CHAPTER I

THE PROBLEM AND ITS SETTING

Introduction

The expansion of burger patty ingredients has extended well beyond conventional beef, encompassing poultry, vegetables, and even seafood. Introducing pen shell and mussels into burger recipes brings a fresh and inventive element to classic dishes. With their flavorful taste and beneficial nutritional qualities, pen shell and mussels present an enticing chance to enhance the burger dining experience while offering a healthier option. Their unique textures and rich flavors contribute to the overall appeal of burgers, providing a delicious and nourishing alternative. This integration of pen shell and mussels opens up new avenues for culinary creativity, enabling the creation of gourmet burgers that are both satisfying and wholesome. The researchers have undertaken an innovative project to create a new version of patties using pen shells and mussels to introduce a fresh taste experience. This innovation aims to create patties by using meat and adding pen shell and mussels as an addition to primary ingredients.

The origins of the hamburger trace back through history, with influences from ancient Rome, Genghis Khan's Mongolian horsemen, and Russian chefs. In the late 19th and early 20th centuries, various claims emerged about the birthplace of the modern hamburger, including New York, Texas, and Connecticut. The evolution of the burger continued with innovations like

cheeseburgers, fast-food chains like McDonald's and Burger King, and gourmet creations such as Daniel Boulud's high-end version. Later developments included the rise of better burger joints like Five Guys and the introduction of plant-based alternatives like the Beyond Burger and Impossible Burger. The burger's journey culminated in extravagant creations like the Netherlands' Golden Boy, a nearly $6,000 burger made with luxury ingredients. (Martin R. 2024)

According to Amano V. L., (2020) Sorsogon Bay is home to the pen shell (Atrina pectinata), locally known as Baloko. This study was designed to assess the existing value chains of pen shell and identify areas for improvement. The sites covered were the municipalities along Sorsogon Bay in the province of Sorsogon, Philippines. It employed the tracer methodology where only the processors and fisher folks connected to the traders were selected as respondents of the study. Primary data were gathered through semi-structured questionnaires. Secondary data were used to establish a good understanding of the pen shell industry in the areas of the study. Results show that the adductor muscle or tinga is a substitute for scallops, thus, an export product. The other parts of pen shell or rambit are also of high demand. The highest volume of pen shell catch occur during October to April during the northeast monsoon (amihan) and gradually decline from May to September during the southwest monsoon (habagat) months.

According to Chun, B.-S. (2022). Atrina pectinata, also known as comb pen shell , is a large wedge-shaped bivalve in the Pinnidae family. Comb pen shell contains approximately 60% proteins, 9.6% carbohydrates, 17.2% lipids,

and 10%. Apart from direct consumption, proteins from CPS can be recovered and concentrated for use in a variety of other products, such as food supplements or energy drinks.

Mussels belong to a group or organisms called bivalve mollusks a group of organisms with soft bodies protected by shells formed from two pieces, called valves. They include mussels and oysters.. The word “mollusk” means soft, a very specific body characteristic, and “bivalve” means it has two valves, also known as shells Bivalve mollusks include other edible creatures like oysters and scallops. Mussels are tender, tasty, and nutritious. They are rich in protein, nutrients that keep our muscles healthy, and they are a good source of vitamins including D and B12, as well as minerals including iron, phosphorus, and calcium. In addition, they have the types of fats that are considered healthy (Frontier for Young Minds, 2024).

According to WebMD Editorial Contributors (2023), Mussels mostly stay in one place, eating plankton that they filter from the water. Because they are filter feeders, Research has shown that seafood consumption offers numerous health benefits, including being a rich source of protein omega-3 fatty acids, vitamins, and minerals. Mussels are low in fat and calories while boasting high levels of essential nutrients making them an excellent choice for those seeking nutritious yet satisfying meals. Mussels are nutritionally rich. One three-ounce serving of steamed blue mussels contains: Calories: 146, Protein: 20 grams, Fat: 4 grams, Carbohydrates: 6 grams, Mussels contain many vitamins and minerals, including: Iron, Vitamin C, Vitamin A, Calcium.

According to Bureau of Fisheries and Aquatic Resources (BFAR) when we ask them about the sourcing of raw materials has specific places, the pen shell can be found in Sorsogon and value of the raw material will not cost much. When it comes to mussel, the raw material is easy to source and the value of the raw material will not cost that much.

This research aims to explore the feasibility and culinary potential of pen shell and mussel-based burger patties. The process that the researchers will conduct is adding mollusks (pen shell and mussels) to a traditional burger patty, to create and innovate a new flavor of patty. By examining existing recipes, cooking methods, and consumer preferences, insights can be gained into the development of flavorful and nutritious seafood burger options. We aim to inspire culinary enthusiasts, chefs, and food industry professionals to embrace the versatility of scallops and mussels and reimagine the classic burger with a seafood twist.

Statement of the Problem

This study aimed to develop a variety of burger patties out pen shell and mussels. Specifically, this study will seek to answer the following sub-question.

