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Knowledge, Attitude and Difficulties of Wildlife Quarantine Policy Implementation of Nigeria Agricultural Quarantine Service Personnel in Ogun State, Nigeria

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Abstract. Quarantine policy provides a pathway towards animals and plants trafficking eradication and helps prevent the entering of dangerous exotic diseases into the country through imported faunas and floras. This study examined the Nigeria Agricultural Quarantine Service (NAQS) personnel knowledge on zoonotic diseases transmission, attitude to zoonotic disease risks and difficulties of wildlife quarantine policy implementation in Ogun State, Nigeria. A multistage sampling procedure was used to select the 70 personnel used for the study. Descriptive statistics was used to analyze the data collected. The results showed that NAQS personnel have a better knowledge on zoonotic diseases transmission (4.83) and gallant attitude to zoonotic disease risks (4.81) while the perceived most wildlife quarantine policy implementation difficulties were corruption (5.76) and nonexistence of appropriate technology for implementation (5.55). It was concluded from the study that despite the considerable Nigeria Agricultural Quarantine Service personnel knowledge on zoonotic diseases transmission and their attitude to zoonotic disease risks, they greatly perceived the implementation difficulties of wildlife quarantine policy which warranted the need for NAQS personnel health education programs to minimize the transmission of zoonotic pathogens from wildlife animals on trans-boundary transits which is also an important factor for a successful wildlife quarantine policy implementation.

Keywords: knowledge, attitude, difficulties, wildlife, quarantine, policy

1. Introduction

A negative impact on our nation's agricultural economy, ecology, and public health might result from the illegal importation of animals and their products without taking into account the risk of hazardous exotic illnesses entering the country. Quarantine regulations are seen as a crucial component in preserving the privileged human, plant, and animal health in Nigeria. To protect the country's economy from harmful alien illnesses and pests, the Act No. 28 of 1959 established the quarantine service (Oyeleye et al., 2022).

The Nigerian Agricultural Quarantine Service (NAQS) has a number of difficulties that prevent its practice procedures from being as efficient as they should be in minimizing the danger to agriculture, the environment, and public safety (Agbelemoge et al., 2021). Despite the efforts of the animal service to assure the entry of clean animals and animal

products, traffickers are becoming more active in the illegal wildlife trade (Hilderink & de Winter, 2021). Although they share a same objective—security—the paucity of holding facilities, limited manpower, a shortage of veterinary specialists, as well as a lack of coordination among other security organizations, cannot be overstated Adejumo et al., 2021).

Current wildlife trading activities in Nigeria have increased human-animal contact, which has accelerated the spread of zoonotic illnesses (Rohr et al. 2019). The socioeconomic harm brought on by illnesses spread through the trade in wildlife has highlighted the necessity for quarantine laws and public health-related behavioral changes to reduce the danger of these infections (Wyatt et al., 2022). Quarantine, however, is a crucial risk management strategy that may be used to lessen the threat presented by deadly wild animal diseases, particularly when the animals are transported internationally or domestically between nations, or when they are introduced into new environments (Kumar et al., 2021).

Nigeria's animal quarantine laws might pave the road for the eradication of animal trafficking while also preventing the introduction of hazardous exotic illnesses into the nation via imported animals (Agbelemoge et al., 2021). However, having this policy on its own is insufficient without Nigeria Agricultural Quarantine Service personnel's awareness of zoonotic disease transmission, attitude toward zoonotic disease risks, and challenges of implementing wildlife quarantine policy.

Therefore, this study examined the Nigeria Agricultural Quarantine Service personnel knowledge on zoonotic diseases transmission, attitude to zoonotic disease risks and difficulties of wildlife quarantine policy implementation in Ogun State, Nigeria.

2. Research Methodology

Ogun State was created in 1976 from the former Western State. The State is located in the South Western part of Nigeria. It covers a total of 1,640,076 square kilometres of land mass where over 60 percent are cultivable arable land, with an estimated population of about 3.391 million. The state has the largest land entry parts.

All personnel of the Nigerian Agricultural Quarantine Service (NAQS) at the land borders, in Nigeria comprised the population of the study.

A multistage sampling procedure was used to select the respondents in the study area.

Stage 1: Ogun State was purposively selected because most smugglings of agricultural products are through land borders and the state has the largest land entry points.
Stage 2: Simple random sampling was used to select 5 stations out of 6 stations of the agency. This was done based on the population of personnel in the stations.
Stage 3: Disproportionate simple random sampling was used to select 70 personnel in the selected 5 stations of the agency because of the difference in population.

