
| RESEARCH ARTICLE

Implementation of Meat Inspection Code (Republic Act No. 10536) and Challenges Encountered by Butchers and Meat Inspectors in Calamba City

MARIO B. DELOS REYES

Slaughterhouse Master II, Slaughterhouse Management Division, Office of the City Veterinary of Calamba City, Philippines

Corresponding Author: MARIO B. DELOS REYES, **E-mail:** mardelosreyes031685@gmail.com

| ABSTRACT

Implementation of the Meat Inspection Code and Compliance with Food Safety are two important factors required to meet the quality of fresh and safe meat produce and satisfy the consumers' desire to serve this fresh meat at their dining table. This has been a long-time struggle for the City Veterinary-Slaughterhouse Management Division since no system has been implemented. The authority whose function is to safeguard the cleanliness and safeness of these produce and maintain the quality of food animal that consumers expect every day for their families. This discussed the problems and concerns that could potentially obstruct achieving the goal of client satisfaction and retention, as well as the relationships between the level of implementation of the meat inspection code and the degree of seriousness of the challenges faced by the butchers and meat inspectors. A researcher-made questionnaire was utilized in this study. This was used to randomly gather surveys from 64 respondents of butchers and meat inspectors. The Mean, Pearson Product-Moment Correlation, and Four-Point Likert Scale were used to analyze and assess the model. Based on the findings, there was a slight but statistically significant positive correlation between the degree of implementation and the severity of the difficulties faced. Additionally, the study suggested a course of action to create and enhance new methods to support the current program and modernize the system, which will help enhance the quality and condition of meat produced at a slaughterhouse that has received accreditation.

| KEYWORDS

Implementation, Republic Act, Meat Inspection Code, Butchers, Meat Inspectors, Food Safety

| ARTICLE INFORMATION

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1. Introduction

The Philippine government implements different laws to ensure that people will follow and guarantee the safety of the consuming public. Republic Acts are implemented. One of these is the Implementing Rules and Regulations of R. A. no. 9296 and as amended by R. A. no. 10536, known as the Meat Inspection Code, which was updated in 2013 to incorporate laboratory and analytical services for the identification of contaminated meat and meat products in NMIS as well as the detection of pollutants, pathogens, veterinary drug residues, and meat parasites. An addition to the implementing rules and regulations of the Republic Act no.10611, is the "Food Safety Act of 2013". This is an act to strengthen the food safety regulatory system in the country to protect consumer health and facilitate market access to local foods and food products, and for other purposes" being part of the Public Safety Program of the government.

As it is, animal slaughtering is a high-income generating business because every day people need to consume meat products as one of the essential needs in life. Many people also benefitted from this business, the animal farm, animal dealers, meat retailers, and the workers of the slaughterhouse. The problem though was the locality never experienced a legitimate or accredited

slaughterhouse like a Single-A, Double-A, or Triple-A Slaughterhouse. This locality has never consumed a safe or clean freshly slaughtered food animal unless the meat was from another locality with an accredited slaughterhouse.

As stated in the Implementing Rules and Regulations of the Meat Inspection Code of the Philippines RA #9296 and as amended by RA10536, regarding classification and accreditation of slaughterhouses, the NMIC established standards for production, plans, designs, and specifications, slaughterhouses should have the following accreditation: **“AAA”** – Those with facilities and operational procedures appropriate to slaughter livestock and fowls for sale in any market, domestic or international; **“AA”** – Those with facilities and operational procedures sufficiently adequate that the livestock and fowls slaughtered therein are suitable for sale in any market domestically; **“A”** – Those with facilities and procedures of minimum adequacy that the livestock and fowls slaughtered therein are suitable for distribution and sale only within the city or municipality where the slaughterhouse is located.

As observed and experienced by meat inspectors in every market, supermarket, meat shop, and grocery around the City of Calamba, they were the ones who knew the real condition of these products and only a few or even a handful of consumers were aware of the real situations of the meat they bought. Meat inspectors knew very well the conditions of these meat carcasses in the market because they were the ones who decided if these meats were safe and fit enough to be consumed by the meat-consuming public. To ensure the safety of these meat products, the implementation of various Republic Acts served as regulatory requirements for commercial food businesses and required them to follow food safety standards.

In addition, traditional slaughtering is an obsolete process of preparing meat products and is considered contaminated because of the area, the source of water, the slaughtering tools they use, and the physical condition of the workers. The researcher attests to the truthfulness of this condition because he is a qualified Inspector of a slaughterhouse and its processes. In almost all old traditional slaughterhouses, meaning old rules, old buildings, or no building at all, just a roof, no walls, no division, no system whether production and management wise, the undefined authority of who will be the deciding person, the slaughterhouse management or the dealer who owned the food animals. The meat inspector does not have the authority to instruct or implement rules and regulations for these private establishments because of the situations where the slaughterhouse workers are used. These organizational issues also affect the performance of the butchers and the movement of the food animal owners or dealers inside the City slaughterhouse. Another is the employment status of the butchers, in the traditional setting, butchers are hired by the Meat Dealers and are compensated differently. They compensate depending on how many swine will be slaughtered, the more swine the bigger the compensation. Worse is when the dealer is out of funds, meaning, no slaughtering, and no work for the butchers.

