Developing Chicken-Enriched Pasta: A Recipe Innovation

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Abstract

Home-made pasta is a food commonly prepared by a group of people who prefer home-made meals rather than eating instant ones. Preparing this food requires time as they also need to prepare a sauce that would be the perfect match for it. The researchers have worked towards this recipe to produce a recipe innovation that will help to lessen the work in the kitchen in preparing a home-made pasta. Pasta that is infused with chicken powder that can be consumed even without a sauce is developed through this research. With this recipe, several trials were done to produce a Chicken-enriched pasta that would be used in Food tasting, and survey questionnaires were given among Food Experts and Consumers to test its sensory acceptability in terms of taste, appearance, texture, and the general acceptability of the product. The product gained a rating that is equivalent to a highly acceptable rating towards every sensory acceptability among the respondents. However, the texture gained the lowest score both among food experts and consumers, which can be a room for improvement for a better product outcome and for future research.

Keywords: *Pasta, Chicken-Flavored, General Acceptability, Hedonic*

INTRODUCTION

In recent years, the culinary world has witnessed an increasing trend towards home cooking and culinary experimentation. People are now more interested in preparing their own meals, seeking to infuse unique flavors and personal touches into their dishes. One such innovative ingredient that has gained significant attention is the use of chicken in different recipes, such as pastas, pies, breads, and on viands. This culinary creation combines the delightful taste of chicken with the beloved texture and versatility of pasta, providing a novel and satisfying dining experience. Traditional pasta dishes have long been a staple in many households, offering a wide range of flavors and ingredient combinations.

Over the past decade, there has been a significant shift in consumer preferences towards homemade meals. This shift can be attributed to several factors, including the desire for healthier food options, greater control over ingredients, saves money, and the satisfaction of creating delicious dishes from scratch (6 Benefits of Homemade Meals + 7 Recipes, 2015). Homemade meals provide an avenue for personalization and experimentation, allowing individuals to adapt recipes to their liking and explore innovative flavor combinations. However, incorporating chicken flavor brings a new dimension to these dishes, infusing them with a rich and savory taste. By creating homemade chicken-flavored pasta, individuals have the opportunity to tailor the flavor profile to their liking, experiment with various ingredients, and ultimately elevate their culinary skills.

In addition, chicken is healthier and safer to consume than beef due to its less saturated fat and fewer calories (Foster, 2023). Chickens are also easier and cheaper to raise than pigs and cows as it will only take 40-45 days to raise a fully-grown chicken (Torella, 2023). Not only it is cheaper to raise, chicken is cheaper in the market than the other meats. Moreover, due to its content and availability, people are shifting their consumption from meat to poultry. Chicken also leads to lower risk of cancer unlike pork and beef, which are considered as red meat, leads to higher risk of cancer.

Another reason for the chicken-flavoring is the cultural and personal beliefs wherein there are religions that are not allowed to consume pork such as the Muslims which led this research to choose the most possible and easy-to-find

ingredient which is the chicken. Personal preferences are also considered due to the fact that people are choosing white meat over red meat because of its fat content. Also, red meat has the presence of a type of protein which is the myoglobin which increases the risk of cancer (Gandhi, 2023). Red meat also contains more saturated fats that leads to high cholesterol levels, unlike the white meat which contains low saturated fats. White meat really suits everyone due to its content and availability in the market.

With the chicken flavoring as well as the significant shift of consumer preferences towards homemade meals, the researchers have decided to incorporate these two to produce a new product which would make preparing an easier dish and which would also take a lesser time compared to the traditional pasta dishes. For a further knowledge about the origin of pasta, pasta's history dates back at least 3500 years and spans numerous cultures and continents, including Asia, Africa, and the Middle East. Pasta appears to be inherently linked to Italy, even with its diverse variations and the numerous literary works in which it has been included. However, history indicates that the first known use of pasta dates back to China's Shang Dynasty (1700–1100 BC), when rice or wheat flour was used to make various types of pasta. In the first millennium BC, pasta seems to have been a part of the diet of the ancient Greeks. Africa also produced a unique type of pasta from the Kamut crop.
Italy is where the history of pasta begins, dating back to the fourth century BC (De Lallo, 2021).

