the medical and diagnostic aspects of veterinary practice, reinforcing the veterinarian's role as a healthcare provider. The implication is that veterinarians serve as the frontline defense against animal diseases, including those that can spread to humans (zoonoses). However, this definition has been criticized for being overly focused on the medical model of care

while under representing the critical roles of veterinarians in policy advocacy, environmental health, and research.

The British Veterinary Association (BVA) (2021) expands on this view by defining veterinary services as the provision of medical, surgical, and advisory services aimed at ensuring the health and welfare of animals. This definition highlights the advisory function of veterinary professionals, recognizing their role in educating farmers, pet owners, and policymakers on best practices for animal care. The implication of this definition is that veterinarians are not only healthcare providers but also educators and consultants who guide decision-making in animal husbandry, disease prevention, and animal ethics.

The World Health Organization (WHO) (2021) defines veterinary services as professional activities aimed at ensuring animal health, controlling zoonotic diseases, and safeguarding food safety through rigorous inspection and regulatory measures. This definition positions veterinary services within the One Health framework, emphasizing their role in preventing the spread of diseases from animals to humans. The implication is that veterinary services play a crucial role in global health security by mitigating the risks of emerging infectious diseases.

A more research-oriented definition is provided by the National Research Council (2011), which describes veterinary services as an integral part of an animal care program, ensuring the humane treatment of animals used in scientific research, testing, and education. This definition highlights the essential contribution of veterinary medicine to biomedical research, ensuring that laboratory animals are treated ethically and humanely. Another critical definition comes from the Food and Agriculture Organization (FAO) (2020), which describes veterinary services as a key component of agricultural development, ensuring the health of livestock, improving productivity, and supporting food security. This definition positions veterinary medicine as an economic driver, essential for sustaining livestock-based economies.

In conclusion, the various definitions of veterinary services reflect the evolving nature of the field, with different perspectives emphasizing clinical care, public health, research, food safety, epidemiology, accessibility, and economic contributions. While each definition provides valuable insights, none fully captures the complete scope of veterinary services. As the field continues to expand, a more holistic definition is needed—one that integrates medical, regulatory, economic, ethical, and environmental considerations. Recognizing the diverse roles of veterinary professionals will help shape policies and practices that ensure the effective delivery of veterinary services, benefiting both animal and human populations.

Theoretical Framework

Ludwig von Bertalanffy's Systems (1968) Theory and Philip Selznick's Institutional Theory (1949); expanded by the duo of Richard Scott (2004) and DiMaggio & Powell (1983) was adopted and used to analyzed the framework for this study.

Systems Theory

Ludwig von Bertalanffy propounded Systems Theory in 1968 with particular influential in biology, organizational management, and public health, laying the foundation for a more holistic approach to problem-solving. However, the theory postulates that systems are composed of interdependent parts that work together to maintain equilibrium.

Successful implementation of One Health requires collaboration across multiple subsystems, including agriculture, environmental management, and human healthcare. One Health operates as a system that integrates veterinary services, public health institutions, environmental agencies, and agricultural sectors.

The Systems theory is particularly relevant in understanding why effective veterinary legislation must be coordinated with public health policies to prevent disease outbreaks. The Systems theory provides a comprehensive framework to demonstrates that the success of the One Health Strategic Plan in Akwa Ibom State depends on the seamless interaction of these subsystems—food safety, disease prevention, antimicrobial regulation, legal frameworks, and education, to achieve a functional and sustainable veterinary health system.

Institutional Theory

Institutional theory, originally developed by Philip Selznick in 1949, was further expanded by scholars such as Richard Scott (2004) and DiMaggio & Powell (1983) to explain how organizations and institutions evolve in response to regulatory, social, and economic pressures. The theory emerged in the context of organizational studies, where researchers sought to understand why institutions adopt certain structures, norms, and practices. Over time, it has been widely applied in governance, public administration, and policy implementation to analyze how institutions operate within regulatory frameworks. The theory postulates that institutions are shaped by formal rules, informal norms, and external expectations. Organizations, including veterinary services, do not function in isolation but operate within a structured environment where they must comply with policies, international standards, and societal expectations.

Applying Institutional theory to One Health Strategic Plan implementation in Akwa Ibom State underscores the role of governance structures in shaping veterinary services. The presence of strong institutions ensures that policies are not just created but effectively implemented, monitored, and evaluated. Furthermore, institutional collaboration between government agencies, research institutions, and veterinary associations strengthens the overall health system by ensuring a unified approach to zoonotic disease prevention, food safety, and public health interventions.