Moreover, the worst scenario that came into the slaughtering system of Calamba City was when the City Slaughterhouse was closed due to a violation of the Liquid Waste Disposal by R.A. no. 9275(Clean Water Act of DENR) and LLDA’s Resolution no. 96-33 for acquiring an updated discharge permit. From 2016, the LGU had no control over the existence of various private slaughterhouses, some were owned by a single meat dealer, and others were clustered and managed by one meat dealer. The only part of the LGU in the Slaughtering system was the Meat Inspection, but the slaughterhouse management was dealt with solely by the private owners, so Meat safety compliance was in a faltered situation.

Furthermore, another situation was when the African Swine Fever affected the swine industry, there, the big plunge in hog slaughtering fell to its bottommost. Decreased in the number of meat dealers thus resulting in a decrease in slaughter workers. Having this system strongly implies the authority of who will be the deciding entity and will also serve the public its needed supply of safe meat. Most of the slaughterhouse staff and workers were exposed to hazards such as animal diseases, work-related accidents especially the butchers, and some equipment that may induce perils such as hot water and sharp materials.

To ensure the cleanliness and safety of the prepared meat, meat inspectors performed their job as inspectors, trained as required by the national agency National Meat Inspection Service (NMIS), they are the authority in implementing rules and guidelines in food safety specifically meat products.

In response to these issues, a quality management system is recommended to avoid such incidences and to raise the moral values of the butchers as they feel that they are part of an organization such as a government-operated slaughterhouse.

The researcher being a meat inspector is finding ways to correct the misleading belief of the consumers of clean and safe meat and direct the slaughterhouse workers to a more stable and secured tenure through a systematic and law-compliant management system. The objective of this study was to lead the researcher to implement the national standard to be the basis of the accreditation of the City Slaughterhouse and assess the degree of seriousness of butchers and meat inspectors' challenges in implementing the Meat Inspection Code of the Philippines and raise the moral values of the butchers and the working competencies of the meat inspectors.

2. Literature Review

This chapter provides an overview of the studies and literature that were pertinent to the suggested research project. The study's focus was on Animal Slaughtering and food safety as it poses challenges to butchers and meat inspectors. The researcher's goal was to foresee the accreditation of the City Slaughterhouse to meet the Food Safety Standard and serve clean and safe meat, fit for human consumption.

Holmes (2023) stressed that a common analogy used for commitment to change depicted it as the glue that provided the vital bond between people and change goals. It was defined as a mindset that bound an individual to a course of action deemed necessary for the successful implementation of a change initiative

For Hidayati, et al., (2021), the results of this study showed how important training is in the slaughterhouse. Taking into account the costs that the business bears for training, the majority of which is informal on-the-job formal training is only available to those who are dedicated to the field and want to continue working in it. Particularly since the two proprietors have acknowledged that high employee turnover is a persistent issue in this particular sector. Nevertheless, because it teaches them to recognize the type of grass utilized, the on-site training is essential. Furthermore, a variety of elements, including training, helped to motivate the staff. As a result, the results indicate that desire and training were somewhat related, which is consistent with earlier research by the different researchers involved in this study. Task completion becomes more efficient with the right motivation and training, which improves job performance.

2.1 Implementation of Meat Inspection Code (Republic Act No, 10536)

Arzoomand et al. (2019), detailed the primary purpose of meat inspection was to ensure safe meat for human consumption. Moreover, meat inspection has become a key control point for animal welfare and a data collection point for baseline monitoring of the food chain, animal diseases, and meat quality. The rapid increase in herd size had increased the workload of farmers, and slaughterhouses. and meat inspectors. New, more cost-efficient ways of working are needed, and one option was revising the distribution of tasks during post-mortem inspections.

Moreover, the National Meat Inspection Service was a specialized regulatory agency in the Department of Agriculture that is the country's sole national controlling and competent authority on all matters of meat inspection and hygiene both for locally produced and imported meat. It was created under Presidential Decree No. 7 as the National Meat Inspection Commission and renamed as National Meat Inspection Service under R.A. 9296, otherwise known as "The Meat Inspection Code of the Philippines, "As amended by R.A. 10536. NMIS was tasked to formulate, promulgate, and implement laws, policies, programs, and projects governing the post-harvest flow of meat to protect the interest and welfare of consumers and promote the development of the livestock and meat industry. (National Meat Inspection Service, Citizen's Charter, 2022).

Animal slaughtering was a global market in which the main product contributed significantly to the daily demands of the world's eating population, necessitating meticulous preparation, inspection, and assurance of its safety and cleanliness. As stated in the article published by Food Safety S. (2022), each of these establishments/slaughterhouses must have specific arrangements in the slaughter hall for the slaughter of various animal species and according to various methods. The slaughterhouse must be cleaned, rinsed, and sanitized following each type of operation.