Since the time of the first millennium, pasta has already been part of the diet of most of the people in ancient Greece which is also passed down up to this generation. There are various ways to prepare pasta but there will always be a proper procedure to achieve the standard one which is al dente in texture and has a neutral taste when cooked (Lafamadm, 2020). To prepare homemade pasta, start by combining all-purpose flour and eggs to form a dough. Knead the dough until smooth, then let it rest for about 30 minutes. Roll out the dough into thin sheets and cut it into desired shapes, such as fettuccine or tagliatelle. Boil the pasta in salted water until al dente, and

serve it with your favorite sauce or incorporate the flavor that you want (How to Make Homemade Pasta, 2023).

Fresh pasta has a soft and delicate flavor that is often described as eggy or buttery. This is because it is typically made with a high proportion of eggs, which gives it a rich flavor. Dried pasta, on the other hand, has a more neutral flavor that is often described as slightly wheaty or nutty. The taste and texture differences between fresh and dried pasta can vary depending on the specific ingredients and production methods used. While fresh pasta may have a more delicate flavor and texture, dried pasta is often preferred for its firmer and chewier texture, which allows it to hold up well in sauces and other dishes (Let's Pasta, 2022).

Homemade pasta exhibits a distinct freshness that sets it apart from store-bought varieties. Its texture is often more tender and delicate, providing a satisfying bite. The flavor profile of homemade pasta is richer, as it lacks the preservatives found in commercial options. Additionally, homemade pasta allows for customization, enabling the incorporation of unique ingredients like herbs or spinach. The process of crafting pasta from scratch provides a rewarding culinary experience, fostering a connection to traditional cooking methods (Making Fresh Pasta, 2012).

In terms of taste, homemade pasta often exhibits a more pronounced flavor profile compared to its mass-produced counterparts. With the absence of preservatives, the natural essence of the ingredients shines through, resulting in a pasta that is both wholesome and flavorful. The ability to experiment with ingredients further enhances the taste, as one can infuse the dough with herbs, spices, or even vegetables, creating a personalized culinary masterpiece (Lee, 2023)..

While homemade pasta can be a delightful culinary experience, it's crucial to be mindful of potential harmful effects. Consuming excessive amounts of pasta, especially when paired with high-calorie sauces, can contribute to weight gain and related health issues. Additionally,

individuals with gluten sensitivity or celiac disease should be cautious, as traditional pasta is made from wheat flour containing gluten. Moderation and consideration of individual dietary needs are essential for enjoying homemade pasta responsibly. The harmful effects of consuming excessive amounts of pasta, particularly when paired with calorie-dense sauces, can contribute to weight gain and related health issues (Rd, 2023).

Furthermore, pasta is still one of the most consumed foods in all over the world is pasta (Nilusha, 2019). It is being consumed my most people of all ages plus the fact of it being low cost and having a long shelf life, it is commonly prepared and consumed (Bustos, 2015). It is made up of egg, flour, salt, pepper, and oil. Combining all of them until it forms a dough makes the pasta. In this research, chicken-flavoring is incorporated to enhance the value of the pasta in terms of its taste.

There is also an increasing demand of health-conscious consumers that is why the interest of the researchers and manufacturers are shifted to develop more healthy products with low saturated fats and carbohydrates (Bustos, Perez, Leon, 2015). Therefore, homemade foods are often consumed more than instant foods that have a lot of additives and preservatives. Instant pasta may be crucial due to a lot of preservatives added to it that may affect our health conditions that is why homemade pasta is healthier and safer to consume. People who prepare homemade pasta may choose high-quality ingredients such as high-graded flour, fresh eggs, and salt. The outcome of these high-quality ingredients together with the proper method of mixing and cooking will reach the desirable flavor and texture of the product.

Overall, homemade pasta is better than instant pasta. Moreover, adding ingredients to produce different kinds of recipes with pasta will add more work when it comes to cooking and it will consume more time rather than having flavored-pasta by just adding one more ingredient on the basic ingredients in making pasta. In this way, people who prepare homemade pasta will just add a few seconds to add that one ingredient and mix it together with the other ingredients.

