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THE VETERINARY DOCTOR'S ROLE IN PUBLIC HEALTH

Eduarda Tabaldi

Barbara Thaisi Zago

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Abstract: This research aims to evaluate the level of knowledge of the population regarding the performance of the veterinarian in Public Health. This professional is of great importance for collective health, what few people know is that he can perform different functions and occupy several positions in this area, being able to work from the inspection of products of animal origin to the front line of combating a pandemic. To assess the population's level of knowledge about the performance of veterinary professionals in this area, a standard online questionnaire with 6 questions on the subject was sent. The results obtained showed that regardless of age and education level, there is still a lot of misinformation on the subject. Most answered that they know the importance of the veterinarian for the health of the population, but they are not aware that, due to the general training that this professional has, they can also act as a manager or be in charge of a Health Department. It is essential that the veterinarian guarantees his space within public health, so that he is increasingly valued within this area. In addition, it is essential that the students of the course have a better understanding of their work in the area and seek practical experience within this sector.

Keywords: Veterinary Medicine, Public Health, Practice Areas.

INTRODUCTION

The field of action of the veterinarian is wide, this professional is qualified to work in activities of inspection and sanitary surveillance of products of animal origin, ensuring healthy food on our tables and contributes, with his knowledge in epidemiological surveillance, in situations of outbreaks food. It also acts in the control and surveillance of zoonoses, preventing new outbreaks of zoonotic diseases; immunization activities, laboratory activities, research,

diagnosis and participates in the production of vaccines and medicines for human and animal use.

Thus, this article focuses on the performance of Veterinary Medicine in Public Health, which is of paramount importance for the health of the general population. The professional in this area is able to perform very important functions in the health area, due to the course curriculum, which provides broad biological, ecological and environmental knowledge.

However, little is said about the importance of this professional in public health, even though he is able to perform various functions and occupy various positions in this area. Therefore, we will seek to develop a work in which the population's level of knowledge about the importance that the veterinarian has in the area of public health will be evaluated and inform the reader of the functions that he can perform and what positions he can occupy according to the legislation.

The research aimed to investigate the areas of activity of the veterinarian, broaden the vision of the profession, recognize the importance that this professional has in society and how this professional can contribute to the social, economic, political and cultural context of his region. In addition, we will seek to emphasize the importance of this professional in the health of the population and bring appreciation to the veterinarian.

This article is divided into sections. Development, where all the part of bibliographical research is found. It is divided into three topics: historical evolution, current scenario of veterinary medicine in public health and the veterinarian in coping with COVID-19; followed by the methodology used and the results and discussions regarding the research. And in the last section is the final conclusion of the study.

DEVELOPMENT

THEORETICAL REFERENCE

In this part of the work, the theoretical framework, the methodology used and the results found will be detailed. It contains an orderly and detailed exposition of the subject addressed in the study.

HISTORICAL EVOLUTION

In 1946, the term veterinary public health was officially used for the first time, during a meeting that charged the World Health Organization with providing a conceptual and programmatic framework for public health activities that required the contribution of knowledge in Veterinary Medicine to promote and protect human health. At the first WHO/FAO meeting, the term Veterinary Public Health was conceptualized as the health that encompasses all community efforts and that influences and is influenced by the art and science of veterinary medicine, as applied to the prevention of disease, protection of life, and promotion of health, well-being and efficiency of human beings (WORLD HEALTH ORGANIZATION, 1951).

In the second half of the 18th century, after the foundation of the first schools of Veterinary Medicine, two movements were followed: the first of them sought to stop the epidemics that affected cattle, and the second sought to reduce the risks to human health of the disoriented slaughter of animals. for commercialization (SCHWABE, 1984).

Public health is the second area of action of the veterinarian directed to populations. According to Rosen (1994) during the Middle Ages, there was no urban organization and houses were clustered under the protective walls of cities where the population maintained rural life habits. Animals such as geese, pigs and ducks were raised in the houses, there was an accumulation of waste, which

caused discomfort. To solve the problem, the municipalities created regulations, such as the construction of places for animals to accommodate and municipal slaughterhouses. At the time, measures were already taken to control food, but in certain cities the meat of sick animals was sent to hospitals.

