

Evaluation of the Hygienic and Sanitary Conditions of Poultry Products Commercial Establishments in Street Markets

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Abstract: The street markets are an aggregational of commercial establishments where a variety of food products can be found, so we must consider the commercialization of these products and the hygienic conditions of these distribution places, which directly affect the quality of the food offered at these markets. This study aimed to evaluate the hygienic and sanitary conditions of the street market located in the southwest region of Bahia. Through this study, it was possible to identify that the main points that need improvement are regarding the hygiene habits of the handlers, how food storage works and the lack of water, which is one of the most critical points found during this evaluation. This study reinforces the need for supervision by the responsible agencies, so that educational actions can be implemented through courses, workshops and lectures in order to raise awareness about their managing and minimize the risks to public health.

Keywords: Evaluation. Poultry Checklist. Chicken. Hygienic-sanitary. Production.

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Introduction

Brazil is distinguished as one of the largest suppliers of poultry meat in the world trade, with more than 150 markets importing poultry meat, favoring the country as the third largest producer of chicken meat, with more than 12 million annual tons of chicken meat (Abpa, 2017). However, due to an increase in chicken production, demand and export, there was a need for safety and quality measures, resulting in the creation of quality and hygienic control programs (Amaral et al., 2014).

In Brazil, the inspection is carried out at the industrial level by the Ministry of Agriculture and Animal Production (MAPA), at commercial points, the Ministry of Health, through the National Health Surveillance Agency - ANVISA, is responsible for verifying the storage conditions of the food (Brazil, 2017).

Quality in a food product is completely associated with ensuring safe food for consumption. These should be exempt from the presence of physical, chemical and biological contaminants that can contaminate in the stages of slaughter, handling, processing and commercialization, and can be avoided or controlled according to the use of quality management techniques (Kunh, 2015).

Despite these control techniques, in Brazil it is still common to sell and consume animal products that were not subject to inspection. Being a product of animal origin, chicken cuts are easily subject to microbiological contamination of different origins (Souza, 2014; Siavs, 2015), which may lead to the risk of transmission of foodborne diseases to the consumer.

Considering the importance of the Official Service of Public Health Inspection and analyzing the risk of transmission of foodborne diseases through the consumption of chicken cuts, this study aims to evaluate the hygienic and sanitary conditions of commercial establishments in free markets in the city of Vitória da Conquista, State of Bahia.

Methods

This is a cross-sectional analytical study, which observed and described the characteristics of an establishment, using a standardized technique for data collection (Gil,

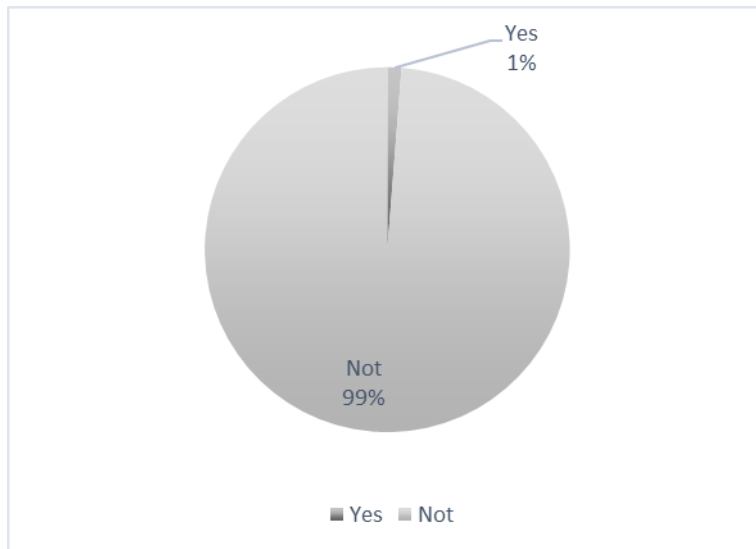
2008). The study was conducted in a municipality in the interior of Bahia (Latitude: -14.8648, Longitude: -40.8369 14 ° 51 ' 53 " South, 40 ° 50 ' 13 " West), conducting field trips to the main popular street market of the city. To evaluate the hygienic and sanitary conditions of the main commercial poultry products establishments, a quality mediation instrument was used, i.e., the checklist.

