



University of
Stavanger

Faculty of Hotel Management

MASTER'S THESIS

Study program/Specialization:

Summer Programme, 2016

Master Degree Culinary Innovation and Leadership

Open / Restricted access

Writer: Natalia Andrea Ferrin Cedeno

NAFE

.....

(Writer's signature)

External supervisor(s): Robert-Bayet Philomène

Thesis title:

The impact and perspectives of a capacitating culinary awareness program, in the knowledge development of culinary identity, nutrition, hygiene, meal planning and culinary techniques applications in the community "El Progreso" situated in Pedro Vicente Maldonado Province of Pichincha Ecuador.

Credits (ECTS): 30

Key words:

Education, Culinary, Nutrition, Higyene, Budget

Pages:

09,June, 2017

Abstract

The purpose of this development project is to settle a Culinary Capacitating program along the community “El Progreso”, located in Pedro Vicente Maldonado, Province of Pichincha, Ecuador, in order to analyze the impact and perspectives that culinary knowledge can rapport. It has been taken in consideration the daily habits of the community, thus to improve their daily life of the people, to make them understand the importance of culinary knowledge and identity and portrait the richness and natural diversity of their area.

To accomplish this awareness, program a deep research project has being made: the territory, the history of the culinary culture and development of the community, the creation of the outline of the capacitation program, which follows a logical order to achieve the capacitation: objectives, activities, results and indicators.

For the investigation of the research, we have reached different sources such as interviews to important representatives of the community, the opinion of the community, research of the local area about natural resources and social development history and the analysis of various Literary and technical processes that allowed this project to be issued.

After analyzing the feasibility and setting the invitation to the community in

order to set the capacitation, it was concluded that certainly a culinary capacitation program in the community “El Progreso” could improve its habitant’s lifestyle and develop a complementary value for the community.

Once this capacitation has been implemented, the lifestyle of each of the members of the community “El Progreso” will be improved, it can rapport a new understanding of culinary habits that will rapport them a better management of the natural resources, will strengthen their gastronomical identity, improve their health, and rapport economically to the household.

Table of Contents

Abstract	1
Foreword	6
Introduction	7
Problem Statement	8
Literature Review	9
Method	10
Exploratory Research	10
Objectives.....	11
General Objectives.....	11
Specific Objectives.....	11
Objectives, goals and activities	13
1.Chapter I. Territory	14
1.1 Geographical location.	14
1.2 Geography and Weather.....	15
1.3 Economic characteristics- Productive Sector.....	16
1.4 Socio-Cultural Characteristics of Pedro Vicente Maldonado	18
1.4.1 NUMBER OF HABITANTS ACCORDING TO THEIR RACE	19
1.4.2 Population Pyramid of Pedro Vicente Maldonado.....	20
1.5 Education Level.....	23
1.6 Health	24
2.Chapter II. Design and strategy of the Culinary capacitation awareness program.	25
2.1 CULINARY AWARENESS PROGRAM.....	25
2.1.1 Section I: Culinary Identity	25
2.1.2 Population Ethnicity of community “El Progreso”	26
2.2 Section 2: Nutrition	27
2.2.1 Nutritional intake at National Level.....	28
2.2.2 Measuring a portion	29
2.3 Section 3: Hygiene:	31

2.3.1 Sources of water in the Community “El Progreso”	32
2.4 Section 4: Budgeting & Food Planning	33
2.5 Section 5: Culinary Demonstration and Practice	33
2.6 Local actors of the project	34
2.6.1 Local Actors	34
2.7 Length of the project	34
2.7.1 overview during 3 months after capacitation	34
3. Chapter III.- Implementation and development of the program	35
3.1 Characteristics of the Program	37
3.2 Cost of the program	38
3.3 Promotion of the program	39
3.3.1 Logo: Culinary Awareness El Progreso	39
3.3.2 Culinary Panel Educating Culinary Awareness Program	39
3.3.3 Design of the culinary laboratory	40
3.4 Itinerary for the program	41
3.4.1 Itinerary of the program	42
4. Chapter 4. Data Analysis and Discussion	43
4.1.1 Demographic Input of the focus group	43
4.2 Results Indicators	44
4.3 Question Analysis	44
4.3.1 Item 1	45
4.3.2 Item 2	45
4.2.4 Item 4: Dish consistency food group lunch meal	47
4.2.5 Item 5: water purification method	48
4.2.6 Item 6: observation of refrigerator storage over 5	49
4.2.7 Item 7: food waste analysis pounds per month week1 week 2 week3 week4	50
4.2.8 Item 8: medical visit or disease	51
4.2.9 Item 9: grocery list	51
4.2.10 Item 10: food planning chart use	51
4.2.11 Item 11: use of Pichincha’s governments product program	51
4.3 Discussion	52

4.4 Conclusion.....	55
4.5 Recommendations	58
References	1
axd.....	Error! Bookmark not defined.

Table of Figures

Figure 1. Location Pedro Vicente Maldonado.....	14
Figure 2: Immigration overview	19
Figure 3: Population Pyramid.....	20
Figure 4: Basic needs in households of Pedro Vicente Maldonato	22
Figure 5: Product Logo.....	39
Figure 6: Culinary Panel.1 (Ferrin, Culinary Panel).	39
Figure 7: Kitchen Design-front 3D, Top 3D/Front 2D, Top 2D.	40
Table 1. General Methodology of the project.....	13
Table 2: Economic characteristics- Productive Sector	17
Table 3: Culinary awareness program	25
Table 4: Clasification of local actors involved in the project.....	34
Table 5: Monthly results Indicators.....	Error! Bookmark not defined.
Table 6: Main Characteristics of the program	37
Table 7: Itinerary of the programe.....	42

Foreword

This thesis is written as completion to the Master's Degree in Culinary Innovation and Leadership. That has taken place in three different campuses: Stavanger University, The Institut Paul Bocuse, Haaga Helia University. The Subject of this thesis focuses on Culinary education and enforces the impact and perspective of how different aspects such as: culinary identity, nutrition, hygiene, budget planning and culinary techniques application can have a positive result in emerging societies. Taking as a focus group the community "El Progreso" located in Pedro Vicente Maldonado, Ecuador.

During this project, I have learned many new skills and the importance of how a master student can rapport in the society at the time of searching for the subject and develops the project, this process has also encouraged me to brake the frame of culinary field and understand the need of the importance of collected Data in the society.

I would like to address a big thank to the people who has contributed on my work, the community "El Progreso" and all its directors as well as all the professionals that have given me all the necessary tools and support in order to accomplish my Final project.

A special thankyou to Madame Robert-Bayet Philomène that has been my Supervisor and has kindly accompanied me through all the process, given me advice and has helped me focus on the whole process.

Introduction

This project has as objective to analyze the impact and perspectives that Culinary education has in a society, to achieve this project a capacitation culinary awareness program will be implemented and measured, this will explain how culinary knowledge can rapport on the development of the community “El Progreso” situated in Pedro Vicente Maldonado Province. (Government of Pichincha Province, 2015). This community currently has 122 habitants. (Coral, 2017). Also, this area is characterized for the agglomeration of different cultures that have immigrated to the area from all over the country, as long as it concerns the amazon, the coast and the mountains. As a result, we can find an important number of different characteristics customs, traditions and culinary habits and techniques. (Ferrin, Personal Testimony, 2017).

To develop the capacitation, program the following aspects are going to be considered: the potential of natural resources and location and the richness of different cultures, knowledge and background of culinary culture and education each of the members of the families that integrate the community el “Progreso” can rapport in order to build identity and improve their daily lifestyle.

Problem Statement

The main goal of this section is to distinguish the different factors that are causing different problems due to the lack of culinary knowledge. Nevertheless, there is an existing potential of biodiversity, natural resources, multicultural culinary background, and family care and composition in the community “El Progreso” “there is a lack of culinary skills and preparation knowledge. This has a direct impact on the living conditions of the habitants, for instance, mal nutrition, infectious diseases such as salmonellosis, Escherichia coli, etc., and difficulty to choose the right food at the time of cooking and lack of how to administrate their budget correctly and in an efficient way. (Morales M. G., 2017).

In addition, there is a significant impact on food waste and product underestimate. Even though the present condition of the community, the habitants and land lords of the zone take initiative on changing their lifestyle in different overviews, they have already started with a agritourism project circuit. (Coral, 2017), and they want to improve their regular habits and conditions for their own wellbeing. (Morales M. , 2017).

With this culinary awareness capacitating program is aim to measure the impact and perspectives that culinary knowledge can bring to a household in the community “El Progreso”. By acquiring basic education in culinary hygiene, nutrition, techniques, budgeting and identity.

Literature Review

This phase has been developed in order to examine the existing literature that has taken place in this area. To start with the author gathers information about the territorial characteristics that will influence in the study. Also, many similar cases of culinary education have been taken in consideration and educating tools have been introduced. Since this Project has the objective to analyze the impact and perspectives of a capacitating culinary awareness program, in the development of the community “El Progreso” situated in Pedro Vicente Maldonado Province of Pichincha Ecuador. An important section of the progress of the analysis have been compared with the (ENSANUT-ECU, 2012). That has provided relevant information about the current status of the field.

Thirty housewives will be part of the capacitation “Culinary awareness program”, that takes place in the “Association de ganaderos” cattle association of the town, this process is programmed during three days and then it has been measured during three

months. Considering that it will improve their culinary knowledge and integrate their alimentary products. Through the development of this project it is looked forward to rich a higher level of lifestyle in households and create a culinary identity in the community.