The beginning of the activities of Veterinary Medicine in Public Health occurred in the meat industry, in the 19th century. The increase in comparative medical research at the end of the same century resulted in a strong connection between Veterinary Medicine and Human Medicine (SCHWABE, 1984).

Schwabe (1984) says that the first period of public health activity within Veterinary Medicine took place at the end of the 19th century and the beginning of the 20th century and was based on food hygiene. Since then, a few professionals in the area have taken on administrative positions in public health programs in several countries. There was a period of relative stability in veterinary participation in public health work, which lasted until World War II. The second phase of Veterinary Medicine in public health began after the Second World War. It was characterized by the use of epidemiology in the development of programs to control zoonoses, it was a work aimed at the population. Veterinarians began to occupy various positions in the technical and administrative areas of public health, as a result of interaction with human medicine professionals.

Because he is used to protecting the population against collective diseases, the veterinarian easily introduces himself to the group of health professionals. The training that the veterinarian receives is in accordance with the concept of public health, which considers all the factors that specify collective health, without limiting itself to the needs of the individual. (ORGANIZACIÓN MUNDIAL DE LASALUD, 1957). In the Second Technical

Communiqué of Specialists in Zoonoses (WORLD HEALTH ORGANIZATION, 1959) the existence of more than one hundred zoonoses was recognized, thus the importance of prevention, control and eradication programs for these diseases increased.

In developed countries, the veterinarian has already been using his knowledge to perform several functions within Public Health agencies, even coordinating surveillance teams. In Brazil and in developing countries, the profession is still limited to the prevention of zoonoses (rabies, leishmaniasis, leptospirosis, yellow fever, dengue fever, malaria, among others), in addition to inspecting slaughterhouses and selling products of origin animal (FIUZA, 2007).

Man has been the main beneficiary of the exercise of the veterinary profession, as he has the physical and mental well-being of the population as a priority. This way, man has quality food in large quantities at his disposal, control of communicable diseases, a clean environment and an understanding of basic phenomena related to reproductive processes and non-communicable diseases. For this reason, this professional is able to perform his duties in the health area, coordinating, planning and executing projects that will allow the improvement and prevention of the population's health (BRITES NETO, 2006).

According to Brites Neto (2006) the majority of the population, unfortunately, is not aware that the veterinarian is also a promoter of human health, recognizing only his performance in the animal area. However, wide and comprehensive disclosures have been made by WHO talking about the need for its member countries to have veterinarians on staff to manage, plan and coordinate health programs.

Two types of functions can be performed by veterinarians within public health. The first type concerns activities for which the

veterinarian has a unique qualification. The second covers the activities that can be performed both by veterinarians, doctors and other professionals in the sector (PFUETZENREITER et al., 2004).

The professional of Veterinary Medicine contributes in countless ways to human health. The most basic form is the function of the veterinary sanitarian, which is based on the unique context of the veterinarian for his connection with lower animals and their diseases, related to the health and well-being of the population. These activities are normally the basis of public health veterinarian training and consider the specific skills of veterinarians (WORLD HEALTH ORGANIZATION, 1975).

Functions directly related to animals include: diagnosis, control and surveillance of zoonoses; comparative studies of the epidemiology of non-infectious diseases in animals compared to humans; exchange of information between veterinary medical research and human medical research; study on poisons and toxic substances from animals; food inspection and health surveillance; supervision of the breeding of animals used in experiments; technical consultation on human health issues related to animals (PFUETZENREITER et al., 2004).

Even if the veterinarian carries out purely veterinary activities such as those mentioned above, his training is broad in the biomedical sciences, which qualifies him to play several roles in public health, which are common to physicians and other professionals on the team, such as: epidemiology in general; public health laboratory; production and control of biological products; food protection; medication evaluation and control; environmental sanitation; public health research. In addition, they have generalist training, and may also occupy functions in the administration, planning and coordination of

public health programs (GOMES, 2017).

According to the Committee of Specialists in Veterinary Public Health (WORLD HEALTH ORGANIZATION, 1975), the fundamental point of implementing the expansion of the role of the veterinarian in public health is to guarantee good training for professionals in the area. All professionals must be focused on the importance of the veterinary profession for human health, and it is considered regrettable when a veterinarian is not aware of this.