LITERATURE REVIEW

Pasta, the epitome of comfort food and a staple in cuisines around the world, has captivated the taste buds of millions for centuries. With its origins dating back to ancient civilizations, pasta has evolved and adapted to various cultures, becoming a versatile and beloved dish. However, it is important to recognize that excessive consumption of pasta can contribute to weight gain and other health issues. While store-bought pasta may be convenient, homemade pasta offers a superior taste and texture that cannot be replicated. In this study, we will explore the advantages of making your own pasta, including the ability to customize the dough, the satisfaction of creating a traditional dish from scratch, and the potential for healthier options. The first point to address is people are becoming more health conscious as time goes on, thus they choose to consume homemade food rather than instant.

The researchers come up with this concept to manufacture natural chicken powder, which is also the major component of homemade pasta. The desired outcome of the current research investigation is to create original pasta with high nutritional value by constructing it with homemade chicken flour, and to evaluate how fortification affects the physicochemical, textural, and sensory characteristics of fortified pasta in order to increase consumer acceptance for practical healthy food applications.

Homemade Pasta
According to the study of Papanikolaou (2020) suggests that homemade pasta can be a healthy addition to children and adults' diets, as it can increase nutritional quality and variety. Consuming homemade pasta leads to better diet quality and higher daily intakes of essential nutrients like folate, iron, magnesium, and dietary fiber. Pasta consumption also lowers saturated fat and added sugar intake. Further research is needed to determine if pasta serves as a vehicle

for under-consumed food groups like dairy, lean protein sources, and vegetables.

Process of Homemade Pasta

Homemade pasta allows you to control the ingredients and customize the flavors to your liking, resulting in a truly unique and satisfying meal. The process of making homemade pasta includes a lot of process from selecting the ingredients to rolling and cutting, and resting the dough. In the study "Effects of dough resting time on the development of gluten network in different sheeting directions and the textural properties of noodle dough" (Liu et. al. 2021), the gluten protein in the noodle dough was seen to undergo considerable macroscopic and structural alterations during resting. It led to the gluten network being spread more consistently and densely in the dough sheet during the sheeting process with the GMP content in the dough sheet increasing dramatically. It also caused the gluten protein to mix closely with water in dough crumbs.

discussion of each of the variable or construct of the undertaking supported by prior studies and relevant literatures.

To sum up this study, Homemade pasta made from protein isolate and homemade chicken flour cooked more quickly and with better results in terms of cooking losses, moisture retention, and swelling index. The bottom line is that chicken flour and protein isolate can be suggested for use in the fortification of functional pasta products with high nutritional content and increased physicochemical, texture, and sensory properties.

Research Questions

The researchers aim to explore the different culinary techniques as the foreground of this study highlights the development and refinement of recipes for chicken-flavored pasta. As we all know, pasta is being consumed worldwide regardless of its varying forms. Therefore, this study aims to determine the acceptability of a homemade chicken-flavored pasta and it specifically seeks answer the following questions:

1. How can chicken-enriched pasta be developed?
2. How do food experts evaluate the chicken-enriched pasta in terms of:
   2.1. Taste
   2.2. Appearance
   2.3. Texture
3. What is the level of acceptability of the chicken-enriched pasta among consumers in terms of:
   3.1. Taste
   3.2. Appearance
   3.3. Texture
4. Is there a significant difference in the general acceptability of the chicken-enriched pasta between food experts and consumers?

Conceptual Framework

The researchers used a Hedonic Scaling Framework to perceive and gather the perception between the consumers and food experts about the chicken-enriched pasta in terms of taste, texture, appearance and to determine its general acceptability as a food.

Figure 1. Hedonic Scaling Framework
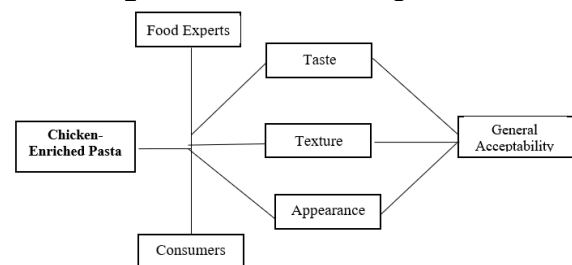
METHODOLOGY

This chapter explored the research design, participants, instruments, data collection process, ethical considerations, and statistical treatment used for the data analysis of this study.