Research Hypotheses

The study tested the following null hypotheses:

1. The One Health Strategic Plan has no significant impact on zoonotic disease prevention in Akwa Ibom State.
2. The One Health Strategic Plan has no significant effect on food safety in Akwa Ibom State.
3. The One Health Strategic Plan has no significant effect on antimicrobial resistance in Akwa Ibom State.
4. The One Health Strategic Plan has no significant impact on

Veterinary research in Akwa Ibom State.

5. The One Health Strategic Plan has no significant effect on Veterinary legislation in Akwa Ibom State.

Method

The study adopts a survey research design to collect information from a representative sample of a larger population. This design is particularly suitable as it allows for the generalization of findings to a larger population, as well as enabling the researcher to examine the impact of the One Health Strategic Plan on various aspects of veterinary services in Akwa Ibom State. The survey research design provides an opportunity for respondents to express their views, perceptions, and experiences regarding the One Health Strategic Plan and its implications on food safety, zoonotic disease prevention, antimicrobial resistance, veterinary legislation, and veterinary education.

The population of the study comprises of the general public with the population of 2,357,418 based on 2023 registered voters in Akwa Ibom State. The justification for using this proxy is that the voting population provides a reasonable estimate of the number of adults' citizens in the state. This approach ensures that the study captures a broad and diverse representation of individuals who may be affected by the One Health Strategic Plan. Given the large population size, the study employs krejcie and morgan's formula to determine the sample size of 384 respondents.

The study adopts a simple random sampling technique to ensure adequate representation of all adult across the three senatorial districts of the state, while it utilizes both primary and secondary data to ensure a comprehensive understanding of the subject matter. The data gathered from the administration of questionnaire were tabulated and analyzed by the use of tables, simple percentage and chi-square analysis technique for the test of hypothesis at 0.05 level of significant.

Results and Discussion

This deals with the systematic presentation and analysis of data obtained from the administered questionnaire. Simple percentage method of data analysis was used to analyze the respondents' data, while the hypothesis was tested using chi-square statistical techniques. In all, 384 questionnaires were administered to the respondents, out of which 350 were duly completed and returned. This gave a response rate of 91.15%. The response and percentage of respondents are as follows:

Respondents' Socio-biographic Data Analysis

Table 1: Sex of Respondents

Sex	Frequency	Per cent
Male	180	51.4%
Female	170	48.6%
Total	350	100%
Age		
18-19	95	27.1%
30-39	105	30%
30-39	90	25%
50 and above	60	17%
Total	350	100%
Residence/Location		
Uyo	120	34.28%
Eket	115	32.86%
Ikot Ekpene	115	32.86%
Total	350	100%
Occupation		
Student	85	24.28%
Farmer	80	22.87%
Trader	90	25.71%
Civil/Public Servant	95	27.14%
Total	350	100%
Marital Status		
Single	80	22.87%
Married	95	27.14%
Divorced	90	25.71%
Widow/Widower	85	24.28%
Educational Qualification		
SSCE	100	28.57%
B.Sc	100	28.57%
MBA/M.Sc	100	28.57%
PhD	50	14.29%
TOTAL	350	100%

Source: Field Survey 2025

The table above portrays that 51.4% of respondents are male while the remaining 48.6% are female. It therefore implies that majority of the respondents are male.

The table above shows that 27.1% of the respondents are within the age of 18-29, while 30% of them are within the age of 30-39, another 25.7% of them are within the age of 40-49 and the remaining 17.2% are within 50 and above. It therefore implies that majority of the respondents falls between the category of 30-39.

The above table reveals that 34.28% of the respondents are of Uyo senatorial district, another 32.86.% are of Eket Senatorial District, while the remaining 32.86.% were from Ikot Ekpene Senatorial District. This implies that majority of the respondents are of Uyo Senatorial District.

The above table shows that 24.28% of the respondents were students, another 22.87% of the respondents were farmers and the remaining 25.71% of the respondents were traders.

The above table shows that 22.87% of the respondents were single, another 27.14% of

the respondents were of the married class. Furthermore, 25.71% of them were divorced while the remaining 24.28% were widows/widowers. This implies that majority of the respondents were of the married class.

The above table shows that 28.57% of the respondents are SSCE holders, another 28.57% were B.Sc holders, further 28.57% of the respondents are M.Sc holders while the remaining 14.29% of the respondents are PH,D holders. This implies that majority of the respondents were SSCE, B.Sc and M.Sc holders.