This awareness program has a guideline in order to bring and additional research to the governmental programs and culinary development in the communities. For this project, it was taken in consideration the objective number 3: To improve people`s quality of life of the. “Good living National Plan”. (Secretaría Nacional de Planificación y Desarrollo, 2013-2017).

“The right to a life of dignity, where health, food and nutrition, water supply, housing, environmental sanitation, education, work, employment, rest and leisure, physical culture, clothing, social security and other necessary social services are all guaranteed”. (Natal Assembly Ecuador, 2017).

Method

For the development of this project the research will be focused in both quantitative and qualitative method as well as exploratory research.

Exploratory Research

For the current analysis, the exploratory research will be used, which allows the investigation of topics that has been poorly researched and are important for the development of the capacitation.

Also, this type of research can be used to induce new subjects from different perspectives with another approach that can be innovative. It can help as well to understand the meaning of new phenomes that can be relatively new or unknown, it seeks for the necessary data to achieve a better research that allows to stablish truthful variables. (Sampieri, R., Fernández, C., & Baptista, M. d. , 2014)

In the research and implementation of this project this type of method is very important since Ecuador does not own a specific plan for culinary education or identity.

Objectives.

General Objectives.

Analyze the impact and Perspectives of a capacitating culinary awareness program, in the knowledge development of: Culinary identity, nutrition, hygiene, meal planning and budgeting and utility of culinary techniques in the community “El Progreso” situated in Pedro Vicente Maldonado Province of Pichincha, Ecuador.

Specific Objectives

1. Make a research plan that allows to have a diagnostic about the location and currents situation of the areas through primary and secondary data. description of the territory (analyzing the zone and population according to the field of study)

2. Design the culinary program step by step that will consist of : five different chapters: culinary identity (research and knowledge of their local products and, culinary hygiene and food safety education, family nutrition, meal planning, food preparation and conservation.
3. Develop the Culinary awareness program in the community. A convocatory "el Progreso", will assist to the capacitation program and be part of the progress step by step.
4. measure the result of the impact in the society and analyze the perspective of the project in the community "el Progreso" located in Pedro Vicente Maldonado-Ecuador.

To achieve the goal of this Capacitation program 4 objectives has being taken in consideration in the following table.

Research Framework

Objectives	Goals	Activities
Description of the territory	Analizing the territory	Definition and structure that belong to the capacitation program
		Analisis of the territory
		Analisis of the different factorst that can influence the program.
Design of the program	Design of the practical process	Design of the capacitation program
		Defining the scheduele and budgeting
		Design of the program step by step
		Validation of the program
		evaluation and impact of the capacitation program
		setle of differerent necessities and analizing the investment
Developement of the program	Design of the program step by step	Chapter 1:Culinary Identity
		chapter 2: Househole Nutrition
		Chapter 3: Culinary Higyene
		Chapter 4: Meal Planification and budgetting.
		Culinary techniques, chef demo and practice
Measuring, discussion and conclusion		Results and conclusion about the program

Table 1. General Methodology of the project

1.Chapter I. Territory

In this chapter, a general overview of the territory will be described as well as specific characteristics of the zone that will be exposed to the project. First of all, a deep research of the local area will be cited, this part shows the geographical localization, also there is an analysis of the local characteristics of the society for instance: their customs, habits, background, and the general actors that can be related with the development of the project.

1.1 Geographical location.

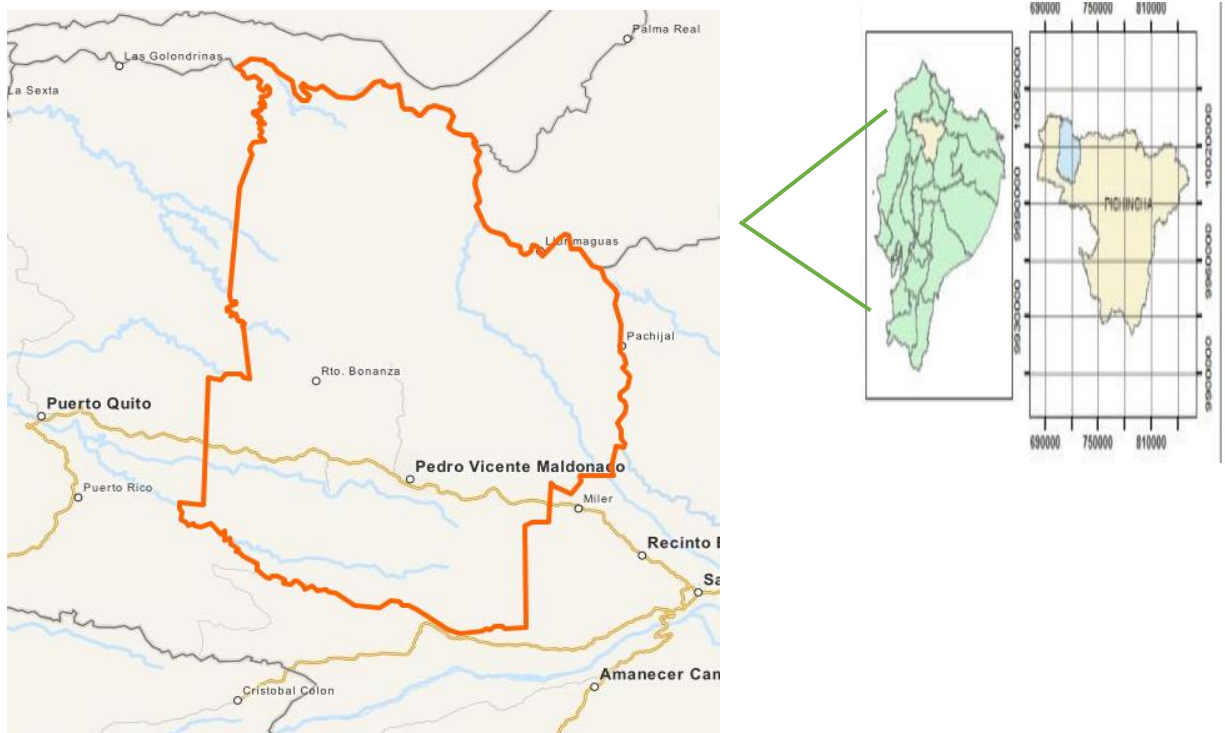


Figure 1. Location Pedro Vicente Maldonado, (Autonomous Decentralized Municipal Government of Canton Pedro Vicente Maldonado, 2015)

Annex a)

The area Pedro Vicente Maldonado, is located in the northwestern area of Pichincha Province 116 km from Quito and on the foothills of the Western Andes. Its limits include:

North: Province of Imbabura - Interprovincial boundary - Guayllabamba River.

South: Province of Santo Domingo de los Tsachilas and Canton San Miguel de los

Bancos. East: Metropolitan District of Quito and Canton San Miguel de los Bancos

West: Canton Puerto Quito. (Autonomous Decentralized Municipal Government of Canton Pedro Vicente Maldonado, 2015).

1.2 Geography and Weather

Pedro Vicente Maldonado has a warm-humid climate the area does not present major climatic changes and has an average of 16 ° C in most of the year, although this temperature tends to rise in the winter season to temperatures higher than 25 ° C In January, February, March, April and May, also, these months is where there is the highest PVM precipitation. The humidity of Pedro Vicente Maldonado oscillates between 84% and 87%, additionally its cloudiness has an average of 8/8 with completely covered sky and the precipitations fluctuate between 3,300 and 3,800 mm with an evaporation that

presents between the 890 and 1,100 millimeters. The space occupied by Pedro Vicente Maldonado covers an area of 656.50 square kilometers.

This biophysical space has its own characteristics of the Sub-Tropical region, making it possible to have abundant natural resources, a fertile soil and a privileged landscape. Its topography is tenuously undulating with altimetric levels that have an average of 620 msnm. Additionally, according to its ecosystem, Pedro Vicente Maldonado, is very humid forest and humid forest. (Autonomous Decentralized Municipal Government of Canton Pedro Vicente Maldonado, 2015).