Additionally, the findings of Njoga et al., (2023) stressed that the inadequate welfare conditions under which food-producing animals (FPAs) were subjected to pre-slaughter and slaughter processes at SHs had serious consequences for the quality and safety of meat produced, as well as for public health. Poor animal welfare practices had a serious impact on the meat processing industry, not only affecting human health but also the profitability of the entire value chain. The development of meat anomalies and degeneration due to inadequate pre-slaughter animal care was a complex process, primarily linked to tissue glycogen depletion and resulting fatigue.

Also, for Prinsen et al. (2020), changes in consumption habits and food production methods were related to urbanization. These patterns and processes can raise or decrease the risks of foodborne disease outbreaks and are usually followed by changes in food safety policies and food handling rules. Findings implied that rural and urban operators may respond differently to policy initiatives due to their differing future expectations. More research was needed to investigate how these disparities in expectations may affect operators' responses to future-oriented interventions.

Furthermore, Waldman et al. (2020), cited inspectors and slaughter staff collaborated and conducted situational expertise to control meat safety risks through their interactions. While scientific and technical risk knowledge informed this expertise, it was also shaped by local logic and contextual conditions that considered material and institutional constraints, local expectations of appropriate business operation and consumer demand, and perceptions of hygiene, cleanliness, and meat quality. This

combination of scientific and practical knowledge had the potential to improve meat safety. Slaughter workers and inspectors, for example, all agreed that meat should be inspected and condemned if it showed visibly problematic signs, and slaughter workers' concern for soil, feces, and maintaining a "clean" environment can help to reduce the risks associated with pathogen contamination.

On the other hand, Kumar et al. (2023), believed that improved knife-sharpening technologies should be developed and that slaughter personnel should be taught knife sharpening. The slaughter personnel should have a basic understanding of animal consciousness, suffering, and distress related to slaughter without stunning, as well as numerous methods for relieving pain and distress during slaughter. To alleviate work pressure in slaughterhouses, sufficient human resources with experience in slaughter processes and correct knowledge of religious beliefs should be recruited. Alternatively, depending on usage and requirement, the slaughterhouse management may give a set of sharp knives for murdering a group of animals in a day or shift. At a slaughterhouse, more than one slaughterer should be assigned so that while one person was slaughtering, another inspected and sharpened the knives. Management should also conduct regular interviews/interactions with employees to gauge their compassion and understanding of animals, as well as the inherent importance of many principles stipulated in religious slaughter. They should intercede whenever necessary.

To reinforce the findings of the study, Ramli (2019) defined the climate as the views that members of an organization had about its formal and informal policies, practices, and activities. Conversely, numerous studies had shown that a positive work environment was closely linked with the organization's ability to operate efficiently. It was further associated with factors such as work-life balance, social benefits, job satisfaction, and managerial quality, including leadership style. As a result, leadership was essential to successfully and efficiently manage an organization's affairs. It was one of the main forces behind an organization's performance improvement, which affected its overall outcomes.

Significantly, Food Safety Standards were set by authorities as described by Vargová et al. (2021), and meat hygiene was a difficult task. Hygienic slaughter and dressing activities, in conjunction with veterinary antemortem and postmortem examination, were critical in reducing the danger of pathogenic organisms' contamination of meat. Regardless of the size or complexity of the firm, management, and employees have an absolute responsibility. Workers ensured that the food produced was safe and suitable in every aspect for its intended end use. Surface contamination was minimized to control pathogenic germs on surfaces by using suitable sanitation and decontaminating processes. This was the outcome of the key points of microbiological contamination in the slaughterhouse intended to help specialists responsible for cleanliness in comparable facilities to establish suitable sanitary practices for the avoidance or decrease of microbial contamination of meat and meat products.

In the Philippines, most of the municipalities had their own slaughterhouse, whether it was government or privately operated and it does not mean that all of them were practicing the right and legal procedures from permit, licensing, and accreditation to ensure safe and clean meat products. According to Agriculture Secretary William Dar, as reported by DA Communications Group, (2020), the Food and meat safety processes of the National Meat Inspection Service (NMIS) of the Department of Agriculture (DA) needed to be improved. Everyone must ensure the safety of food, especially meat. To ensure the health and well-being of all consumers, it was needed to do this. Agriculture Secretary William Dar challenged the National Meat Inspection Service (NMIS) of the Department of Agriculture (DA) to advance current practices and level up its food and meat safety protocols. "Food safety, particularly meat safety, \was a shared responsibility. We each have to do our part to keep and maintain safety in our locality, and in the entire country, to ensure the health and wellness of all consumers," said Secretary Dar, underscoring the importance of a safe and clean meat industry, during the 48th anniversary of the DA-NMIS on October 20, 2020, in Quezon City. Agoot (2023), on the other hand, emphasized that Class AA abattoirs were those with facilities and operational procedures sufficiently adequate that the livestock and fowl slaughtered there were suitable for sale in any market within the country.