Data was collected was collected through the administration of a set of questionnaire. The questionnaire was designed to elicit basic socio – demographic information, the perceptions of the respondents on transboundary zoonotic diseases and its transmission and the constraints of guidelines enforcement of quarantine policy in Nigeria. The rating used was based on a 7-point Likert-type scale ranging from “strongly disagree” (1) to “strongly agree” (7) and “not a constraint” (1) to “extremely serious constraint” (7) respectively. Data was analyzed using SPSS (Statistical Package for Social Sciences) and subjected to descriptive statistics.

3. Results and discussion

Table 1 presented the NAQS personnel knowledge on zoonotic diseases transmission. From the table, the respondents have a better knowledge on the threat of zoonotic diseases to human health (6.69), the maintenance of optimum health in humans and wild animals in preventing zoonosis (6.14), the cause of abortion in wild animals because of infectious diseases can also cause abortions in humans (5.39) and the likelihood of therapeutic success of some zoonotic diseases infected by humans (5.08). In all, it can be deduced from the results in the table that the NAQS personnel have a better knowledge on zoonotic diseases transmission (4.83).

Table 1: Knowledge of quarantine personnel on zoonotic diseases transmission

Perceived Statements	Mean
Zoonotic diseases are threat to human health	6.69
Maintenance of optimum health in human and wild animals help prevent zoonosis	6.44
Infectious diseases that cause abortion in wild animals can also cause abortion in humans	5.39
Some zoonotic diseases maybe incurable if contracted by humans	5.08
Wild animals infected and treated with precaution can live longer	4.82
Many zoonotic diseases have been around for hundreds of years	4.41
Quarantine personnel are more at risk than others	4.21
A close contact with wild animals and their waste products is a risk for zoonotic diseases transmission	3.99
Zoonotic diseases can be avoided with proper measure	3.89
Grand Mean	4.99

Table 2 presented the NAQS personnel attitude to zoonotic disease risks. From the table, the respondents have a better attitude in understanding that wild animals' diseases are dangerous for people and care must be taken seriously (6.84), diseases that cause wild animals' abortion are serious and need highest consideration (6.69), assisting the wild animals in delivery with bare hand can expose us to disease risks (5.08) and collecting the aborted fetuses and placenta with bare hands can expose us to disease risks (4.82). As a whole, it can be deduced from the results in the table that the NAQS personnel have a better attitude to zoonotic disease risks (4.81).

Table 2: Attitude of quarantine personnel to zoonotic disease risks

Attitudinal Statements	Mean
Wild animals' diseases are dangerous for people and care must be taken seriously.	6.84
Diseases that cause wild animals' abortion are serious and need highest consideration.	6.69
Assisting the wild animals in delivery with bare hand can expose us to disease risks.	5.08
Collecting the aborted fetuses and placenta with bare hands can expose us to disease risks	4.82
Throwing aborted fetuses and placenta to the environment contribute the spread of the diseases in our country.	4.35
We are at risk of acquiring diseases from abortion causing agents.	4.13
Many of the agents that cause abortion in animals have the potential to cause disease in people.	3.89
Spread of animals' abortion causing agents to humans is preventable.	3.81
Animal health care providers can handle abortion outbreaks very well.	3.69
Grand Mean	4.81

Table 3 presented the perceived difficulties of quarantine policy implementation in Nigeria. These includes corruption (5.76), nonexistence of appropriate technology for implementation (5.55), privation of clear definition of responsibility and coordination (5.48), deficiency of clear definition of goals (5.41), lack of continuity commitment to policy (5.34), over ambitious policy goals (5.23) and comparison during implementation (5.16).

Table 3: Difficulties of quarantine policy implementation

Statements	Mean
Corruption	5.76
Nonexistence of appropriate technology for implementation	5.55
Privation of clear definition of responsibility and coordination	5.48
Deficiency of clear definition of goals	5.41
Lack of continuity commitment to policy	5.34
Over ambitious policy goals	5.23
Comparison during implementation	5.16

4. Conclusion

Quarantine is a necessary measure in Nigeria as it is the first line of action against exotic diseases into the country. However, despite the appreciable Nigeria Agricultural Quarantine Service personnel knowledge on zoonotic diseases transmission and attitude to zoonotic disease risks, they greatly perceived the difficulties of quarantine policy implementation of wildlife quarantine policy. Thus, wildlife animal quarantine service which is core to securing the nation against trans-boundary diseases is a major concern of this study, thus, the need for NAQS personnel health education programs to minimize the transmission of zoonotic pathogens from wildlife animals on trans-boundary transits which is an important factor for a successful wildlife policy implementation.

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