1.3 Economic characteristics- Productive Sector

ACTIVITY	# Of establishments	Percentage of population working
Lodgment and F&B services	50	3.94%
Health/medical	11	1.28%
Management Services	1	1.44%
Finance	3	0.42%
Science	9	1.00%
Public law	6	2.62%
Agriculture, aquaculture	1	47.30%
entertainment	10	0.31%
Commerce and automobilist services	278	11.27%
Construction	1	5.89%
Water distribution	2	0.25%
Waste management	11	3.21%
Education	48	5.32%
Industrial Manufactures	18	0.63%
Other Services	24	1.38%
Transportation	5	3.41%
Not registered	354	0.07%

Total of registered Business	478	
Total of registered and non-registered	832	
Occupation rate	97.32	

Table 2: Economic characteristics- Productive Sector

Adapted from: (Autonomous Decentralized Municipal Government of Canton Pedro Vicente Maldonado, 2015)

According to data collected by the National Institute of Statistics and Census of Ecuador in 2010, in Pedro Vicente Maldonado, a total of 832 commercial establishments are distributed in 19 main economic-productive activities that take place in the area. (National Information System, 2014)

The activities with the greatest number of establishments are; Repair of motor vehicles and motorcycles with a total of 278, followed by establishments where accommodation and food service activities are carried out with a total of 50 and finally there are 48 establishments of manufacturing industries. However, it is necessary to mention that approximately 43% of establishments that exist in Pedro Vicente Maldonado are not declared in the national census carried out in 2010. (National Information System, 2014). Only a declared commercial establishment of agriculture, livestock, forestry and fishing. However, due to the large number of undeclared establishments, a greater number of properties with the same characteristics can be found. A total of 16 properties were registered in agriculture, livestock, forestry and fishing activities as a main source of

income for their inhabitants in a census carried out in the "El Progreso" area in the year 2016. (Ferrin, Personal report about the territory of Pedro Vicente Maldonado, 2017)

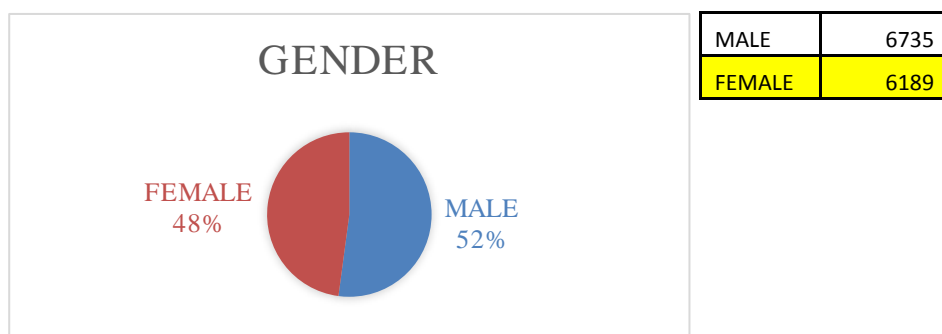
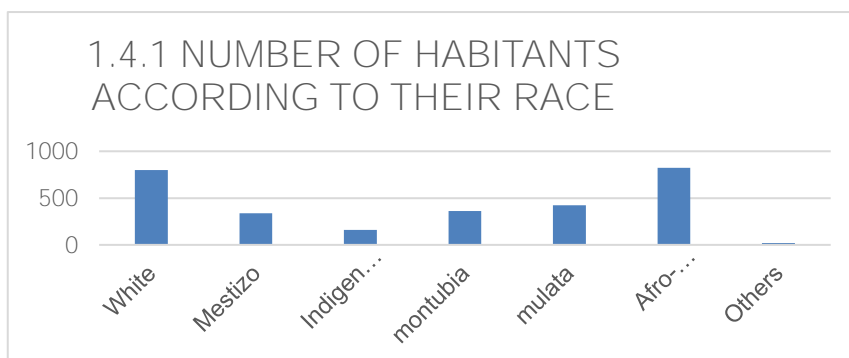
According to the information, the percentage of total occupation by activity, the activity of greater occupation is presented in the sector of agriculture, forestry, hunting and fishing, arriving to reach the 47.30% of the population of Pedro Vicente dedicated to this activity, followed by 11.27% of the population engaged in wholesale and retail trade, and finally the third activity with the highest occupational population is construction, reaching 5.89%. In order to determine the percentages, an employed population of 5,226 people was taken into account, with 2,357 workers in the urban area and the remaining 2,869 working in the rural areas of the community. (National Information System, 2014)

1.4 Socio-Cultural Characteristics of Pedro Vicente Maldonado

The population of Pedro Vicente Maldonado is made up of people of different ethnicities that comprise more than 30 precincts, its total population is approximately 13,000 people, of which 50% is native to the sector and the remaining 50% consists mainly of immigrants Of Bolivar, Pichincha, Cotopaxi, Loja and the Gold. (Autonomous Decentralized Municipal Government of Canton Pedro Vicente Maldonado, 2015). Due to the ethnicity richness, the community "El Progreso" is characterized for applying different culinary techniques, flavors and practices.

1.4.1 Number of habitants according to their race

RACE	# of people
White	798
Mestizo	337
Indigenous	160
montubia	362
mulata	424
Afro-ecuadorian	823
Others	20
TOTAL OF HABITANTS	2924



MALE	6735
FEMALE	6189

Figure 2: Immigration overview

Adapted from: (INEC- Ecuador, 2015)

According to the 2010 census, the majority of inhabitants of Pedro Vicente Maldonado is of mixed descent with 10,160 inhabitants, followed by the black-Afro-Ecuadorian population with 823 inhabitants and finally the white population with 798 people, it is also necessary to mention That the distribution of the population between women and men is quite even with 6,735 and 6199 inhabitants respectively.

In addition, the population of the urban area is equivalent to 5,561 people, whereas the majority of inhabitants of MVP are in rural areas reaching the 7,363 inhabitants (National Information System, 2014).

1.4.2 Population Pyramid of Pedro Vicente Maldonado

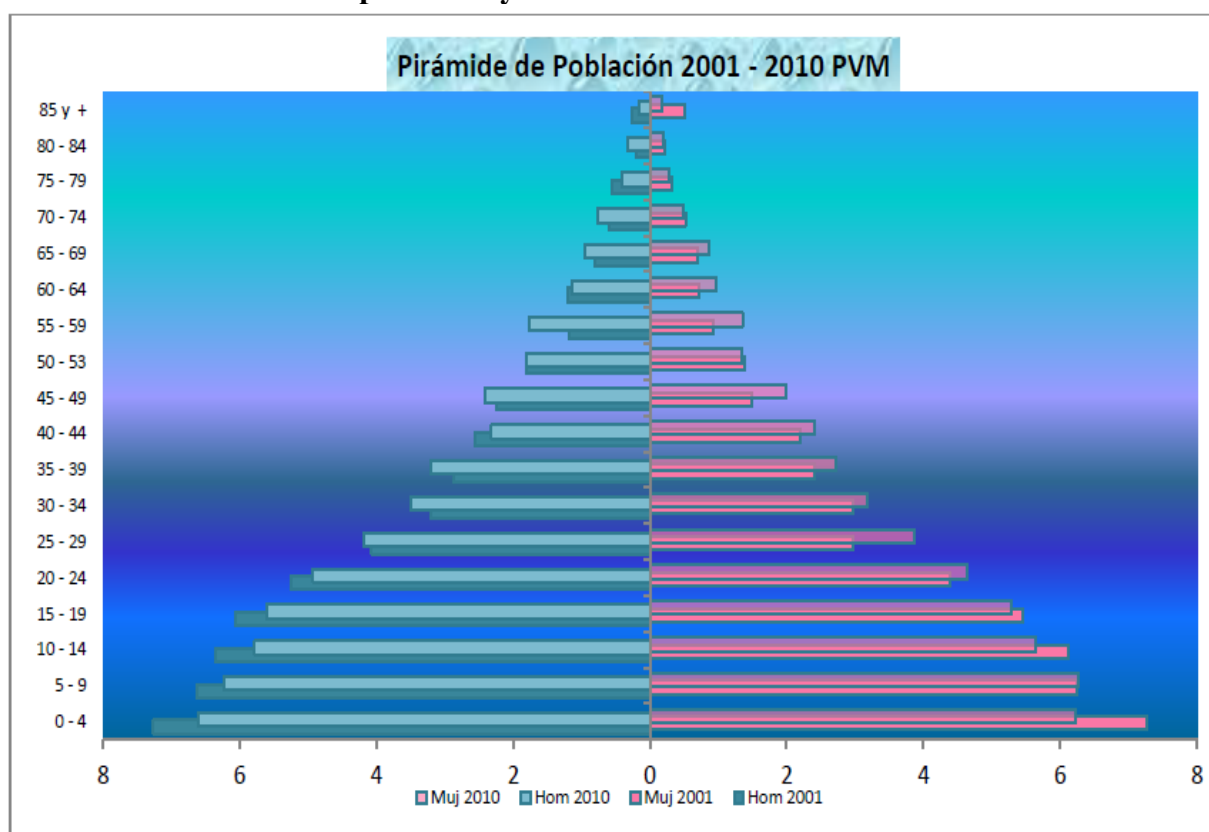


Figure 3: Population Pyramid

Retrieved from: (Autonomous Decentralized Municipal Government of Canton Pedro Vicente Maldonado, 2015)

According to the population pyramid of Pedro Vicente Maldonado, children aged 0-11 occupy 30.26% of the total population, youth from 12 to 17 years of age reach the 13.16% of the population, young people who comprise the ages of 18 to 29 years belong

to 21.84% of MVP citizens; The rest of the population is comprised of people 30 to 64 years of age with 30.11%, and finally older adults over 65 years of age, occupy 4.61% of the total population.

It is necessary to mention that a great part of inhabitants comprise the ages of 0 to 17 years old, being the children and adolescents, arriving to occupy the 43.42% of the population of MVP. They are the main beneficiaries for the social programs of education, health, food and recreation spaces

Due to its privileged location, several rivers cross the canton Pedro Vicente Maldonado, which allow the provision of water for agricultural purposes and human work, among the most important are; Caoní, Sábalo, Guayllabamba, San Dimas, Pachijal, Cristal, Silanchi, Jordán, Pizará, among others. (Autonomous Decentralized Municipal Government of Canton Pedro Vicente Maldonado, 2015).

Regarding connectivity, the main way to reach PVM from Quito is the Calacalí-La Independencia highway, at a distance of approximately 120 kilometers with a time of about two hours. (Autonomous Decentralized Municipal Government of Canton Pedro Vicente Maldonado, 2015). To reach the "El Progreso" enclosure, it is necessary to have your own vehicle.