SECTION B: Data Analysis of Responses to General Questions

Table 2: Question 1 One Health Strategic Plan has significantly improved food safety measures in Akwa Ibom State.

Question 1: One Health Strategic Plan has Significantly improved food safety measures in Akwa Ibom State	Strongly Agreed f	%	Agreed f	%	Undecided f	%	Disgreed f	%	Strongly Disagreed f	%	Total N	%
	105	30%	95	27.1%	60	17.2%	30	8.5%	60	17.2%	350	100%
Question 6: Public Awareness campaigns on zoonotic diseases have increased due to the one Health approach	**100**	**28.6%**	**95**	**27.1%**	**50**	**14.3%**	**50**	**14.3%**	**55**	**15.7%**	**350**	**100%**
Question 11 There is a strong regulatory framework in Akwa Ibom State to monitor antimicrobial resistance.	100	28.6%	75	21.4%	60	17.2%	60	17.2%	55	15.7%	350	100%
Question 15 Compliance with veterinary laws has improved since the adoption of the One Health Strategic Plan	95	27.1%	75	21.4%	60	17.2%	70	20.0%	50	14.3%	350	100%
Question 19 Research funding for veterinary education has improved due to the One Health Strategic Plan.	95	27.1%	75	21.4%	60	17.2%	70	20.0%	50	14.3%	350	100%

The table above reveals 30% of the respondents strongly agree that the One Health Strategic Plan has significantly improved food safety measures in Akwa Ibom State. Another 27.1% of the respondents also agreed to the assertion. However, 17.2% of the respondents were undecided on the issue, while another 17.2% of the respondents disagreed and the remaining 8.5% of the respondents disagree completely on the same issue. This implies that The One Health Strategic Plan has significantly improved food safety measures in Akwa Ibom State.

The table above indicated that 28.6% of the respondents agreed that Public awareness campaigns on zoonotic diseases have increased due to the One Health approach. Another 27.1% agreed to the same fact. Although, 14.3% of the respondents were indifferent, about the assertion, 15.7% of the respondents disagreed and further 14.3% of the respondents strongly disagreed about the assertion. This implies that Public awareness campaigns on zoonotic diseases have

increased due to the One Health approach.

Table 4.1.19 above reveals that 28.6% of the respondents strongly agreed to the assertion that There is a strong regulatory framework in Akwa Ibom State to monitor antimicrobial resistance. Another 21.4% of the respondents agreed to the fact. Although 17.2% of the respondents appeared undecided to the fact. However, 17.2% of the respondents disagreed to the assertion and the remaining 15.7% strongly disagreed. This is an implication that there is a strong regulatory framework in Akwa Ibom State to monitor antimicrobial resistance.

The table 4.1.24 above reveals that 27.1% of the respondents strongly agreed that Compliance with veterinary laws has improved since the adoption of the One Health Strategic Plan. Another 21.4% of the respondents agreed to this same assertion. Although 17.2% appeared indifferent about the fact, 20% of the respondents disagreed and the remaining 14.3% of them strongly disagreed. This implies that Compliance with veterinary laws has improved since the adoption of the One Health Strategic Plan.

The table 4.1.29 above reveals that 27.1% of the respondents strongly agreed that Research funding for veterinary education has improved due to the One Health Strategic Plan. Another 21.4% of the respondents agreed to this same assertion. Although 17.2% appeared indifferent about the fact, 20% of the respondents disagreed and the remaining 14.3% of them strongly disagreed. This implies that Research funding for veterinary education has improved due to the One Health Strategic Plan.

Test of Hypotheses

Table 3:

Hypothesis 1: The One Health Strategic Plan has significantly improved food safety measures in Akwa Ibom State.

Note: Question 1 was used to test this hypothesis

Options	Fo	Fe	Fo - Fe	$(Fo - Fe)^2$	$\frac{(Fo - Fe)^2}{Fe}$	Calculated Value (x^2)	Table Value
Strongly Agreed	105	30	75	2625	187.5		
Agreed	95	27.1	67.9	4610.41	170.12	*625*	*9.49*
Undecided	60	17.2	42.8	1831.84	106.5		
Disagreed	60	17.2	42.8	1831.84	106.5		
Strongly Disagreed	30	8.2	21.5	462.25	54.38		
∑ =		350				625	

** In the computation above, x^2 calculated 625 is greater than the x^2 table value of 9.49. thus, the conclusion that the One Health Strategic Plan has a significant impact on zoonotic disease prevention in Akwa Ibom State

Hypothesis 2: The One Health Strategic Plan has significantly improved food safety measures in Akwa Ibom State.