Research Design

This study will adapt the process of food product development as a research design. According to Benner M. (2005). in experimenting with the pasta for the development of this product with a healthy, beneficial component. We, as researchers, in order to develop this product, we should do experimental and developmental

production studies. By using both designs, this study combines experimental and developmental design to optimize the benefits of Chicken-Flavored Pasta and to produce a product that is acceptable to the community.

Sample and Sampling Technique

In conducting this study, the respondent have chosen to use a purposive sampling of food experts and random sampling for the consumer. Purposive sampling is a technique used when the researchers are intentionally selecting food experts or a specific respondent based on specific criteria relevant to the study (Nikolopoulou, 2023). On the other hand, random sampling is a method, the investigators select subjects to be included in the sample based on a systematic rule, using a fixed interval participants for the study. A minimum of ten (10) food experts such as Chefs, Dieticians, Technical Vocational Livelihood teacher, Bachelor of Technical Vocational Teacher Education college instructor, or a food technologist would be the target respondents in the food taste testing prior to the consumer food taste testing. Furthermore, a minimum of 50 random consumers will be chosen as respondents in the food test tasting survey as soon as the select food experts have approved the product.
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Research Instrument

The researchers gathered data to determine the sensory acceptability of the chicken-enriched pasta in terms of taste, appearance, texture, and its general acceptability as food between consumers and food experts using a survey questionnaire. The questionnaire has a four-point Likert scale and is divided into 3 sensory characteristics which are: taste (flavorful), texture (mouth feel), and appearance (color and size). The characteristics are graded from 1 to 4, wherein 4 serves as the highest (strongly agree), and 1 being the lowest (strongly disagree). This method is adapted from the food industry to measure the general acceptability of the product.

Data Collection Procedure

At the outset of our data collection process, we begin by creating a survey questionnaire. This tool, designed specifically to capture the required data, is meticulously crafted to align with our research objectives. To ensure its effectiveness, we prioritize a validation step. We collaborate closely with our experienced researcher professor, who evaluates the questionnaire's content, structure, and relevance to the research goals. This validation process not only enhances the questionnaire's quality but also ensures its alignment with the research objectives. The survey questionnaire stands as a pivotal instrument in our data collection, enabling us to gather valuable insights from our study participants.

At the initial stage of our data collection process, we kick-start by constructing a survey questionnaire, which serves as a fundamental tool for our research. This survey questionnaire is thoughtfully designed to capture the necessary data, aligning it with our research objectives and ensuring precision. To validate the questionnaire's effectiveness and relevance, we engage in a thorough evaluation process. We collaborate closely with our experienced researcher professor, whose expertise ensures that the questionnaire is meticulously crafted, meeting the highest standards. This validation step not only enhances the questionnaire's quality but also guarantees its alignment with the research objectives.

Besides this validation process, we actively seek feedback from our study participants. Their input provides valuable insights into the product we are examining. The feedback from participants affirms the product's quality. They find the pasta to be perfectly sized, with a consistent al dente texture when cooked. Furthermore, the chicken flavor infused in the pasta itself is noted to be exceptionally flavorful. These positive reviews from participants further strengthen the credibility of our research findings.

Data Analysis

The following statistical procedure was used to interpret the data gathered from the respondents of the study. In the context of product development which is the Homemade pasta, the researchers used the Cochran formula to determine the sample size needed for assessing

preferences or characteristics related to taste, appearance, and texture.

The Cochran formula is expressed as follows:

Where: $$n = \frac{N}{1 + \frac{N-1}{X}}$$

- •　　n - is the required sample size,
- •　　N - is the population size,
- •　　X - is the margin of error (expressed as a decimal).

In order to structure and arrange the responses and answers received from the research questionnaire participants, the researchers utilized Microsoft Excel 2016. This software was employed to organize and prepare the collected data for subsequent analysis. The data analysis was conducted using a JASP Statistics, which is a software that facilitates data cleaning and exploration, allowing users to visualize data through graphs and charts, and rapidly analyzing massive data collections. To know the results from the questionnaires given to the participants, the researchers will use the Hedonic scale. The researchers used mean and were able to obtain results that successfully determine the food acceptability in terms of taste, appearance and texture by using JASP to generate significant insights.