The lack of public transportation to the complex complicates the arrival to the same, since they do not have their own transportation, the residents of the "Progreso"

precinct are forced to walk for approximately an hour to reach their destination, otherwise they should wait to have a private van or car transport them to reach their final destination.

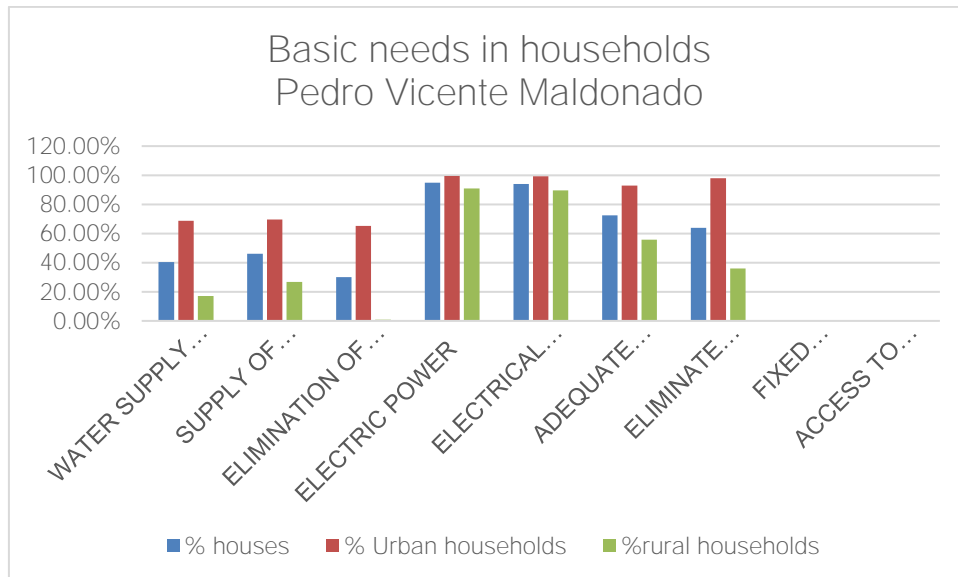


Figure 4: Basic needs in households of Pedro Vicente Maldonado

Adapted from: (National Information System, 2014)

As for the provision of basic services, a large part is mostly available for the urban areas of the region. (National Information System, 2014)

Rural areas must find their own means to be able to source themselves from certain basic services such as water usable for Their daily activities. (Ferrin, Personal Testimony, 2017). However, the decentralized government of Pedro Vicente Maldonado, looks for strategies in order to be able to supply a larger number of homes with the basic services necessary to achieve a decent life. (Autonomous Decentralized Municipal Government of

Canton Pedro Vicente Maldonado, 2015).

As far as the sewerage is concerned, according to the INEC census in 2010, only 29.95% of dwellings are connected to the services of the public sewage system; It is necessary to mention that only 0.9% of rural households have this service. The rest of the population uses different methods for the excreta elimination; 54.8% of households use septic tanks, 27.9% have blind well connections, while 7.0% use latrines, 0.6% do direct discharges to the sea, lake, river or creek, and finally, 8.7% Of housing does not have the service. (Autonomous Decentralized Municipal Government of Canton Pedro Vicente Maldonado, 2015).

1.5 Education Level

Education Level	Percentage
None	7,13%
Center for Literacy / (EBA)	0,77%
Preschool	1,25%
Primary	45,01%
Secondary	19,93%
Basic Education	11,79%
Bachelor's Degree	6,44%
Post-baccalaureate degree	0,66%
Superior	5,08%
Postgraduate	0,30%
Ignored	1,64%

Table 3: Level of education in the area (Ambuludi, 2014)

The highest level of education within the canton Pedro Vicente Maldonado is the "Primary" with 45.01%, second is the "secondary" level with 19.93%, Then the level "basic education" with 11.79%. The minimum level recorded, Corresponds to "postgraduate", with 0.30%. The "none" level stands out with 7.13%, Outperforming other levels such as higher and pre-school where the need for Continue to literate the canton.

1.6 Health

Cause	Percentage
Malignant neoplasm of the stomach	12.90%
leukemia	6,45%
malignant tumors	9,68%
Hypertensive diseases	9,68%
heart disease	6,45%
Diseases of the respiratory system	6,45%
liver diseases	9,68%
Transport accidents	19.35%
Aggressions	9,68%
External causes	9,68%

Table 4: Morbidity rate in Pedro Vicente Maldonado

2.Chapter II. Design and strategy of the Culinary capacitation awareness program.

In this chapter, it is explained the specific development of the culinary capacitation awareness program and the proposition of it. At the same time, it is communicated the advantages of the program and how the community that will be benefit through this. Directly and indirectly.

2.1 Culinary awareness program

With the implementation. Once the problem has been analyzed, the objectives will be explained, the goals and the impact as well as the explanation of the program step by step, that will consist of a timeline, a chronological order. And finally set a budget in order to implement the capacitation program.

2.1.1 Section I: Culinary Identity

To design Section 1 for the Culinary awareness program it has being taken in consideration 3 important points, the products diversity of the area, the consumption of different products the different culinary techniques according to the population immigration and the existing practices and culinary habits.

The items that are produced the most locally thanks to the richness of the soil are: palmetto considered as the most important (60830,12 kg per year), African palm (25125.5 Kg per year), Meat (27216 kg per year), Milk (22000.0 per year), considering the agriculture sector as the most productive. (Ambuludi, 2014). In addition, there are other existing products that are produced locally such us casave, platain cocoa beans, passion fruit, rice, corn, borojo, araza, coffee beans, zalac, chicle, watermelon, papaya, aromatic herbs like cilantro, basil, persil, etc. (Ferrin, Personal Testimony, 2017).

After analyzing the population of the area in (Figure 2) we can perceive that there is an important cultural mix since people have inmigrated to this area from all over the country. White, Mestizo, Indigenous, montubia, mulata, Afro-ecuadorian, Others.

2.1.2 Population Ethnicity of community “El Progreso”

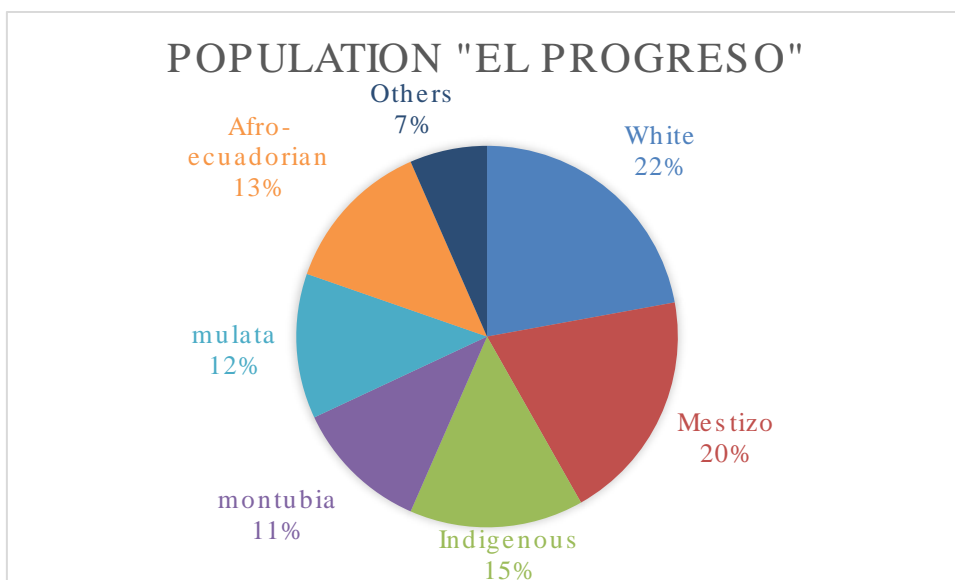


Figure 5: Races integrating the sample group community “El Progreso”

(Ferrin, Questionary set for the community "El Progreso" General characteristics, 2017)

In the figure 5, we can have an insight of the multiculturalism of the sample group. Community “El Progreso” in Pedro Vicente Maldonado. Ecuador population is characterized for its traditional food that is created from three poles: daily food, festivity foods and ritual foods. All influence by baroque style cuisine. (Pazos, 2010). There is an important influence from the indigene population that held to the use of authentic foods such as corn and quinoa. (Apolo, 2000). To issue the different types of meals housewives usually furnish their kitchens with the following materials: Casserole, wooden spoon, paila. Knife, wooden plank. Pots of different sizes. Mortar, enclosed iron pan, skillet, blender, garlic crush (stone). Some of the dishes that are normally used are from “fabrique origin” plastic, metallic, ceramic but also ancestral elements are still used in their cuisine such us plantain leaves, corn leaves achira leaves, black stone, etc. And the cooking methods implemented are: Baked, grilled, boiled, steamed, fried: breaded, overcooked, sautéed. (Weston, 2009).

2.2 Section 2: Nutrition

In the section 2 of the culinary awareness program it has being taken in consideration the (ENSANUT-ECU, 2012). A national report that has analyzed

Ecuadorian nutritional habits in order to understand the current situation of the population and make them aware of the importance of eating balanced meals.