As mandated by the Meat Inspection Code of the Philippines (RA 9296), and as performed by the National Meat Inspection Services (NMIS), all meat was inspected for safety and quality, and being sold in the market were safe meat items. All meat and meat products were exported at the same time. All exported meat and meat products entering the country should only come from abroad or from meat companies with accreditation from from the Department of Agriculture. Using HACCP to prepare meat, procedures, as well as other global standards, recommendations, a list of steps, and guidelines are followed. The nation's strong compliance with the manufacture of meat and meat-related products, while the importation of such was supported by the negative result. Moreover, Republic Act 9296, or the Philippines' Meat Inspection Code mandated local government units to ensure the protection of human and animal health against direct and indirect hazards, such as zoonotic diseases, meat-borne infection, and the spread of livestock diseases. The law also required local government units to see to it that the economic losses from inferior quality meat or abnormal properties were avoided. Additionally, local government entities were mandated by law to take measures to prevent financial losses due to subpar meat or unusual traits.

Matchawe et al. (2019) said that The Yaoundé slaughterhouse's subpar hygiene methods and poor circumstances for handling and slaughtering carcasses were evident in the results. Thus, maintaining meat hygiene necessitated maintaining human hygiene as well as the cleanliness of the facilities and equipment used in slaughter and meat processing. These findings highlighted the urgent necessity to incorporate HACCP principles across the slaughter process at this slaughterhouse and to train the abattoir staff on Good Manufacturing Practices.

In an article where Rustia et al. (2020) detailed that, The Philippine Food Safety Act of 2013 (FSA 2013) was now the framework for food safety in the Philippines. It required all relevant government entities to work together to implement measures to protect consumers and promote food safety to the general public. One of these projects used risk analysis as the scientific foundation for developing appropriate food safety laws and legislation, not only to safeguard consumer health but also to clarify concerns in national food control and food trade.

As delineated by Agu et al. (2021), there was a general understanding of hygienic habits, as well as demonstrably good hygiene practices, probably because of health discussions by supervisory ministry personnel. However, major gaps in practice were identified by more than half of the respondents in some critical areas. A good knowledge of sanitary techniques was a factor in good hygienic practice. Despite the limitations of self-reporting bias, this study contributed to the understanding of the knowledge and practice of hygienic practices, as well as its determinants, among workers in the Abakaliki abattoir and slaughter slab, and the practical implications suggested a basis for the immediate implementation of targeted interventions by government and stakeholders, beginning with training on the importance of good hygiene and sanitation. Butchers also played a big part in slaughtering food animals because they were the ones who killed and prepared the food animals for the food consumption of the consumers.

Slade and Alleyde (2021). reviewed findings that highlighted the scarcity of research on the psychological well-being of SHWs. Existing research showed a link between this type of work and bad psychological and behavioral results, both for individuals and for society. Furthermore, these findings had significant implications for mental health and community practitioners who were able to address the industry's detrimental impacts. Much more theoretical and empirical study, however, was required to build the evidence base for creating prevention and intervention techniques. According to the analyzed studies, working in a slaughterhouse was associated with both general antisocial conduct and sexual offenses in particular. However, no evidence established such a connection with violent crimes. They highlighted relevant findings for practitioners and policymakers that merit attention while suggesting future directions for study (i.e., adopting additional methodological rigor) based on existing research. Several occupations call for the legal slaughter of living things.

2.2 Challenges Encountered by Butchers and Meat Inspectors at Slaughterhouse

For the British Meat Processors Association (2019), there were about 75,000 people employed in the meat industry in the United Kingdom (Department for Environment, Food & Rural Affairs, 2019) and the United States (United States Department of Agriculture, 2020), respectively, to meet market demand. Furthermore, statistics revealed that the bulk of these workers have little formal education and originate from low socioeconomic backgrounds, with migrants accounting for 70% of the workforce. There was evidence of higher rates of depression, anxiety, psychosis, and feelings of lower self-worth at work. Of particular note was that the symptomatology appeared to vary by job role. Employees working directly with the animals (e.g., on the kill floor or handling the carcasses) were those who showed the highest prevalence rates of aggression, anxiety, and depression. Given the psychological and psychopathological demands of slaughterhouse employment, the workers engage in a range of coping strategies. Some of the strategies were helpful and adaptive, such as taking days off work and relying on prosocial forms of support e.g., family or religion. However, oftentimes, the workers employed maladaptive strategies, such as repressing difficult emotions, sabotaging their working environment as a form of expression, using illicit substances, and/or engaging in interpersonal violence. Therefore, it was unsurprising that crime statistics indicate a positive association between the presence of slaughterhouse establishments and crime arrests generally and rape arrests specifically. Contributions from these issues may affect the working attitude and competency of the butchers and other abattoir workers. So, developing the work environment and the system may lessen the psychological and emotional burdens.