Ethical Consideration

For ethical consideration, the researchers, had the full consent from the participants before they start the data gathering. Researchers explained to respondents that they would willingly take part and have the right to withdraw from the survey. Since the researchers used a survey form, participants were informed that their responses will be treated with full confidentiality, and whatever they answered on the survey, only the researcher has access to it. Since the participants were outside the campus, their identities were coded, and only the researchers have the access to their personal information.

RESULTS

This part of the research presents the procedure, interpretation, and the analysis of the data gathered by the researchers from the food experts and students using random sampling method. It is also shown here the several trials of specific ingredients until the researchers have achieved the desired recipe that will be acceptable to consumers and food experts.

1. Recipe of the Chicken-enriched pasta:

The ingredients, tools, and equipment for the preparation of the chicken-enriched pasta are listed down below. The researchers used Personal Protective Equipment (PPE) and followed safety procedures and hygiene practices to ensure the safety of the respondents. The researchers conducted several trials to produce chicken-enriched pasta that would be acceptable for the food tasting and here are the ingredients and the number of trials that were made to ensure the quality of the product.

Trial 1 (Prototype)	Trial 2 (Enhancement)	Trial 3 (Chicken-enriched Pasta)
2 cups Flour 2 medium size Egg 1 ½ cup water (may vary) 1 tsp Salt 2 tsp pepper 1 ½ Tbsp chicken-powder (Knorr) 1 tsp Oil	1 ½ cup Flour 1 Large Egg 1 cup water (may vary) 2 ½ tsp Salt 2 tsp pepper 1 ½ Tbsp chicken-powder (Knorr) 1 tsp Oil	1 cup Flour 1 medium size Egg 1 cup water (may vary) 2 tsp Salt 2 tsp pepper 2 Tbsp chicken-powder (Home-made) 1 tsp Oil

1.1 Ingredients:
- 1 cup Flour
- 1 medium size Egg
- 1 cup water
- 2 tsp Salt
- 2 tsp pepper
- 2 Tbsp chicken-powder
- 1 tsp Oil

1.2 Tools and Materials:
- Measuring spoons
- Measuring cups
- Plates
- Fork
- Casserole
- Wire whisk
- Mixing Bowl
- Rolling Pin (Optional)

1.3 Initial Product Cost
- 1 cup flour – ₱20
- 1 medium size egg – ₱10
- 1 tsp Oil – ₱2
- 1 cup flour – ₱20
- 2 tbsp Chicken-powder – ₱13
- 2 tsp Salt – ₱1
- 1 tsp Pepper – ₱1
- Utilities (Electricity, Gas, Water) – ₱100

TOTAL: ₱167 = 350 grams of Home-made Chicken-enriched pasta

Procedures (for Home-made Chicken Powder)

1. Wash the chicken and remove the slimy part.
2. Boil the chicken for 15-25 minutes or until well-cooked.
3. Set aside and let it cool on a tissue to drain the excess water on the chicken.
4. Once cooled down, debone the chicken and slice it as thinly as possible to dehydrate it faster.
5. Put the thinly sliced chicken to the dehydrator. Make sure it has a parchment paper if it has holes on every layer because once the chicken has been dried, it will become smaller than the actual size before drying.
6. Dehydrate under 65°C for 12-16 hours.

The researchers produced their own and home-made chicken-powder to maintain the originality of this recipe and to produce the home-made chicken-enriched pasta from the scratch.

For the Chicken-enriched pasta:
1. Dust the table with some flour to avoid the dough from sticking once it is being knead.
2. Put 1 cup flour and form a volcano and add the egg in the middle then add salt and pepper.
3. Slowly mix it with the flour then gradually add water until it forms a dough consistency.
4. Continue kneading until it is smooth in texture.

5. Rest the dough for 30 minutes. Cover it with plastic wrapper and leave it in a room temperature.
6. After 30 minutes, knead it for another 10 minutes and cut into smaller size. Make a gnocchi-shaped pasta.
7. Boil it for 10-15 minutes or until al dente in texture.
8. You can serve it with Marinara sauce as an additional flavoring.