2.2.1 Nutritional intake at National Level

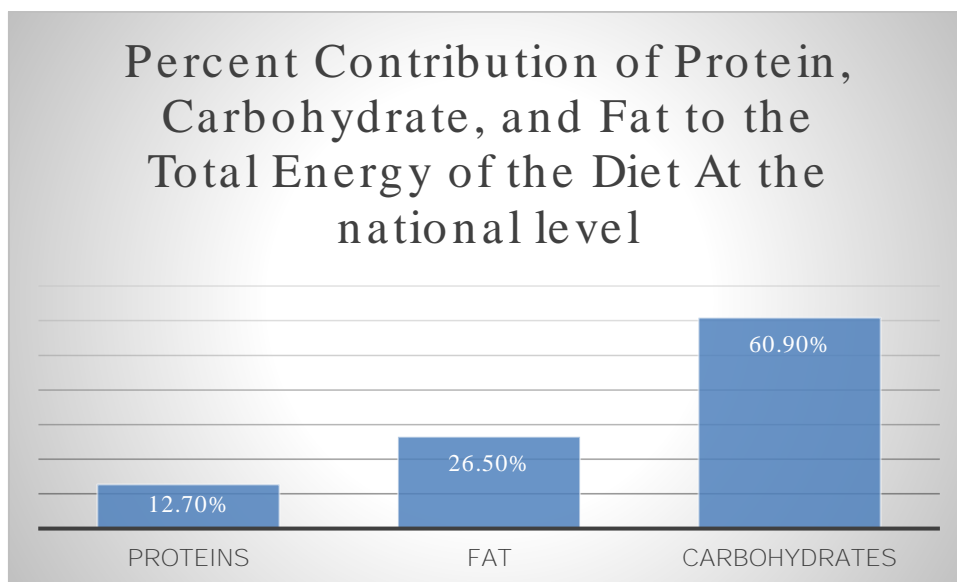


Figure 6: Total energy of the diet at the national level

Modified from: (ENSANUT-ECU, 2012)

The dishes that are usually served in daily food among the households do not follow the international standards of nutrition. 180 grams of meat proteins, (50% of the total weight), 90 grams of carbohydrates (25% of the total weight) and 90 grams of vegetables (25% of the total weight). Instead, they are composed by: 360 grams and are composed in a large Percentage for carbohydrates, protein and fats, to the point that the maximum 10% to vegetables. According to recent nutritional national studies Ecuadorian's diet is based in Proteins 12.70%, Fat 26.50%, Carbohydrates 60.90%. (Apolo, 2000). This can testify the current overweight and obesity, due to the

consumption of a diet with high caloric content and lack of physical activity. (ENSANUT-ECU, 2012).

To teach this crucial part the Culinary awareness program has focused on the already existing “Strategy program action nutrition”, supported by the minister of education. That has had a successful result on teaching emerging societies in Ecuador the importance of nutritional meals for children. An also the different Nutrition manuals created by in health minister of Ecuador in order to guide the different nutritional needs in the household. (Publica, 2017). In the chapter 1 of this paper it has being analyzed the educational level of the Area of Pedro Vicente Maldonado and Primary level is the most important reaching 45.09% of the population, this is the reason why the program has focus its PowerPoint slides material in a simplified ludic way in order to let the public understand the important message. A tridimensional nutritional pyramid has been adapted in order to explain the different types of food groups and the balanced dish. The government of United states has implemented an innovative way to educate in nutrition, thus this chapter has been adapted for the culinary awareness program. (USDA C. f., 2017).

2.2.2 Measuring a portion



Figure 7: Measuring a Portion.

Figure 7 might help the implementation of the nutritional system for the Culinary awareness program.

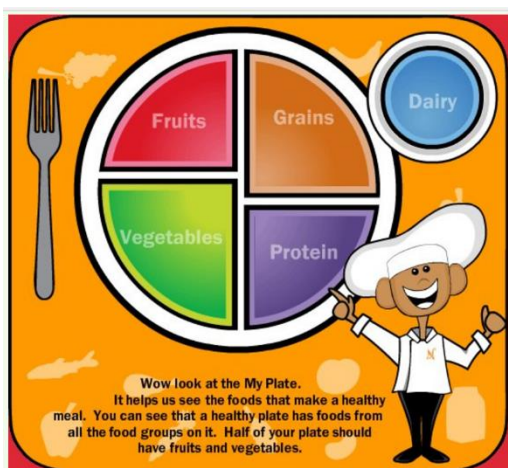


Figure 8: Balanced meal

Taken from: (Nourishinteractive, 2017)

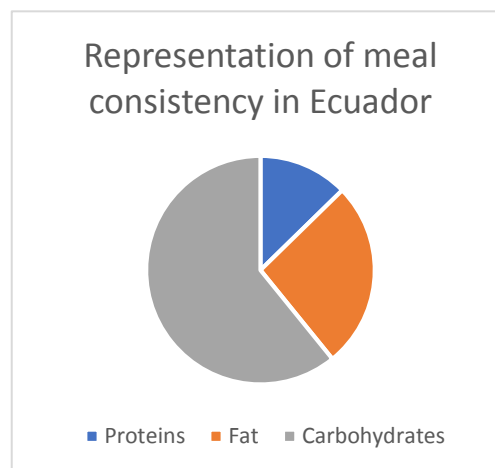


Figure 9: National Meal consistency

Adapted from: (ENSANUT-ECU, 2012)

This figure 7 has allowed an interactive way to teach the focus group the Nutritional care importance preparing balanced meals, according to the needs of the members of the family where the importance of the combination of different food groups. (Nourishinteractive, 2017). Figure 8: Versus the current situation in Ecuador where we can perceive according to the statistics of (ENSANUT-ECU, 2012). That the food groups are not respected as a result the meals are unbalanced. To make it easier to measure it is not essential to have a scale. There is an existing interesting method that came out in the Dietary Guidelines of, (USDA C. f., 2017). Which consists on using the hand in order to calculate the approximate amount of food that needs to be in the dish for each individual.

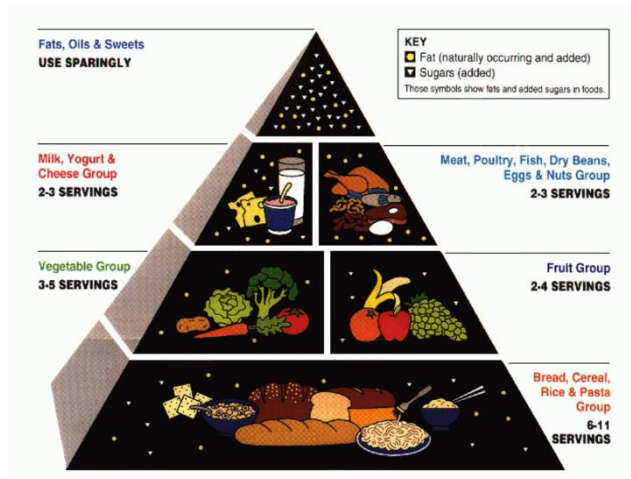


Figure 10: Nutritional Pyramid

Taken from: (USDA C. f., 2017)

2.3 Section 3: Hygiene

In Section 3 of the culinary program the basis of safety food practices are considered in order to obtain a satisfactory result after the implementation of the program, in order to design this section, an observatory research has been implemented, and a quick review of the Health Minister has been taken in consideration.

Basic information about important practices to avoid food poisoning and cross contamination have been applied, first the importance of washing hands properly before and during the manipulation of different ingredients: secondly, the need of cleaning correctly the surfaces where food is going to be handle and third the correct storage of food in the kitchen and the well manipulation of food exceed. The processes used by the

Government of the United States have been used. (USDA C. f., 2017)

In this process, it is important to focus on water sanitizing techniques since rural areas such as Pedro Vicente Maldonado do not privilege from proper water, instead they provide their households with rain water, the nearby rive or water wells.

“663 million people around the world still don’t have access to safe drinking water. Over 2 million people die every year from waterborne diseases and most are children under 5 years old.” (Onedifference, 2017)

2.3.1 Sources of water in the Community “El Progreso”

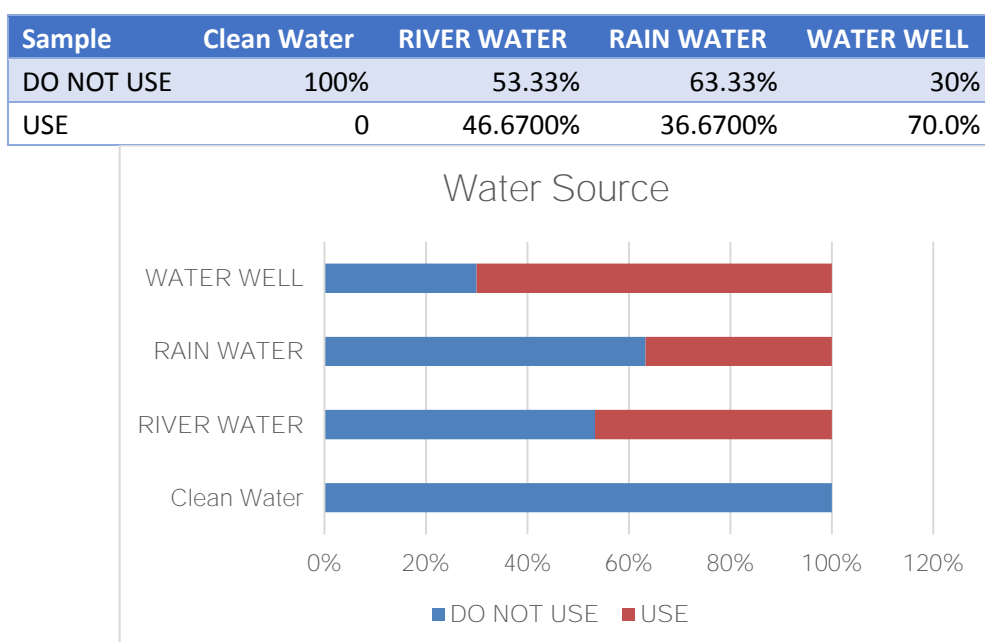


Figure 11: Used Source of Water

(Ferrin, Questionary: Basic needs of the community "El Progreso" in Pedro Vicente Maldonado, 2017)