Based on the findings already published by Ursachi et al. (2021) in the literature, slaughterhouse managers should consider more stringent preventive measures adopted in their safety management systems to battle the SARS-CoV-2 virus, and a suitable place to start could be the steps described in Section 6. As a result, meat processing enterprises should consider an urgent assessment of the risks in the current pandemic crisis and apply hierarchical measures to prevent such outbreaks. Aside from all of the steps to reduce worker crowding, they should include alternative hours for breaks and the installation of barriers between workstations. Furthermore, special gadgets and mechanisms for preventing virus propagation should be established to facilitate communication among personnel.

In addition, Luturlean et al. (2019) mentioned that increasing employee job satisfaction through the implementation of transformational leadership and work stress level management had a positive relationship with employee job satisfaction. However, transformational leadership did not have a significant relationship with work stress. This therefore meant that there was no mediation of work stress. Customer satisfaction was commonly recognized as a critical element that can influence an organization's overall success. Offering top-notch customer service was essential in the fiercely competitive world of today and the cornerstone of any prosperous business.

Finally, Nwankwo et al. (2023) stated that the Ikpa slaughterhouse was of inferior quality, structural, skilled personnel capacity, cleanliness, waste management, and managerial status, and hence ineligible to serve as a Point of diagnosis and illness surveillance. There was an urgent need for a new slaughterhouse with high-tech equipment, capable staff capacity to support good meat safety and hygiene practices, and an operations point of disease surveillance.

According to the study of Mallhi et al. (2019), meat handlers had low awareness of food safety and practices, and microbial load in samples was also greater than WHO criteria, therefore, regulatory authorities should focus on improving the meat food safety situation in Lahore.

Moreover, Igawe et al. (2020) stated that slaughtering animals was a male-dominated occupation in northern Nigeria. This was clear in the study, where all of the workers who took part were men. Workers who slaughtered animals and sold meat at markets and stalls had the highest seropositivity rate among the other types of abattoir workers they examined. Seropositivity was linked to factors such as slaughtering animals in abattoirs, assisting in animal parturition, working in the slaughterhouse while having an open cut or wound, and eating while working in the abattoir. They also discovered that workers who utilized personal protective equipment (PPE) such as protective hands and footwear while working in the abattoir were at least twice as likely to become seropositive with the brucella organism. According to this study, seropositivity to the brucella organism rose with increasing years of labor or employment in abattoirs. Veien, 2019, added that despite their extensive exposure to allergens and irritants, butchers and slaughterhouse workers seldom develop occupational skin diseases. The primary sources of irritation are related to moist work. Both immediate-type and delayed-type allergens are classified as allergens. Bacteria such as methicillin-resistant strains of *Staphylococcus aureus* and hemolytic streptococci can be exposed to. Although it hasn't been proven, the human papilloma virus, including type 7, has been suggested as a potential source of occupationally transmitted warts in butchers and slaughterhouse workers

In addition, Osman , Adzitey, & Sallah, , 2019, the lack of infrastructure and essential equipment at the abattoirs resulted in the slaughter of few animals. Most butchers and abattoir workers did not utilize safety clothing since it was not provided. Waste management was subpar, and ventilation was inadequate. Insufficient veterinarians performed ante-mortem and post-mortem meat inspections in the majority of slaughterhouses. The three Northern Regions of Ghana require modern slaughter facilities, which must be provided by the government, non-governmental organizations, and other interested parties.

As Okpala et al. (2021) recounted, The Food Safety and Applied Nutrition (FSAN) Directorate of the National Agency for Food and Drug Administration and Control (NAFDAC) in Nigeria guides inspection as well as production at small-medium food enterprises and prescribes the minimum good hygiene practices (GHPs) pertinent during manufacturing, processing, and packaging, which were very applicable to cattle beef products. The primary goal was to ensure both the safety of (meat) products and the protection of consumers. GHP key measures, which were important at every level of the supply chain, appeared to be highly related to food production, quality, and safety. GSP, on the other hand, was particular to the meat sector and considered incoming material storage to finished product storage. Good practices are known to contain quality assurance operations, which must comply with the regulation of food production and its associated processes, as described in codes of practice and generally created by government authorities.

2.3 Relationship between the Implementation of the Meat Inspection Code (R.A. No. 10536) and its Challenges Encountered by the Butchers and Meat Inspectors

Traditional slaughtering can be considered obsolete in countries controlled by law, especially after those groups who were concerned about the humane handling of animals or from countries where cultural naivety was practiced.

According to Eljamay et al. (2022), the findings of the study showed that there was a relationship between the extent of consciousness of butchers and their practices in some issues and no association between the level of education and awareness in others. As a result, it was suggested that more preventative and control lectures be given.