CURRENT SCENARIO OF VETERINARY MEDICINE IN PUBLIC HEALTH

The functions of greatest interest in the area remain food protection and the control and eradication of zoonoses. Three other areas also stand out: the development of veterinary public health services; biomedical models (using animals in research to study human health problems), and teaching and training in public health. With regard to the last topic, it is recommended to provide an education more focused on aspects of public health, leaving the curricular approach less excessive in the clinical area (ARÁMBULO, 1991).

Nielsen (1997) declares that the level of competence of the Veterinary Medicine professional must be consistent with what society demands. Social relevance is the crux of the

recognition of the importance of the profession to society. In this century, the issues with greater social relevance are: sustainability in food production taking into account population growth; protection of the environment seeking to avoid loss of biodiversity and degradation; prevention of new zoonoses with epidemic potential. The importance of the participation of the veterinary sanitarian grows in issues that deal with sustainability.

Several authors highlight the problem of zoonoses (CRIPPS, 2000; OSBURN, 1996; STÖHR & MESLIN, 1997). This group of illnesses remains a major health problem for much of the world. The control of diseases of this nature requires cooperation between sectors and institutions, bringing together segments related to health, finance, planning, commerce, agriculture and food industry, consumers and the biomedical and agricultural scientific community (STÖHR & MESLIN, 1997).

Emerging and re-emerging zoonoses have acquired global significance in the last two decades. Among many, problems related to Salmonella enteritidis in birds, the viral hemorrhagic fevers of Marburg and Ebola, the link between bovine spongiform encephalitis and Creutzfeldt-Jacob disease, the Hantaviruses, and several other zoonoses that demand joint work are cited. doctors, veterinarians and biologists. The new trends in production practice are linked to these problems, interference in wild animal populations, demographic changes, population mobility, urbanization and globalization of the food industry.

These changes must be accompanied by high levels of epidemiological surveillance and new methods of disease control and prevention (WORLD HEALTH ORGANIZATION, 2002).

The Study Group redefined Veterinary Public Health and the purpose of its collaboration, thus Veterinary Public Health came to be conceptualized as the sum of all contributions to the physical, mental and social well-being of human beings through the understanding and practice of veterinary science (WORLD HEALTH ORGANIZATION, 2002). Veterinary science fulfills fundamental functions in public health, directly influences human health through its knowledge and experience and encompasses

all veterinary activities including animal production and health.

According to Coutinho (2021), cited by `` Universidade Federal Rural da Amazônia `` (2021), the role of the veterinarian is not restricted to ensuring animal health, contrary to what many people think. The view that society has of the profession is because it is used to seeing the veterinarian taking care of the health of pets and production animals in their homes, but if you analyze the training of this professional technically, it is noticeable that everything that involves collective health is part of its actions.

THE VETERINARIAN IN THE FACE OF COVID-19

COVID-19 is a serious respiratory disease in humans caused by the new coronavirus (SARS-CoV-2), with easy transmission and high lethality. It was first described from infections in Wuhan, China at the beginning of 2019 (FERREIRA, 2021).

There is evidence that COVID-19 has an animal origin. Studies indicate that the viral origin is from bats, as the genetic sequences of Sars-Cov-2 are similar to those found in specific coronaviruses of this species (ALMEIDA, 2021).

In the face of this pandemic, the WHO called on 14 categories of professionals to act on the front lines in the fight against COVID-19. Among these categories is the veterinarian (CRMVDF, 2021).

This role of the veterinarian fits perfectly with the demands of COVID-19 and is based on Law 5517/1968, which governs Veterinary Medicine and also guarantees the private rights of the profession, among them, the present in Article 6, paragraph b (the study and application of public health measures regarding animal diseases transmissible to humans) (FERREIRA, 2021).

Veterinarians are working in laboratories

in laboratory analyses, conducting the processing of biological samples, serological tests, molecular evaluation, genetic sequencing and others appropriate for the demands of COVID-19 (FERREIRA, 2021). They are also involved in the production of inputs, vaccines and diagnostics.

Coutinho (2021), quoted by `` Universidade Federal Rural da Amazônia `` (2021) states that with the pandemic the role of the veterinarian in the health of the population was evidenced. The lack of information was evident, therefore, professionals in the area have a duty to provide quality information about health to the population, and veterinarians have the knowledge to advise on the risks and prevention of infectious diseases.