After analyzing the interview made to the sample group of 30 housewives that integrate the community “El Progreso”, it can be concluded that 100% of the households do not use clean water they are not installations by the government. The most used source of water is “water wells “which are built by themselves 70%, there are other used methods, the river’s water 46.67% and the 66.33% uses rain water. As a result methods for purifying water at home where introduce: Disinfection by boiling, disinfection with chlorine, disinfection with ionic silver, Ceramic filters, Activated charcoal filter Ozone Purification, Ultraviolet Disinfection (UV), Reverse Osmosis Purification. (Rio Arronte Fundacion, 2012)

2.4 Section 4: Budgeting & Food Planning

In the section 4 of the Culinary awareness program there will be implemented an organizational table that will allow the participant to understand how to manage their budget at the time they prepare food, in addition a local food supply program will be introduced to the participants, and they will be able to manage their budget and apply what they have knowledge from the previous session. See annex

2.5 Section 5: Culinary Demonstration and Practice

In section 5 a complete demonstration of culinary skills program will be applied in order to encourage housewives to implement all the advices and practices that have

been proposed during the previous sections. It will start from basic knowledge such as cutting techniques and cooking methods up to how to conserving for saving.

2.6 Local actors of the project

The local actors involved in the proposal are classified as centralized, decentralized, civil society and cooperation, this are distributed in the following Table.

For the identification of local actors, it has taken in consideration: entities in ministries, autonomous decentralized governments, associations, cooperatives, two farms.

2.6.1 Local Actors

Descentralized	Private	Civil Society
GAD Province of Pichincha	Farm "la Estancia"	Cadle Association of Pedro Vicente Maldonado
GAD Pedro Vicente Maldonado	Ranch "Don Dario"	Comunity "El Progreso"

Table 5: Classification of local actors involved in the project

2.7 Length of the project

This capacitation has a duration of 3 months, using the first one to apply the proposition, and the two others to see the impact in the community.

2.7.1 overview during 3 months after capacitation

Month	Activity	Tool
1	Program	Culinary Awareness program
2	Observation	Capacitated Professional
3	Questioning	Questionary

The community that will mainly have advantage out of this capacitation program will be “El progreso” with a total of 122 habitants, and thirty housewives will be assisting to the culinary capacitation awareness program, and will rapport with their information about the community as well as will lend the different ingredients for the capacitation, the owners of the different properties are included as well and the responsible of “Asociacion de Ganaderos” cattle association.

As well as the different suppliers of Pedro Vicente Maldonado that will provide certain ingredients to make the capacitation to be developed.

Finally, the government of Pedro Vicente Maldonado will benefit of a Culinary capacitation program that can be implemented to help the development of other communities as well as the objective to present this program in all the country.

3.Chapter III.- Implementation and development of the program

In this chapter, the strategy for the implementation of the program is explained with detailed measures and the development of the culinary awareness program in the community “El Progreso”.

The current proposal has the objective to develop a Culinary awareness program in the community “El Progreso”. Conceptualization of the product, the itinerary of the program and its costs, the logo of the project and the installation of it.

In this chart, the current situation of the program is describing: all the needed element, materials and factors in order to accomplish the process and the identification of the local community and their motivation to improve their lifestyle.

3.1 Characteristics of the Program

NAME OF THE PRODUCT	Panel Culinario "El progreso" Culinary Panel "El Progreso"
Identifying the project	X
Description of the product	
Subject and orientation	Culinary education awareness program that aims to improve the lifestyle of the local community "El Progreso"
Target	Housewives, from 25 to 60 years that are in charged of their households
	Families that integrate the community el progreso and want to improve their lifestyle
Motivación (To adquire culinary knowledge)	
	<ul style="list-style-type: none"> Learn about the potential of the local products of the region and share culinary cultural background Understand the importance of eating healthy and avoid diseases. People interested in adquiring higyene procedure in order to keep their family healthy Understand the satisfactory economical impact after meal planning and budget administration. learn how to develop a community identity through culinary practices and creation.
	Fundamentals (Importance and contribution to the actual conditions of the comunity)
	<ul style="list-style-type: none"> This awareness program will contribute to the lyfestile of the community and will give preparation to the housewives in order to maintain the good condition of the different family members, improve their nutrition, and avoid diseases. And manage their budget. Also this will contribute to the adequate implementation of local products and the implementation of innovative techniques in order to create local culinary identity. At the same time this can contribute to the different project of agroturism developed before. And adjust culinary tourism as part of their development objectives.
Quality of the program setting	
Preparation of the Place to develop the product	<ul style="list-style-type: none"> It is important to set the place in order to be confortable to focus on the process. It is necessary to find a place with easy acces and safe conditions. Internet and connectivity are needed in order to present the program Clean Running water must be used the place must be strategically positioned in case there is an emergengy Fire security system is required
Capacitating program	<ul style="list-style-type: none"> It is necessary to have a professional for the capacitation program it is recomended: a professional chef and a representative of the community It is important to use a ludic way and interactive program in order to accomplish the objective of the product. A guideline for each of the chapters must be used and previous organization must be settle to establish the different stages of the program. The use of specifique manual of the different processes and standards have to be given in order to develop the program.
Culinary Laboratory	<ul style="list-style-type: none"> A well equiped space is needed in order to achieve better results for the program
Characteristics	<ul style="list-style-type: none"> In the interior of the laboratory the following material is needed: a table that allows each of the participants participate in the program, a board where the chef can explain the program step by step and give out some important information, proyector in order to show the powerpoint presentation. Equiped kitchen that will be use for the cooking demostration. The current laboratory limits it acces to maximum 30 participants. It is important to have basic need such us water, lightening and evacuation.
Acces	<ul style="list-style-type: none"> Due to the lack of transport in the area it is important to organize the participants in a convenient schedulee. The program has been planned only for a short period of time due to disponibility and movilization of the participants. The current situation of the laboratory limits the process into basic capacitation due to de lack of materials and safety procedures.
Quality of the program	
Security	<ul style="list-style-type: none"> It is important to provide the participants with a operational protocol of the three day program, that includes safety rules and procedures and detailed information of Higyene conditions. During three days it is important to control the cleanness of the environment and the possible risks at the time of cooking. It is necessary to set the program in a detailed way that the participants can be completely involve during the three days and submit to the safety rules of the program.
Procedure	<ul style="list-style-type: none"> The disposal of manuals and brochures for each of the chapters with procedures is crucial in order to maintain the standars of the program.
Human Resources	<ul style="list-style-type: none"> Capacitated, professional and certified talented people is needed to accomplish the objectives of the program. Capacitated person with the knowledge of the sanitary procedures is needed for the process. Motivated participants that want to improve their lyfestile.
Tecology	<ul style="list-style-type: none"> Computer acces, internet conectivity, Infocus technology.

Table 6: Main Characteristics of the program

3.2 Cost of the program

To understand the budget that is needed for the program it has being taken in consideration three important aspects: the operational costs such as transportation, materials and ingredients and the remuneration of the professional that collaborates with the project. (The chef). The budget for the culinary laboratory.

Operational Costs	cost in dollars
transportation for audience	85
materials	45
ingredients	100
cleaning supplies	20
cooking materials	65
Costs Proffesional	0
costs of transportation	50
meals	25
lodge	0
Culinary Laboratory	0
refriderator	100
Stove	150
Gas	5
TOTAL	645

Table 7: Budget of the program

This Chart describes the amount of money used during the three days that the program was hosted.

3.3 Promotion of the program

3.3.1 Logo: Culinary Awareness El Progreso



Figure 12: Product Logo

Designed by: (Ferrin, Culinary awareness El Progreso)

According to the program a Logo has being proposed in order to identify it and promote it. This Logo represents the importance of culinary education, it is a balance between food, nutrition, health and wellness

3.3.2 Culinary Panel Educating Culinary Awareness Program

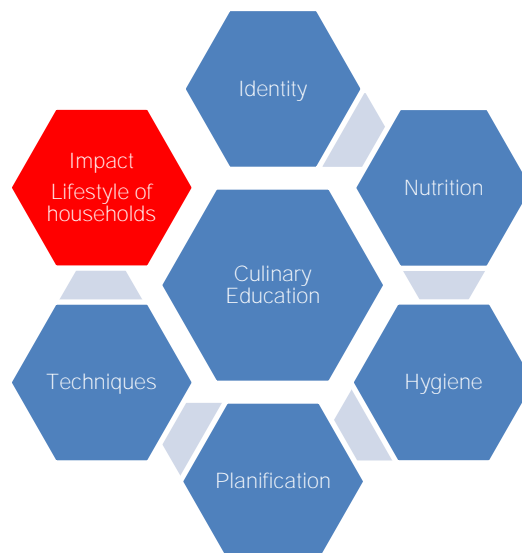


Figure 13: Culinary Panel's (Ferrin, Culinary Panel).