As explained by Díez et al. (2023) from the standpoint of public health, the slaughterhouse's goal was to ensure the safety of meat from the standpoint of animal pathology and illness, where meat inspection was an important instrument for controlling animal diseases and ensuring public health. Furthermore, the slaughterhouse can and should be used as a central point in the surveillance of other animals and other current issues, such as the epidemiology of livestock diseases (including zoonotic diseases), farm animal welfare control, surveillance of zoonotic agents responsible for food poisoning, and antimicrobial resistance monitoring and control. Aside from these diseases encountered in a slaughterhouse, Diaz et al. (2020) also reiterated that repeated duties requiring intense upper-limb movement predominate in slaughterhouses, and it was difficult to conduct work rotations efficiently. Furthermore, various restrictions were discovered when developing a job rotation plan, such as hygienic sanitary aspects peculiar to each industry, differential compensation among duties, and the presence of insalubrious tasks in some sectors. As a result, it was advised that additional research be conducted in chicken slaughterhouses to investigate the existence of non-repetitive activities that could be part of work rotation systems, hence reducing risk. Other suggestions included researching the effectiveness of job rotations with more than two duties, as well as including light or non-repetitive tasks.

Moreover, Abed and Zuhir (2020) indicated that butchers had poor food safety attitudes, with nearly three-quarters having low food safety practice scores. A strong relationship existed between butchers' food safety practice and their age and marital status. The findings should be used to strengthen food safety initiatives to help butchers be healthier and improve their educational outcomes. In the local market, the spread of news about meat that was called hot meat usually confuses consumers. This was a product of illegally slaughtered food animals, in a legal point of view, if a meat product was not prepared in a registered establishment, it was considered hot meat and can be confiscated.

As reported by Orellana (2019), contrary to standards, cows, and pigs brought to Vitas were butchered near the other living animals, which may lead to developing contaminant hormones among them. Diaz said that in a normal slaughterhouse, animals were killed separately from those that are still alive. Aside from the sorry state of the butcher area, he said that the slaughterhouse also needed to address the lack of water and garbage disposal area. During Moreno's first inspection on Wednesday, he said that the slaughter area would not pass the sanitation standard set by the Department of Environmental and Natural Resources due to its lack of facilities.

As Manalo and Gabriel (2020) stated, inspection of the abattoir and assessment of the final product. The pH of meat samples from each plant revealed that the design of a facility, animal handling before the slaughter, and slaughtering procedures had a significant influence on the quality of meat, particularly the pH. Most of the hog slaughterhouses visited feature a traditional design for simple yet effective carcass removal off the floor. Although PDPs require significant improvement to meet the bare minimum for a basic slaughterhouse. Interventions from the government and other important stakeholders were planned. Personnel training was also required, as the majority of the workers were unaware of sanitary slaughtering procedures. Despite some visited plants' unsanitary practices, acceptable meat quality in terms of PSE and DFD. These abattoirs continued to produce meat. Although a combination of factors led to this public health disaster, the long history of failed oversight of the animal slaughter industry in Calamba City played a significant role in shaping the disastrous conditions and scores of other slaughterhouses throughout the country. Failure to recognize the interconnection between human, animal, and environmental health and well-being and the central role of legal rights in protecting them. With this evidence, an unsafe and unclean slaughterhouse or establishment contributed hazards to the meat products, the inspectors, and the butchers. The absence of safety standards as identified in the recent literature requires meat dealers to submit or comply with the directed laws or ordinances.

Winders and Abrell (2021) stated reinforcing a regulatory framework governing the slaughter industry that prioritized protecting, strengthening, and enforcing rights to improve the health and well-being of both humans and animals, relevant rights in this context include the rights to bodily safety; to be free from cruel, inhumane, and degrading treatment; to just and favorable conditions of work; to health; and a healthy environment. However, due to the disparity between legally recognized rights afforded to humans and those afforded to animals, there are admittedly practical limitations on the degree to which they can be equally enforced on behalf of workers and animals under the regulatory framework stated in the action plan. Nonetheless, it would be a significant improvement over the current condition and could serve as the initial step on a pathway to meaningful legal recognition of nonhuman interests.

3. Methodology

This chapter covers the research methodology, research design, population, sample size, research respondents, research tool, instrument validation, and data collection technique, as well as the handling of quantitative data. Principled considerations are also noticeable to assure the consistency and dependability of the study.

3.1 Research Design

The quantitative descriptive-correlational method of research was used in determining the relationship between the implementation of R.A No. 10536 as an independent variable and the degree of seriousness of challenges on butchers and meat inspectors as the dependent variable. The descriptive analysis was applied as the study described the status of an identified variable; together with correlational analysis, it attempted to evaluate the extent of a relationship between variables by using statistical data.

According to McCombes (2020), the objective of applying the descriptive correlational method to detect and describe the variables and correlations that certainly transpire. Data describing certain groups or circumstances had to be gathered to do this. Data were gathered using the descriptive correlational method using a survey questionnaire and individual data.

3.2 Research Locale

The research was conducted in 17 backyard slaughterhouses in different barangays of Calamba City, Laguna. These backyard slaughterhouses are either individually operated or clustered operation. As suppliers of meat products in Calamba City which employed the butchers and where the inspectors conducted their functions, who were the main sources of data needed in this study, they were chosen as the respondents.