1. What is the profile of the respondents in terms of:

    a. Age

    b. Sex

c. Profession?

2. What are the processes involved in making the variation of burger patty utilizing pen shell and mussels in terms of:

a. Sourcing of raw materials
b. Method of processing
c. Recipe standardization
d. Storage and packaging
e. Product Costing?

3. What is the level acceptability of variations of burger patty utilizing pen shell and mussels in terms of:

a. physicochemical analysis
    1. pH level analysis
    2. Moisture level
    3. Microbial analysis
    4. Nutritional content?
b. Sensory evaluation
    1. Appearance
    2. Aroma
    3. Taste
    4. Texture?

4. What are the recommendations to further enhance the variation of burger patties utilizing pen shell and mussels, in terms of;

a. Physicochemical analysis

1. pH level analysis
2. Moisture level
3. Microbial analysis
4. Nutritional content?

b. Sensory evaluation

1. Appearance
2. Aroma
3. Taste
4. Texture?

Assumptions of the study

This study focuses on the following assumptions:

1. The profile of respondents varies in terms of age, sex, and profession.
2. The process involve in making variations of burger patty utilizing pen shell and mussels, varies in terms of the sourcing of raw materials, method of processing, recipe standardization, storage and packaging, and product costing.
3. The level of acceptability of mussels and pen shell patties as a new food product in terms of physicochemical analysis: pH level, moisture level, microbial analysis, nutritional content and Sensory evaluation: appearance, aroma, taste, texture.

4. There are possible recommendations to further enhance the variation of burger patties using pen shell and mussels varies in terms of physicochemical analysis: pH level, moisture level, microbial analysis, nutritional content and Sensory evaluation: appearance, aroma, taste, texture.

Scope and Delimitation

This study focuses on the burger patty utilizing pen shell and mussels. It included the profile of the respondents, level of acceptability of the respondents, and the recommendations of the respondents. The finished product are subjected to sensory evaluation the respondent will be (30), five (5) Food Entrepreneurs, five (5) Cooks/Chefs, five (5) Food Technologists, five (5) Nutritionists/Dietitians, five (5) Fisheries and five (5) Consumers.

Respondents whose participation doesn't fit with the goals of the study are delimited from this study.

Significance of the study

The significance of the study provides information about the Variation of Burger Patty Utilizing Pen shell and Mussels. The completion of this study would be beneficial to the following:

Food Technologists. The food technologists will benefit from the study because they can use the study to utilize the seafood-based burger patties. Allowing the food technologists to create products with enhanced nutritional value, catering to health-conscious consumers seeking nutritious meal options.

Nutritionist/Dietitians. This study will be useful to nutritionist and dieticians because they can use the study to educate consumers about the nutritional benefits of incorporating seafood like pen shell and mussels into their diet. They can dispel myths or misconceptions surrounding seafood consumption and provide guidance on incorporating it into meals in a sustainable and health-conscious manner.

Chefs/Cooks. This study will benefit the chefs and cooks providing them idea incorporating pen shell and mussels as seafood-based burger patties add diversity to menus, catering to a wider range of dietary preferences and tastes. They can attract seafood lovers and health-conscious diners with unique burger. Allows chefs and cooks to showcase their creativity and culinary skills developing innovative recipes that excite and intrigue diners.

Food Entrepreneurs. This study will help the food entrepreneurs because they can use the researchers study to educate consumers about the nutritional value and culinary versatility of pen shell and mussels. They can attract seafood lovers and those looking for alternative protein sources, thereby expanding their market reach.

Fisheries. The fisheries will benefit from the study because it creates demand for pen shells and mussels, providing an additional revenue for fishermen and fisheries businesses.

Community. This study would help the community by Introducing alternative ingredients like pen shell and mussels can offer healthier alternatives to traditional beef patties. These seafood options are often lower in fat and calories while providing essential nutrients like omega-3 fatty acids and protein.

Fishermen. This study will be beneficial to fishermen because it can benefit from diversifying their catch, potentially leading to increased income opportunities.

Hospitality Management Instructors. This study is beneficial to Hospitality Management Instructors especially for teaching students about the innovative ingredients like pen shell and mussels can enrich students' learning experiences offers them exposure to alternative ingredients broadening their understanding of flavor profiles and ingredient versatility.

Hospitality Management Student. This study would help them develop new ideas and ways of thinking that they could use in the future to learn more and get better at things. It may even inspire them to start a new specialty in the food industry.

Researchers. This study allows the researcher to explore new culinary possibilities by incorporating mollusks into burger patties, potentially discovering unique flavors and textures. Researchers can benefit by studying the variation of

burger patties using mollusks, researchers can contribute to the fields of food science, sustainability, nutrition, and culinary arts while potentially offering new solutions to global food challenges.

Future Researchers. This study would help future researchers figure out if the innovative patty is good enough to sell. It could give them more ideas, information, and ways to sell these products.