Ferreira (2021) says that in times of public calamity, during the pandemic, equipment such as respirators were provided by veterinary teams for use in human patients, which demonstrates how much human and animal medicine are linked and that the purpose of both is or lifesaving. He also says that without a doubt, the performance of the veterinarian on the front line of COVID-19 it is a great opportunity to advance the population's knowledge of how important this professional is in the health of the general population.

This topic, as well as the others discussed above, must be highlighted in the training of veterinarians so that they can keep up with current demands and anticipate understanding of future ones. Therefore, this research is important to inform the general public that the role of the veterinarian in public health is fundamental.

METHODOLOGY

This article is of a basic nature, as it seeks to inform the reader about the fundamental role that the veterinary medicine professional has in the health of the population, in view of the lack of information on the professional's

performance in this area.

The approach used in the research was qualitative and quantitative. Initially, a bibliographical research was carried out, seeking information on the subject in articles and scientific journals. The data found were used to support the development of the subject, in the form of citations. Afterwards, a numerical survey was carried out through a questionnaire, where the level of knowledge that the general population has about the performance of the veterinarian in public health was measured.

The population received a standard online questionnaire prepared on the Google Forms platform. The public was asked about their age, level of education, whether they were aware of the importance of the veterinarian in public health, where the professional can work and what positions they can occupy in this area. This way, the study became exploratory and has as a technical procedure the data collection, as it divided the interviewees by age group and level of education, bringing results that indicated whether the relationship between the variables (age group and level of education) has or not related to the level of knowledge that the population has on the subject.

RESULTS AND DISCUSSION

The online questionnaire sent to the population brought responses from 32 people. The first question, which asked about the age of the population, revealed that 53.1% of the public interviewed was in the 15 to 24 age group; 18.8% from 35 to 44 years old, 12.5% from 25 to 34 years old; 9.4% in the 45 to 54 age group and 6.3% in the 55 to 64 age group, as shown in Figure 1.

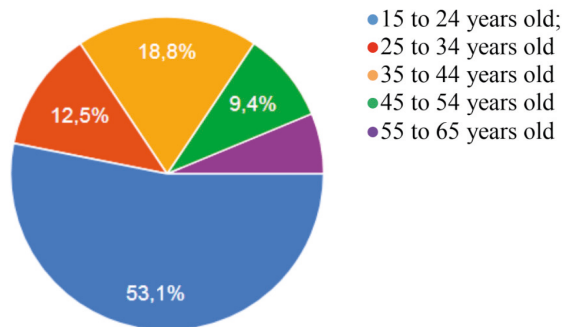


Figure 1 - Age of the population interviewed.

Source: Eduarda Tabaldi, 2021.

The second question asked the schooling of the population. 40.6% of the interviewees have higher education in progress; 31.3% have completed higher education; 21.9% have completed high school; 3.1% only completed primary education and 3.1% did not complete secondary education, as represented in Figure 2.

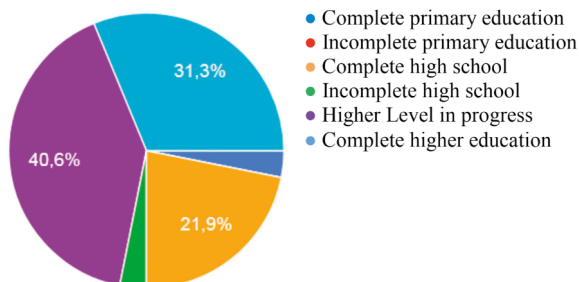


Figure 2- Level of education of the interviewed population.

Source: Eduarda Tabaldi, 2021.

Then, the interviewees were asked if they were aware that veterinarians can act and perform several important functions in public health. 75% answered yes, that they have knowledge. 25% answered that they are not aware that the veterinary professional can have several functions within public health (Figure 3).

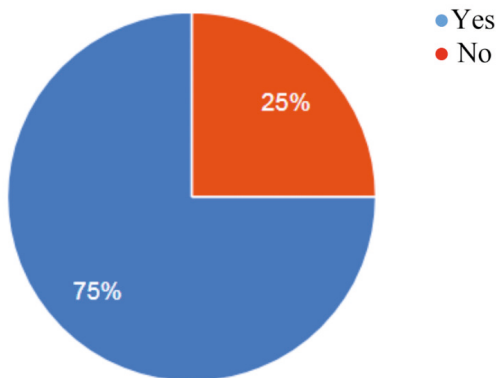


Figure 3 - Knowledge of the population about the attributions/positions that the veterinarian can occupy in public health.