3.3 Population and Sampling

In this study, a stratified random sampling technique was applied in selecting the corresponding number of respondents. The sampling was established with the effect size to quantify the magnitude of the difference between populations, the margin of error, and the confidence level calculated with the expert of the researcher’s statistician using G*Power of 64 Meat Inspectors and Butchers from 17 backyard slaughterhouses in Calamba City.

3.4 Respondents of the Study

To assess the implementation of the Meat Inspection Code and the challenges encountered by butchers and meat inspectors in Calamba City, the study included seven Meat Inspectors and 57 Butchers in 17 backyard slaughterhouses in Calamba City. Butchers were registered in the records of the City Veterinary Office, while the Meat Inspectors had their files intact in the office as well. They were the main characters in the slaughterhouse who prepared the food animal for consumption and were subject to compliance with food safety standards and meat inspection codes. As the table shows, meat inspectors represent 11% of the total population while butchers represent the majority of the population which is 89%.

Table A: Respondents of the Study

Type of Respondent	Frequency	Percentage	Population
Meat Inspectors	7	11%	7
Butchers	57	89%	57
Total	64	100%	64

The group of respondents included seven (7) meat inspectors and fifty-seven butchers.

3.5 Instrument

Every respondent will be given a researcher-made questionnaire to complete and collect their primary data. There were nine (9) questions in each of the sub-variables of each variable with a total of thirty-six (36) items. The implementation of R.A. No. 10536 was evaluated in the first section. in terms of the effectiveness of the Process and Compliance. The second part determined the degree of seriousness of challenges encountered by the butchers and meat inspectors with elements including competency and responsiveness.

1) *Likert Scale*

Level of Implementation of R.A. #10536 in terms of Process and Compliance:

- 4 - Strongly Agree (SA) Fully Implemented (FI)
- 3 - Agree (A) Implemented (I)
- 2 - Disagree (D) Partially Implemented (PI)

1	-	Strong Disagree (SD)	Not Implemented (NI)
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Degree of Seriousness of Challenges Encountered by butchers and meat inspectors:

4	-	Strongly Agree (SA)	Strongly Agree (SA)
3	-	Agree (A)	Agree (A)
2	-	Disagree (D)	Disagree (D)
1	-	Strong Disagree (SD)	Strong Disagree (SD)

To formulate precise responses and assess the quantitative worth of the aspect being assessed, a four-point Likert scale was utilized. The study’s perspective and the following interpretation were used to better clarify how the Likert scale was construed in this investigation.

3.6 Validation of the Instrument

The formulated researcher-made instrument was validated by research experts of LCBA as prescribed. Their input and suggestions were shown to the adviser. As a result, every comment and proposal received full consideration. The other categories of respondents related to the work of the butchers and the meat inspectors—were likewise tested by the prepared questions. These participants and their responses were solely utilized to do the testing; they were not included in the actual study process. The respondents were asked for any suggestions or modifications that would be necessary to guarantee the instruments' ongoing validity and advancement. The survey questions were changed in response to the respondent's suggestions, omitted irrelevant questions, and clarified complex or ambiguous phrases to ensure comprehension.

The computation concluded that the S-CVI Average and S-CVI UA Average satisfied the satisfactory standard of 1.0 based on proportion relevance. As such, the questionnaire's scale has attained a satisfactory degree of content validity.

The internal data consistency and reliability of the instrument were measured at .769 using Cronbach's Alpha. Experts who volunteered their time to consider every issue that needed to be addressed and clarified during the study process confirmed and approved this instrument. The statistician for the researcher, an LCBA professor, a City Veterinary, and a Slaughterhouse Management Office representative made up this group of specialists.

3.7 Data Gathering Procedure

Since the study required the participation of respondents, the consent of the respondent's employers was secured, and relayed all important details of the study including its aims and purposes. By explaining these important details, the respondents were able to understand the importance of their role in the completion of the research.

The survey was administered by distributing custom-tailored questionnaires. After three to four days, the data were collected personally by the researcher. The results of the survey were tallied, prepared in tabular form, presented to the statistician, and asked for help in the analysis and interpretation of the data using the appropriate statistical treatment.

3.8 Ethical Consideration

One of the most significant components of the concerns about ethics ranks among the research’s most crucial elements. Consequently, the LCBA Ethics Manual, and Data Privacy Act of 2012 were considered in this investigation. Before the trial, the informed consent of the participants was obtained. He was determined that the dignity of the study survey participants should not be jeopardized in any manner. Lastly, safeguarding the confidentiality and security of the information gathered was considered throughout the process.

3.9 Treatment of Quantitative Data

To tackle the concerns related to Calamba City's status as a Meat Inspection Code area, the research employed the subsequent statistical methodology. Results for each item were collected and tabulated after all respondents' completed data had been collected.