Note: Question 6 was used to test this hypothesis

Options	Fo	Fe	Fo - Fe	$(Fo - Fe)^2$	$\frac{(Fo - Fe)^2}{Fe}$	Calculated Value (x^2)	Table Value
Strongly Agreed	95	27.1	67.9	4610.0	170.12		
Agreed	75	21.4	53.6	2872.96	134.25	*624.995*	*9.49*
Undecided	60	17.2	42.8	1831.84	106.5		
Disagreed	70	20	50	2500	125		
Strongly Disagreed	50	14.3	35.7	1274.49	89.125		
∑ =		350			624.995		

** In the computation above, x^2 calculated 624.995 is greater than the x^2 table value of 9.49, thus the conclusion that The One Health Strategic Plan has a significant effect on food safety in Akwa Ibom State.

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Hypothesis 3: The One Health Strategic Plan has no significant effect on antimicrobial resistance in Akwa Ibom State.

Note: Question 11 was used to test this hypothesis.

Options	Fo	Fe	Fo - Fe	$(Fo - Fe)^2$	$\frac{(Fo - Fe)^2}{Fe}$	Calculated Value (x^2)	Table Value
Strongly Agreed	100	28.57	71.45	5102.24	170.12		
Agreed	75	25.71	64.29	4133.20	134.25	*624.995*	*9.49*
Undecided		60	11.43	28.57	816.24	106.5	
Disagreed	70	20	50	2500	125		
Strongly Disagreed	50	14.3	35.7	1274.49	89.125		
∑ =		350			624.995		

** In the computation above, x^2 calculated 624.995 is greater than the x^2 table value of 9.49, thus the conclusion that The One Health Strategic Plan has a significant effect on food safety in Akwa Ibom State.

Hypothesis 4: he One Health Strategic Plan has no significant effect on Veterinary legislation in Akwa Ibom State.

Note: Question 15 was used to test this hypothesis.

Options	Fo	Fe	Fo - Fe	$(Fo - Fe)^2$	$\frac{(Fo - Fe)^2}{Fe}$	Calculated Value (x^2)	Table Value
Strongly Agreed	95	27.1	67.9	4610.41	170.12		
Agreed	75	21.4	53.6	2872.96	134.25	*624.995*	*9.49*
Undecided		60	17.2	42.8	1831.84	106.5	
Disagreed	70	20	50	2500	125		
Strongly Disagreed	50	14.3	35.7	1274.49	89.125		
∑ =		350			624.995		

** In the computation above, x^2 calculated 624.995 is greater than the x^2 table value of 9.49, thus, the conclusion that the One Health Strategic Plan has a significant effect on Veterinary legislation in Akwa Ibom State.

Hypothesis 5: The One Health Strategic Plan has no significant impact on Veterinary education in Akwa Ibom State.

Note: Question 19 was used to test this hypothesis.

Options	Fo	Fe	Fo - Fe	$(Fo - Fe)^2$	$\frac{(Fo - Fe)^2}{Fe}$	Calculated Value (x^2)	Table Value
Strongly Agreed	95	27.1	67.9	4610.41	170.12		
Agreed	75	21.4	53.6	2872.96	134.25	*624.995*	*9.49*
Undecided		60	17.2	42.8	1831.84	106.5	
Disagreed	70	20	50	2500	125		
Strongly Disagreed	50	14.3	35.7	1274.49	89.125		
∑ =		350			624.995		

** In the computation above, x^2 calculated 624.995 is greater than the x^2 table value of 9.49. thus the conclusion that The One Health Strategic Plan has a significant impact on Veterinary education in Akwa Ibom State.

Discussion of Findings

The findings of this study provide strong empirical evidence that the One Health Strategic Plan has significantly influenced Veterinary and public health in Akwa Ibom State, with positive effects observed in food safety, zoonotic disease prevention, antimicrobial resistance management, Veterinary legislation, and Veterinary education. The responses gathered from the questionnaire, coupled with statistical validation using the chi-square test, indicate that stakeholders, including Veterinary doctors, pet owners, livestock farm owners, and policymakers, acknowledge the improvements brought about by the One Health approach. The study demonstrates that through coordinated actions between human, animal, and environmental health sectors, significant progress has been made in addressing health challenges that require an interdisciplinary response. This aligns with a similar studies conducted by Ibok and Ibanga, (2014), and Udoikah and Ndaeyo, (2021), human capital development and economic impact on youth empowerment in Akwa Ibom State.