In the culinary panel the global overview of the program is shown, is a sequence that explains how culinary education has a sequential impact in the lifestyle of people, starting from the culinary Identity understanding the background and customs and discovering new products. Secondly, the knowledge of nutritional needs according to the population. Third hygienic practices in order to avoid cross contamination and disease. Fourth, how to plan a meal and manage a budget and finally, the techniques needed in order to apply all the knowledge.

3.3.3 Design of the culinary laboratory



Figure 14: Kitchen Design- front 3D, Top 3D/Front 2D, Top 2D.

(Ferrin, Culinary Lab)

A design of the “Culinary laboratory “is shown in order to standardize the program for further applications, and a way of prevention for any emergency evacuation. In

addition to this an image of the whole community used to developed a agritourism product. (Coral, 2016) is shown in order to obtain a better insight of the area where the community is located.

3.4 Itinerary for the program.

To develop this itinerary, it was taken in consideration three days of capacitating awareness program. The fissionability of the different participants, the mobility conditions in order to arrive to the culinary laboratory and the access to the different resources needed such as: cooking utensils and ingredients.

3.4.1 Itinerary of the program

HOUR	ACTIVITY
10:00	Meeting with the owner of the farm "Rancho Don Dario"
10:30	Transportation to the area where "Comunity el Progreso is located"
11:30	Discussion with the local authority about the issuing of the capacitation
12:00	Lunch: prepared with local products and analyzing the existing habits of a local family of the community
2:00	Undertanding the disposition of the community and try different products that grow in the area
4:00	Travel around the comunity and collect information about their lifestyle, knowledge and culinary practices. Undertanding the productive sector.
5:50	Collecting products for the capacitation and explanation.
	DAY 2
10:00	Meeting with the participants in "La feria de ganaderos" in the adapted culinary laboraty
10:30	Explanaiton of the general awareness program and the different Topics that will be learned.
11:00	Start with a general discussion of personal information and recopilation of the comunity knowledge and understanding of the program.
11:15	CHAPTER 1-Culinary identity: Background tradition and understanding of the local products and utility.
12:00	Lunch Time
13:00	CHAPTER 2-HOUSEHOLE NUTRITION: The importance of cooking healthy meals and serving adequate portions.
13:30	CHAPTER 3- FOOD PLANIFICACION: Understand the meal planification and budget administration.
14:00	Discussion, questions and answers and planification for cooking demostration
	DAY 3
10:00	Preparation of the working space with the required material
11:00	demostration of culinary basic techniques and methods of conservation
12:00	Preparation of a common dish practicing all that has being learned and understood during the awareness program. This allow the creation of an identy dish that represents the zone.
13:00	Degustation of the dish and discussion about the improvement of it and question session
14:00	Conclusion of the awareness program insight, opinions, questions and answers of the different topics and suggestions. Explanation of the measuring process during the following months.

Table 8: Itinerary of the programe

4. Chapter 4. Data Analysis and Discussion

After the application of the program the X=30 housewives were submitted to a measuring process in order to analyze the impact of the Culinary knowledge on their daily life. In this chapter, a chart of main demography characteristics that concern each of the participants are shown as well as a complete questioner of the different effects of the capacitation are shown followed by a discussion about the case and related situations around the world and finally recommendations regarding the process and conclusion of the analysis is explained.

4.1.1 Demographic Input of the focus group

ITEM 1	GENDER	AGE	ETNICITY	LEVEL OF EDUCATION	Occupancy	Household Income per year	Household Characteristics
X1	FEMALE	37	White	primary	Home worker	1\$-3000\$	couple+1-5children
X2	FEMALE	36	Mestizo	Basic Education	Home worker	3500\$-6000\$	couple+5children
X3	FEMALE	44	Mestizo	primary	Home worker	6500\$-10000\$	Couple no children
X4	FEMALE	50	montubia	Primary	Retire	10000\$ <	couple+1-5children
X5	FEMALE	26	mulata	Secondary	Home worker	10000\$ <	couple+1-5children
X6	FEMALE	37	Afro-ecuadorian	Basic Education	Home worker	3500\$-6000\$	couple+1-5children
X7	FEMALE	26	Others	Bachelor's Degree	Home worker	3500\$-6000\$	couple+1-5children
X8	FEMALE	28	Indiginous	Post-baccalaureate degree	part time/home	3500\$-6000\$	couple+1-5children
X9	FEMALE	29	montubia	Superior	Home worker	3500\$-6000\$	couple+1-5children
X10	FEMALE	28	Mestizo	Postgraduate	Home worker	3500\$-6000\$	couple+1-5children
X11	FEMALE	25	Afro-ecuadorian	none	part time/home	3500\$-6000\$	Couple no children
X12	FEMALE	20	Afro-ecuadorian	primary	Home worker	3500\$-6000\$	couple+5children
X13	FEMALE	33	Afro-ecuadorian	secondary	Home worker	3500\$-6000\$	couple+1-5children
X14	FEMALE	21	Indiginous	primary	Home worker	3500\$-6000\$	couple+5children
X15	FEMALE	29	Indiginous	primary	part time/home	6500\$-10000\$	couple+1-5children
X16	FEMALE	37	mulata	secondary	Home worker	6500\$-10000\$	couple+1-5children
X17	FEMALE	29	Others	postgraduate	Home worker	6500\$-10000\$	couple+1-5children
X18	FEMALE	40	White	primary	Home worker	3500\$-6000\$	couple+5children
X19	FEMALE	55	Mestizo	primary	Home worker	6500\$-10000\$	couple+1-5children
X20	FEMALE	32	montubia	primary	part time/home	3500\$-6000\$	couple+1-5children
X21	FEMALE	48	montubia	secondary	part time/home	3500\$-6000\$	couple+1-5children
X22	FEMALE	49	Mestizo	Bachelor's Degree	part time/home	10000\$ <	couple+1-5children
X23	FEMALE	40	Mestizo	Basic Education	Home worker	3500\$-6000\$	couple+1-5children
X24	FEMALE	53	Afro-ecuadorian	secondary	Home worker	3500\$-6000\$	Couple no children
X25	FEMALE	24	mulata	Basic Education	Home worker	1\$-3000\$	couple+1-5children
X26	FEMALE	33	White	Basic Education	Home worker	3500\$-6000\$	couple+1-5children
X27	FEMALE	39	Mestizo	Secondary	Home worker	3500\$-6000\$	Couple no children
X28	FEMALE	47	Indiginous	Bachelor's Degree	Home worker	10000\$ <	couple+5children
X29	FEMALE	45	Indiginous	Secondary	Home worker	3500\$-6000\$	couple+1-5children
X30	FEMALE	31	White	primary	part time/home	3500\$-6000\$	Couple no children

Table 9: Demographic characteristics of the study group

4.2 Data collection and measurement

The purpose of this field is to determine critical values to the focus group and measure performance of the impact program it was taken in consideration the following results indicators. Graphical analysis focused on each of the items have contributed to the explanation of this questions.

Result Indicator

Month	Result Indicator
1rst	1 successfull implemented product
2nd	Community Comitee
	4 weekly reports of observation
	1 Global repost of Behavior
3rd	Community Comitee
	Questionnaire of Impact
	Analisy Report

Table 10: Monthly results Indicators

Since this study has been designed to capture both the impact and perceptions of culinary Education. Two different surveys have been created with that objective: One focused in demographic analysis and the other as a post survey to analyze the short term impact. Also, they give us an overview of the result of the program after the implementation. In short term condition and open a field of study for further research.

4.3 Question Analysis

during the measuring method 10 different Items related to the different sections that were described in the previous chapter were carefully analyzed one by one in order to obtain detailed information about the impact of the program.

Annex e: Questioner

4.3.1 Item 1: New Dish Creation/ Spanish version: Despues de la capacitacion culinaria has inventado un nuevo plato? SI o NO

Table 11: Question 1 analysis

We can perceive that after the capacitation program the majority of the group exposed to the study had applied at least 1 time the utility of new techniques in order to create a new dish. 33.7% of the people have answered NO to the question, in the other hand. 63.33% have answered yes. This shows that the section 1 of the process have been considered. But there is still a reinforcing section to be made in order to make the rest of the group have higher level of initiative.

4.3.2 Item 2: Use of new Product/ Spanish version: ¿Despues de la capacitacion culinaria ha ud. Utilizado un nuevo producto en la preparacion de sus platos?SI o NO

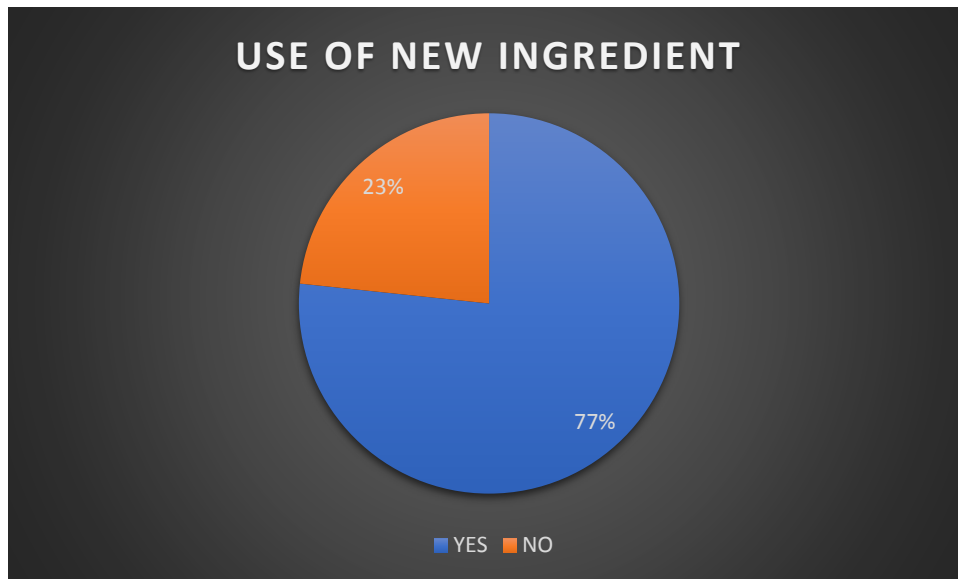


Figure 15: Use of new Ingredient

After the knowledge of section 1 about food identity, in the asked question it can be analyzed that 77% of the people that have assisted to the program have introduced at least one new ingredient into their meal preparation and 23% have not use a new item. This can conclude that there have being an increase on diet variety and knowledge.