Table 1. Sensory acceptability of Chicken-enriched pasta in terms of taste among Food Experts

Indicators	(4) Strongly Agree	(3) Agree	(2) Disagree	(1) Strongly Disagree	Mean	Interpretation
1.1 The richness and savory of the home-made chicken pasta is acceptable	8	7	1	0	3.46	Strongly Agree
1.2 The home-made chicken pasta is flavorful	6	8	2	0	3.18	Agree
1.3 The chicken powder is evenly absorbed in by the pasta	10	4	2	0	3.55	Strongly Agree
1.4 The taste of the chicken-flavoring in the pasta is evident	6	9	1	0	3.27	Strongly Agree
1.5 The taste of the home-made chicken pasta is enhanced by the chicken powder flavoring	8	7	1	0	3.46	Strongly Agree
					3.38	Highly Acceptable

Interpretation: 3.26 – 4.00 - Highly Acceptable; 2.56 – 3.25 - Acceptable; 1.76 – 2.50 - Slightly Acceptable; 1.00 – 1.75 - Not Acceptable

Table 1 shows the tabulated data in evaluating the sensory acceptability in terms of taste among the Food Experts. The computed data garnered a total mean of 3.38 which states the acceptability of the Chicken-Enriched pasta in terms of taste is in highly acceptable form. According to Klosse (2022), incorporating a flavor result to deliciousness, hence, affects the taste (mouth feel) and appetite of a person.

RESULT

Food Tasting of the Experts

Table 2. Sensory acceptability of Chicken-enriched pasta in terms of appearance among Food Experts

Indicators	(4) Strongly Agree	(3) Agree	(2) Disagree	(1) Strongly Disagree	Mean	Interpretation
2.1 The home-made chicken pasta is acceptable in length/size.	10	6	0	0	3.55	Strongly Agree
2.2 The home-made chicken pasta is in desired color.	9	4	2	1	3.09	Agree
2.3 The home-made chicken is presentable	9	5	2	0	3.27	Strongly Agree
2.4 The home-made chicken pasta is well-prepared and has smooth edges	8	6	2	0	3.36	Strongly Agree
2.5 The home-made chicken pasta is well-defined and uniform in sizes	8	7	1	0	3.46	Strongly Agree
					3.35	Highly Acceptable

Interpretation: 3.26 – 4.00 - Highly Acceptable; 2.56 – 3.25 - Acceptable; 1.76 – 2.50 - Slightly Acceptable; 1.00 – 1.75 - Not Acceptable

Table 2 shows that the product is acceptable in length/size which dictates the gnocchi-shaped pasta and it is in desired color just like when consumers are producing a regular home-made pasta. The product also has smooth edges and has uniform sizes which makes it appealing to the eyes of the food experts. The survey among food experts garnered a total mean score of 3.35 which states that the chicken-enriched pasta is highly acceptable in terms of its appearance.

Table 3. Sensory acceptability of Chicken-enriched pasta in terms of texture among Food Experts

Indicators	(4) Strongly Agree	(3) Agree	(2) Disagree	(1) Strongly Disagree	Mean	Interpretation
3.1 The home-made chicken pasta is cooked properly and has an al dente texture	9	6	1	0	3.36	Strongly Agree
3.2 The home-made chicken pasta retains a pleasing texture despite the addition of chicken flavor	7	6	3	0	3.27	Strongly Agree
3.3 The home-made chicken pasta is uniformly cooked and has no raw/uncooked part.	8	7	1	0	3.27	Strongly Agree
3.4 The home-made chicken pasta is NOT starchy	7	7	2	0	3.18	Agree
3.5 The home-made chicken pasta is smooth and was properly cooked	9	6	1	0	3.46	Strongly Agree
					3.31	Highly Acceptable

Interpretation: 3.26 – 4.00 - Highly Acceptable; 2.56 – 3.25 - Acceptable; 1.76 – 2.50 - Slightly Acceptable; 1.00 – 1.75 - Not Acceptable

Table 3 shows the computed scores of the sensory acceptability of the chicken-enriched pasta in terms of its texture. Every item has respondents who disagreed towards the texture of the product and those data are gathered during our first food tasting. After another series of food tasting, the data gathered have risen since the product is improved at the next survey.