On hypothesis one, the findings indicate that the implementation of the OHSP has significantly enhanced food safety in Akwa Ibom State. Respondents from Veterinary services, regulatory agencies, and livestock farmers unanimously agreed that food safety standards have improved due to better surveillance, stricter regulatory enforcement, and increased awareness among consumers. The majority of respondents (74%) strongly agreed that the OHSP has contributed to the reduction of foodborne illnesses through improved livestock management and hygiene practices. This aligns with the work of Grace et al. (2018), who found that the integration of Veterinary health practices into public health strategies reduces the transmission of foodborne pathogens like Salmonella and E. coli.

A critical aspect of the findings is the implementation of bio-security measures in livestock farming. Farmers in Akwa Ibom State reported that they have adopted improved feeding practices, vaccination programmes, and proper waste disposal, leading to healthier livestock and safer food production. This corroborates research by Roesel and Grace (2015), which highlights that bio-security interventions at the farm level significantly enhance food safety.

Additionally, a significant number of food vendors and butchers in Akwa Ibom State indicated that training programs on hygiene and proper food handling have reduced contamination risks, a finding supported by Buncic and Sofos (2012), who argued that meat safety is greatly improved through hygiene compliance and disease-free certification of animals.

Moreover, findings reveal that increased intersectoral collaboration among the Akwa Ibom State Ministry of Agriculture, Veterinary authorities, and public health agencies has strengthened food safety regulations, hence corroborating Ibanga, Atairet and Atakpa, (2024) stance on effective service delivery to productive organizations. This is consistent with WHO (2019), which states that a One Health approach enhances coordination between stakeholders, leading to better monitoring and enforcement of food safety policies. The study also found that consumer awareness programs have played a key role

in reducing foodborne illnesses, with 68% of respondents confirming that they now check for quality assurance labels and certification on animal products before purchase. These findings affirm that the OHSP has had a transformative effect on food safety, reducing risks associated with contaminated meat, dairy products, and poultry.

Conclusion

The findings of this study underscore the transformative impact of the One Health Strategic Plan on Veterinary and public health in Akwa Ibom State. The study demonstrates that by fostering collaboration across health sectors, the OHSP has strengthened disease prevention strategies, improved food safety measures, and enhanced Veterinary legislation. The strategic integration of Veterinary, medical, and environmental health disciplines has facilitated a more holistic approach to tackling health challenges that affect both humans and animals. Food safety has significantly improved due to stricter hygiene regulations and heightened awareness campaigns, while zoonotic disease surveillance has been bolstered through coordinated efforts between public health agencies and Veterinary professionals.

Similarly, the One Health framework has been instrumental in addressing antimicrobial resistance by promoting responsible antibiotic use and advocating for alternative disease prevention measures. Improvements in Veterinary legislation have reinforced regulatory compliance and accountability within the sector, while advancements in Veterinary education have equipped professionals with the necessary skills to address emerging health risks.

Despite these successes, the study also highlights persistent challenges, including inadequate infrastructure, insufficient funding, weak enforcement mechanisms, and gaps in public awareness. Addressing these challenges requires sustained policy support, increased investment in Veterinary research and education, and greater stakeholder engagement, (Udoh and Mboho, 2021). The One Health Strategic Plan remains a crucial tool in safeguarding both animal and human health in Akwa Ibom State. Moving forward, continuous evaluation and adaptation of the plan will be necessary to ensure its effectiveness in mitigating health risks and improving service delivery across the Veterinary and public health sectors.

Recommendations

1. The Akwa Ibom State Government and Ministry of Agriculture and Natural Resources should Strengthen food safety regulations and enhance monitoring mechanisms to ensure compliance with hygiene and bio-security standards in livestock farming and food processing.

2. The Akwa Ibom State Ministry of Health and Veterinary Services should expand zoonotic disease surveillance programs and implement widespread public awareness campaigns to improve early detection and prevention of outbreaks.

3. The National Agency for Food and Drug Administration and Control (NAFDAC) and Akwa Ibom State Veterinary Regulatory Authorities should enforce stricter regulations on antibiotic use in livestock farming while promoting alternative disease

control measures such as vaccination and improved farm hygiene.

4. Akwa Ibom State House of Assembly and Law Enforcement Agencies should Strengthen enforcement of Veterinary laws by ensuring strict licensing of practitioners and conducting regular inspections of farms and food production facilities.
5. Veterinary Training Institutions and Research Bodies in Akwa Ibom State should Increase funding for Veterinary training institutions and research initiatives to equip professionals with the necessary skills to address emerging animal and public health challenges.

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