This instrument is based on RDC Resolution No. 216 of September 2004, which aims at the constant improvement of hygienic and sanitary controls of commercial food establishments. The checklist will include field observations on hygiene and sanitary aspects, consisting of 26 items, distributed in eight blocks: external area and access; area for receiving and storing products; sanitary facilities; equipment, furniture and fixtures; marketing flow; marketing area; manipulation and integrated control of urban vectors and pests. The observed items will be attributed to the positive and negative aspects, divided into "Compliant" and "Non-Compliant", respectively.

Results and Discussion

The free markets visited represent the main points of popular commercialization in the city of Vitória da Conquista, State of Bahia, the results obtained showed poor infrastructure conditions in most of the evaluated places, problems related to conservation, food handling and cleanliness. According to the merchants' staff, data collection took place at random in the main major fairs of the municipality.

In the criterion related to the area of access to the commercial establishments studied, non-conforming standards were found, according to the Resolution RDC No. 216/2004 in 98.8% of the collected sites. Local street markets featured independent entrances on the front and sides. In the closest area there are several commercial centers that sell grains and other food products, allowing the presence of rodents that can transmit diseases through urine, feces and other sources of contamination in the poultry meat commercialization boxes (Ministério da Saúde, 2019).

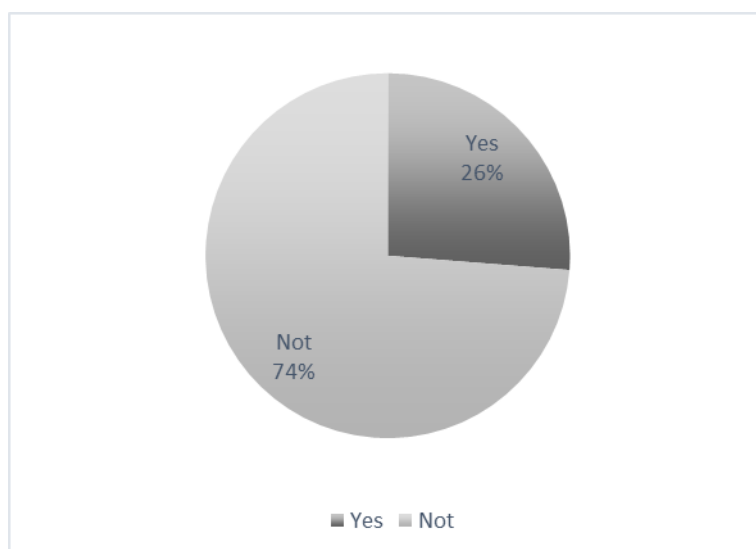


Graphic 1- Outside area with focus of unhealthiness. Source: Research Data, 2019

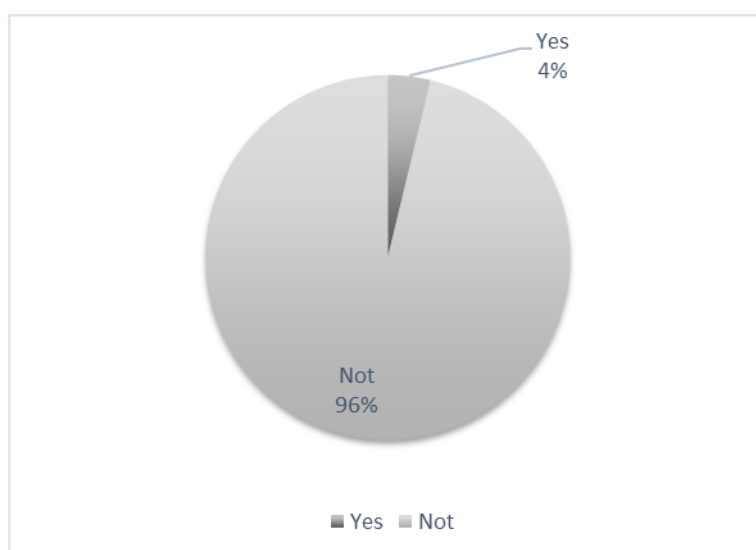
The waste has no cover and is disposed of in the vicinity of these establishments, which include carcasses of farm animals and spoiled food, which entails a risk of cross-contamination by mechanical biological vectors such as dipterous, which may spread a wide variety of etiological agents of OTD (Health, 2019).