Table 4. Sensory acceptability of Chicken-enriched pasta in terms general acceptability among Food Experts

Description	Mean	Interpretation
Taste	3.38	Highly Acceptable
Appearance	3.35	Highly Acceptable
Texture	3.31	Highly Acceptable
TOTAL:	3.35	Highly Acceptable

Table 4 shows the garnered mean score in terms of the sensory acceptability of the food in terms of taste, appearance, texture, and its general acceptability among Food Experts. Overall, the total mean score has gained 3.35 which states a highly acceptable rating.

Result

Data of the Chicken-enriched Pasta after the Taste Testing of Consumers

Table 5. Sensory acceptability of Chicken-enriched pasta in terms of taste among Consumers

Indicators	(4) Strongly Agree	(3) Agree	(2) Disagree	(1) Strongly Disagree	Mean	Interpretation
5.1 The richness and savory of the home-made chicken pasta is acceptable	27	22	1	0	3.52	Strongly Agree
5.2 The home-made chicken pasta is flavorful	30	18	2	0	3.56	Strongly Agree
5.3 The chicken powder is evenly absorbed in by the pasta	27	22	1	0	3.52	Strongly Agree
5.4 The taste of the chicken-flavoring in the pasta is evident	25	22	3	0	3.44	Strongly Agree
5.5 The taste of the home-made chicken pasta is enhanced by the chicken powder flavoring	21	26	3	0	3.36	Strongly Agree
TOTAL:					3.48	Highly Acceptable

Interpretation: 3.26 – 4.00 - Highly Acceptable; 2.56 – 3.25 - Acceptable; 1.76 – 2.50 - Slightly Acceptable; 1.00 – 1.75 - Not Acceptable

Among consumers, 50 respondents were tasked to answer the survey questionnaire and

participate in the food testing. In this table, it indicates that the total mean score for the sensory acceptability of the product in terms of taste among consumers is 3.48 which implies a highly acceptable rating.

Table 6. Sensory acceptability of Chicken-enriched pasta in terms of appearance among Consumers

Indicators	(4) Strongly Agree	(3) Agree	(2) Disagree	(1) Strongly Disagree	Mean	Interpretation
6.1 The home-made chicken pasta is acceptable in length/size.	24	24	2	0	3.44	Strongly Agree
6.2 The home-made chicken pasta is in desired color.	24	26	0	0	3.48	Strongly Agree
6.3 The home-made chicken is presentable	26	22	2	0	3.48	Strongly Agree
6.4 The home-made chicken pasta is well-prepared and has smooth edges	27	23	0	0	3.54	Strongly Agree
6.5 The home-made chicken pasta is well-defined and uniform in sizes	21	27	2	0	3.38	Strongly Agree
					3.46	Highly Acceptable

Interpretation: 3.26 – 4.00 - Highly Acceptable; 2.56 – 3.25 - Acceptable; 1.76 – 2.50 - Slightly Acceptable; 1.00 – 1.75 - Not Acceptable

Table 6 interprets that every item in the sensory acceptability of the food in terms of its appearance among consumers are highly acceptable. It gained a total mean score of 3.46 which corresponds to a highly acceptable rating although it can still be improved on its sizes since there are respondents who disagreed on the product being presentable and having a uniformed-size.

Table 7. Sensory acceptability of Chicken-enriched pasta in terms of texture among Consumers

Indicators	(4) Strongly Agree	(3) Agree	(2) Disagree	(1) Strongly Disagree	Mean	Interpretation
7.1 The home-made chicken pasta is cooked properly and has an al dente texture	25	18	7	0	3.36	Strongly Agree
7.2 The home-made chicken pasta retains a pleasing texture despite the addition of chicken flavor	20	23	7	0	3.20	Agree
7.3 The home-made chicken pasta is uniformly cooked and has no raw/uncooked part.	18	24	8	0	3.20	Agree
7.4 The home-made chicken pasta is NOT starchy	26	15	9	0	3.44	Strongly Agree
7.5 The home-made chicken pasta is smooth and was properly cooked	28	18	4	0	3.48	Strongly Agree

Table 7 indicates that the ratings are highly acceptable in the sensory acceptability of the product in terms of its texture, yet, 2 items garnered a total mean score that implicates an acceptable rating and every item has respondents who disagreed, thus, the product can be improved in terms of its texture but overall, the garnered score for the acceptability of the product in terms of its texture is highly acceptable.