Source: Eduarda Tabaldi, 2021.

Next, they were asked if they had knowledge of the function of the veterinary professional in public health. 59.4% answered that they did not know about the function of this professional in this area, 40.6% answered yes (Figure 4).

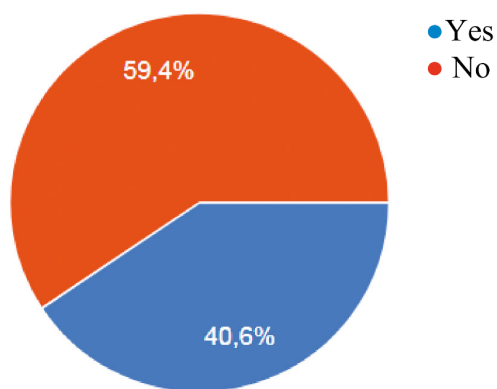


Figure 4- Knowledge of the population about the function of the veterinary professional in public health.

Source: Eduarda Tabaldi, 2021.

Afterwards, people who had answered “yes” to the previous question were asked to mention which function(s) they were aware of that are performed by veterinary professionals in public health. Out of 32 people, only 10 responded, equivalent to 31.25%. Most of the people who responded mentioned being aware of the professional’s role in the

inspection and health safety of products of animal origin, which ensures that only quality food reaches the population and prevents the spread of zoonotic diseases. The minority, on the other hand, cited care such as vaccination and animal health, and many do not have assistance because they live on the street.

Finally, they were asked if they know the importance of the veterinarian in the health of the population. 59.4% answered that yes, they know the importance, 40.6% answered that they did not know (Figure 5).

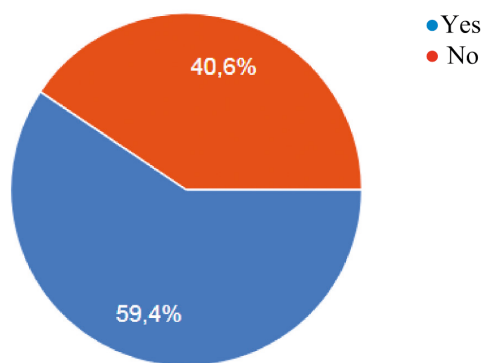


Figure 5 - Knowledge of the population about the importance of the veterinarian for the health of the population.

Source: Eduarda Tabaldi, 2021.

The study carried out brings unpublished data, since no reports were found in the literature about the data collected, which made it difficult to discuss the results with other authors and works.

It is noted that regardless of age and education level, the population knows that the veterinary medicine professional is very important to promote everyone’s health. However, Da Costa’s (2011) idea is reaffirmed that there is still a lot of misinformation both from professionals and the population about where and how they can act and what positions a veterinarian can occupy within public health.

Reaffirming what Xavier and Nascimento (2017) state, the veterinarian has generalist

training, is not limited to animal health, but also addresses human and environmental health, which is why it is essential to have a veterinarian when it comes to planning and development of public health actions.

It is essential that the population becomes aware that this professional has a great ability to act in the various sectors of public health, Gomes (2017) states that the veterinarian can act in the inspection of products of animal origin, control of zoonotic diseases, as a manager, at the head of a health department or as part of the team. Veterinary professionals must be given the appreciation they deserve.

CONCLUSION

Taking into consideration, the data collected, it is concluded that the objectives of the work were achieved and that few are aware of the functions that training in veterinary medicine offers to professionals within public

health, a reason that causes astonishment when a position of greater power in the health area is occupied by a veterinarian. It must be emphasized how important it is for the population to become aware of the role of the veterinary professional in collective health, so that it has the appreciation it deserves more and more.

It is also worth emphasizing that it would be of great value if educational institutions offered lectures on the subject, so that students broaden their vision in relation to this area of activity. In addition, institutions could add part of the internship in the area of public health to their curriculum, no longer focusing only on the clinical and surgical part, offering academics the opportunity of practical experience in this sector, which is so important for the health of the general population and which little is said.

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