Regarding the spaces intended for receiving and storing the products, the results were predominantly negative with 73.8% of non-compliance, representing a high risk to the consumer. There was the absence or poor conservation of the sinks, lack of material to perform hand hygiene, the handling of the box had inadequately sanitized, broken floor and door and bad conditions in general. The boxes analyzed did not have an exclusive place for the storage of cleaning products, predisposing to the risk of toxic contamination due to the proximity of chemicals (Tsambientali, 2019).

Regarding to sanitary facilities also hears nonconformities, the markets analyzed have toilets located outside, and their access is open to all traders and consumers of the free fair, thus increasing the number of people who use it, facilitating the proliferation and enteropathogenic flow, offering risk of cross-contamination by manipulation (Guerra, 2019).



Graphic 2 - Area for reception and storage. Source: Research Data, 2019



Graphic 3 - Equipment, furniture and fixtures Source: Research Data, 2019

Regarding equipment, furniture and utensils, 96.2% of the boxes were non-compliant, there is a lack of equipment used to preserve food (refrigerators and freezers) or the condition of equipment that was inadequate. No establishment had a record of corrective and preventive maintenance every six months, leading to inadequate cooling, thus causing microbial growth and deterioration of the marketed product. The utensils used by the handling did not undergo previous cleaning, thus predisposing to cross contamination by fungi and bacterial agents (Cruz, 2019).

Regarding the flow of commercialization, the hygienic-sanitary conditions of the ingredients, packaging raw materials are observed. In these aspects, what was observed in the free fairs are many predisposing factors for contamination by physical and microbiological agents. All boxes analyzed were not compliant in this regard, some commercialized meat products were exposed to room temperature for a period greater than thirty minutes, thus increasing the chance of deterioration.

In the criterion related to the handlers, there was non-compliance in all establishments, the attendants did not use adequate equipment for handling meat products, such as uniforms, lab coats, closed footwear, glove and waterproof apron and when they were used, they were dirty or in bad hygienic conditions.

In the integrated control of urban vectors and pests, it was analyzed whether there were presence of urban vectors and pests, observing if there was evidence such as feces, nests, among others and if the marketers adopted preventive and corrective measures such as screen, sealing rubbers and absence of material in disuse, whose purpose was to prevent the attraction, shelter, access and proliferation of vectors and urban pests, in all locations analyzed, it was found that none met the requirements.

In this scenario exposed above, the study revealed a serious scenario of risk to public health, considering that in virtually all establishments studied do not have structural, sanitary and personal hygiene conditions of the handlers, in addition to exposure of food to chemical and biological contaminants. and deteriorating agents. The results show the low sanitary hygienic quality of the analyzed establishments, which can expose the local population to OTD, including by multiresistant pathogens through the consumption of meat products marketed

Conclusion

To reverse this situation, it is required stricter supervision from the breeding of slaughter animals to the marketing of meat products, imposing heavier fines on breeders and traders who do not follow current legislation. Thus, it will guarantee a good offer. The results show the low sanitary hygienic quality of the analyzed establishments, which can expose the local population to OTD, including by multiresistant pathogens through the consumption of meat products marketed.

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