1. The Mean and the four-point Likert scale were used in describing the level of the implementation of the Meat Inspection Code and the Degree of Seriousness of challenges encountered by meat inspectors and butchers.

2. To compare the means of two groups the paired t-test was used in hypothesis testing to determine whether a process or treatment has an effect on the population of interest, or whether two groups are different from one another.

3. The strength and direction of the association of the level of implementation and the degree of seriousness of the challenges with the implementation of the meat inspection Code were measured using the Pearson Product-Moment Correlation.

4. Results and Discussion

4.1 Summary of Findings

From the data gathered and analyzed, the following findings were presented:

1. Level of Implementation of the Meat Inspection Code (RA No. 10536) in Calamba City as assessed by Butchers and Meat Inspectors in terms of:

1.1 Process

It had a general assessment of **2.90** verbally interpreted as **Implemented**.

1.2 Compliance

It had a general assessment of **2.81** verbally interpreted as **Implemented**.

2. Degree of Seriousness of Challenges Encountered by Butchers and Meat Inspectors as to the Implementation of RA No. 10536 in terms of:

2.1 Competency of the Workers

It had a general assessment of **3.40** verbally interpreted as **Very Serious**.

2.2 Responsiveness of the Workers

It had a general assessment of **3.04** verbally interpreted as **Serious**.

3. Test of Significant Difference between the Assessments of the Butchers and Meat Inspectors as to the Implementation of R.A. no. 10536.

There was a significant difference between the assessments of the butchers and meat inspectors as to the implementation of R.A. no. 10536 in terms of compliance. The probability value was .030 which was less than the level of significance at .05, thus rejecting the null hypothesis.

4. Test of Significant Relationship between the RA No. 10536 Implementation Level in Calamba City and the Degree of Seriousness of the Challenges Encountered by Butchers and Meat Inspectors?

There was a significant relationship between the RA No. 10536 implementation level in Calamba City and the degree of seriousness of the challenges encountered by butchers and meat inspectors in terms of Process and challenges encountered such as Competency of the workers and there was a significant relationship between the compliance on the implementation of RA 10536 and challenges encountered in terms of competency of the workers. The probability values were .024 and .000 which were less than the level of significance at .05, thus the null hypothesis was rejected.

On the other hand, there was no significant relationship between the RA No. 10536 implementation level in Calamba City and the degree of seriousness of the challenges encountered by butchers and meat inspectors in terms of Compliance and challenges encountered such as Responsiveness of the workers and there was no significant relationship between the compliance on the implementation of RA 10536 and challenges encountered in terms of responsiveness of the workers. The probability values were .967 and .916 which were more than the level of significance at .05, thus the null hypothesis was accepted.

5. The Proposed Action Plan

The establishment of a proposed action plan or program awareness was undertaken to further improve the Implementation of the Meat Inspection Code (Republic Act No. 10536). To achieve this development objective, this study formulated an innovative framework of technical assistance based on a demand-driven strategy, anchored on assisted self-reliance and implemented through active participation of workers.

5. Conclusion

1. That a strong support among slaughterhouse employees for the implementation of meat inspection regulations outlined in RA No. 10536. However, the workforce acknowledges that adherence to slaughterhouse protocols and guidelines significantly impacts their motivation and service provision. Despite this, the slaughterhouse maintains commendable performance standards, characterized by transparency and honesty. Basic meat inspection training equips inspectors with the necessary skills to fulfill their duties effectively, ensuring compliance with slaughtering and inspection requirements.

2. That the absence of Rules and Regulations in an organization leads to a mismanaged process and personnel that may also fail to achieve a certain goal. In addition to, lack of training and experience of the slaughter workers caused delays in the slaughterhouse operation. Lack of management contributed much to the challenges encountered by the slaughter workers which included the proper waste disposal that requires compliance with environmental policies. Moreover, some functions of the Meat

Inspectors were not performed due to incomplete facilities needed in a slaughterhouse.

3. That there are many differences in the assessments of butchers and meat inspectors regarding the implementation of R.A no 10536 from a compliance perspective. Employee engagement is related to highly emotional tasks, judgments of personal integrity, and commitment to the professional world. Lack of skills and training in addition to educational background reduces productivity and employee commitment.

4. That when the Level of Implementation of R.A No. 10536 increases, the degree of seriousness of challenges decreases. When the Level of Implementation of R.A No. 10536 decreases, the degree of seriousness, of challenges implemented increases. The higher the Level of Implementation of R.A No. 10536, the lower the degree of seriousness, of challenges encountered as to implementation. The lower the level of implementation, the higher the degree of seriousness of challenges encountered.

5. That the establishment of a proposed action plan or program was undertaken to further progress the Implementation of the Meat Inspection Code (Republic Act No. 10536). This study developed an innovative framework of technical support (Republic Act No. 10536) based on a demand-driven strategy, anchored on helped self-reliance, and implemented through workers' active participation in order to attain this development target.

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ORCID ID: <https://orcid.org/0009-0005-2329-5715>

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