Table 8. Sensory acceptability of Chicken-enriched pasta in terms general acceptability among Consumers

Description	Mean	Interpretation
Taste	3.48	Highly Acceptable
Appearance	3.46	Highly Acceptable
Texture	3.34	Highly Acceptable
TOTAL:	3.43	Highly Acceptable

Table 8 shows that the total mean score for the product's sensory acceptability in terms of taste, appearance, texture, and general acceptability among consumers are all highly acceptable.

Determining the Significant Difference of The General Acceptability of the Chicken-Enriched Pasta Between the Experts and Consumers

Table 9. General acceptability of Chicken-enriched pasta among Food Experts and Consumers

Description	Consumers	Experts	Interpretation
Taste	3.48	3.38	Highly Acceptable
Appearance	3.46	3.35	Highly Acceptable
Texture	3.35	3.31	Highly Acceptable
TOTAL:	3.43	3.35	Highly Acceptable

Table 9 indicates each rating for the sensory acceptability of the food in terms of its taste, appearance, texture, and general acceptability. Sensory acceptability in terms of taste gained a total mean score of 3.48 for the consumers and 3.38 for the food experts. The appearance garnered a total mean score of 3.46 for the consumers and 3.35 for the food expert and

texture gained a total score of 3.35 for the consumers and 3.31 for the food experts. The general acceptability of the product gathered a total score of 3.43 for the consumers and 3.35 for the food experts. Consumers gained higher scores than the food experts in all the variables, overall, the general acceptability of the food gained both highly acceptable among food experts and consumers.

Table 10. Comparison Between Experts' and Consumers' Sensory Acceptability of Chicken-Enriched Pasta

Measure 1	Measure 2	t	p
Consumers	Experts	0.459	0.691

As stated in the T-test, there is no significant difference between the Food Experts and Consumers since the garnered score is 0.459. A number that is greater than 0.05 states that there are no significant difference and any number that is less than 0.05 would indicate that there is a difference between the respondents. The researchers used the mean score for determining the general acceptability of the Consumers and Food Experts of the chicken-enriched pasta as there are no significant difference between the consumers and experts for the acceptability of the food in terms of taste, appearance, texture, and its general acceptability.

DISCUSSION

According to the results of the gathered data in this study, the sensory acceptability of the product in terms of taste and appearance among food experts is highly acceptable and the texture is acceptable, thus, there are still factors that can be improved to make the rating of the texture meet the highly acceptable. In general, the overall total acceptability rating of the product among food experts is highly acceptable.

Theoretical Implications of the Study
This research implies that it is possible to make product that can give satisfaction to consumers in terms of its taste, appearance, and texture and it can also give nutrients to the body such as the carbohydrates, protein, and calories in one easy-to-prepare meal. It is also clear how ingredients,

mixing, and kneading techniques must be followed to achieve the texture that is acceptable to the consumers and food experts.

Practical Implications of the Study
For the practical implications of this study, it is shown how the chicken-flavoring adds nutrients to the pasta. With the combination of the ingredients such as flour, egg, chicken-powder, salt, and pepper, people can have an all-in-one meal in one preparation. This research also aims to lessen the work of the people who prefers home-made food instead of instant. In addition, the researchers have developed this product due to the fact that home-made foods are free from chemicals and are safer to consume than eating instant food that are equipped with a lot of preservatives.

Limitations of the Study
This study has present limitations just like any other research. First, the food tasting only happened in the vicinity of Angeles City, Pampanga and even though some of the respondents have different ethnicity aside from being a *Kapampangan*, they also have different view. Some may like it salty and some may not, some wanted it to be spicy, and some are satisfied with the product itself. Second, the study focused on how to do the chicken-enriched pasta and its general acceptability and not to the extent of measuring the nutritional contents in every serving.

Future Research Directions
Future researchers may conduct a study relevant to this topic such as the nutritional content of chicken-enriched pasta per serving, incorporating another flavor may it be a spicy, sweet, or other kinds of flavor, and a wider perspective about this topic. Future researchers may also conduct a study nationwide or internationally to gain more respondents and have more credible data in gathering the perspective of the consumers and food experts in terms of the general acceptability of the product.

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