4.2.3 Item 3: Number of meals per day cooked at home. Spanish Version: ¿Cuántas comidas cocina al día en su hogar luego de la capacitación culinaria ?

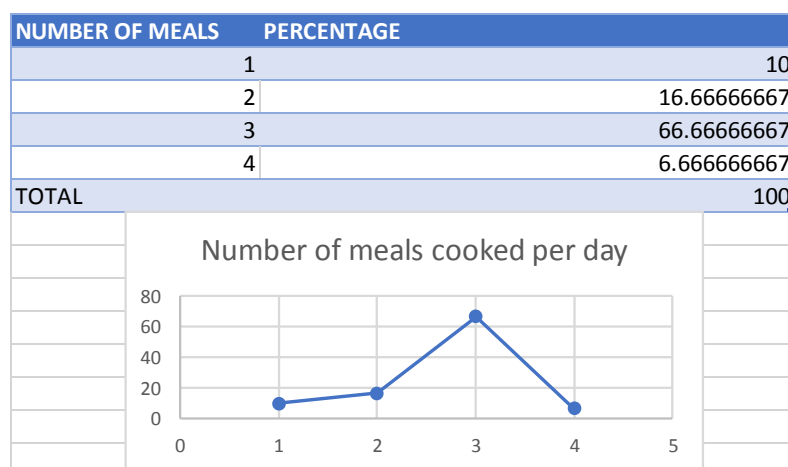


Figure 16: Number of meals cooked per day

In Item 3 we can analyze the number of meals cooked per day. Only 10% of the sample group cooks 1 meal per day this can be due to specified factors such as occupancy or organization. Nevertheless, the majority cook is registered that 66.7% cook 3 meals per day. This can be perceived as a positive sign in the nutritional standards.

4.2.4 Item 4: Dish consistency food group lunch meal

#Food Groups	#of people	% use of vegetables
ALL	20	73.33333333
4	53.33333333	% use of proteins
3	23.33333333	90
2	3.333333333	% use of carbohydrates
1	0	90
TOTAL	100	% use of Dairy
		60
		% use of gains
		76.66666667

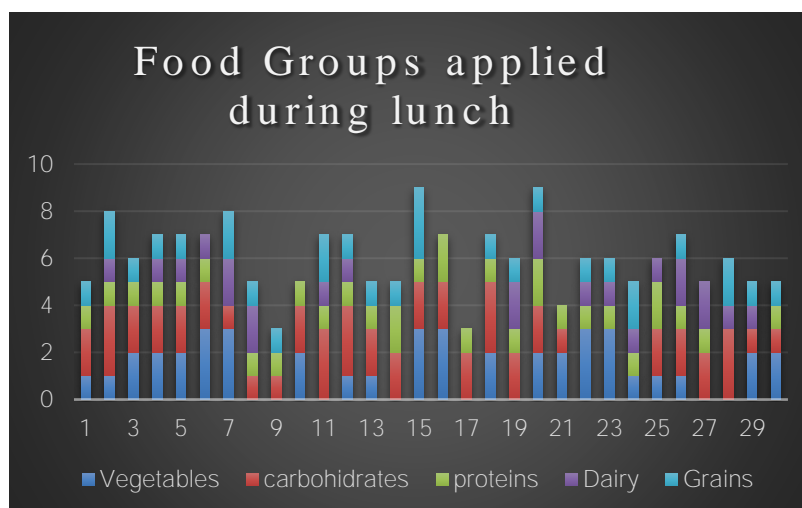


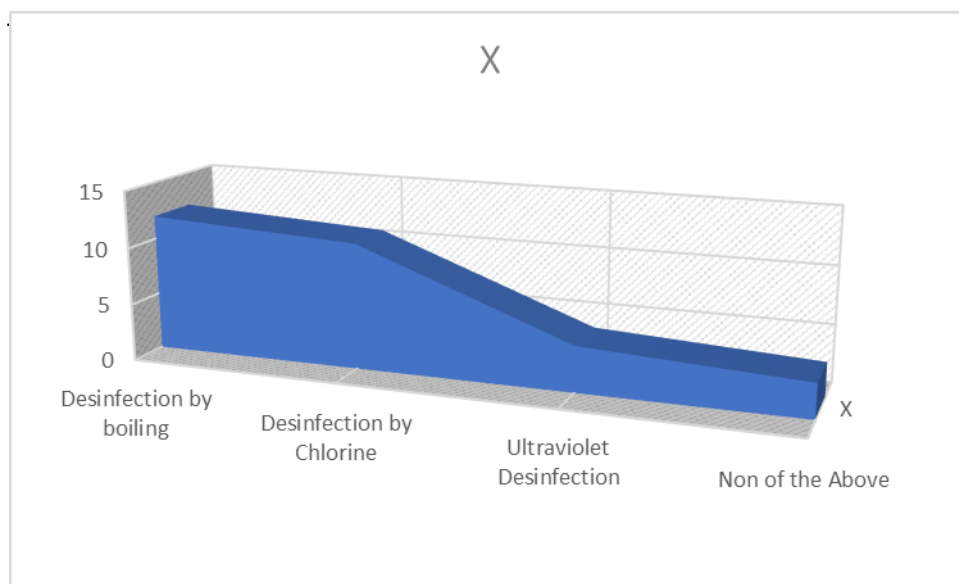
Figure 17: Dish consistency according to Nutritional Pyramid

After the capacitation, it is understood that the majority of the participants have implemented the nutritional knowledge provided in the program, in **figure 17** it can be

seen that there is a varied diet according to the dish consistency and nutrition related with the nutritional pyramid showed in Chapter 2. In addition, it is concluded that most of the participants use at least 53.33% of the food groups required in order to have a balance diet.

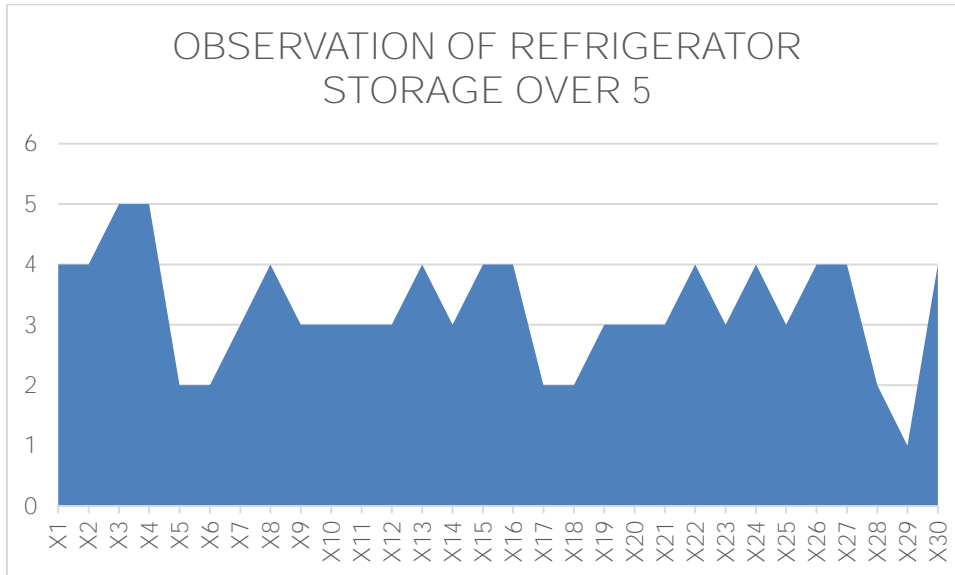
4.2.5 Item 5: water purification method

Purification Method	X
Disinfection by boiling	12
Disinfection by Chlorine	11
Ultraviolet Disinfection	4
None of the Above	3



It has been sourced in chapter I that the area has a lack of basic services, specially water sources, Item 5 describes the impact of the program three months after the study considering the use of water purification method. Putting in the first place disinfection by boiling as the most important and only 3 of the Xs do not use any of the alternatives.

4.2.6 Item 6: observation of refrigerator storage over 5 points



The author has identified in Item 6 that after a concrete measurement of the application of the different sections of the program mentioned in the previous chapter the average grade of the analysis concerning storage has oscillated between 3 or 4 over 5 points. Meaning that the capacitation has contributed overall successfully in most of the cases.

4.2.7 Item 7: food waste analysis pounds per month



Figure 18: Waste management

Item 7 can contribute with the fact that food waste management has been carefully controlled. In the figure 13 it can be seen how the amount of organic waste have progressively decreased during the 4 weeks of measurement. By the analysis of this question we can perceive that measuring an important step in the process can change the behavior of the test.

4.2.8 Item 8: medical visit or disease

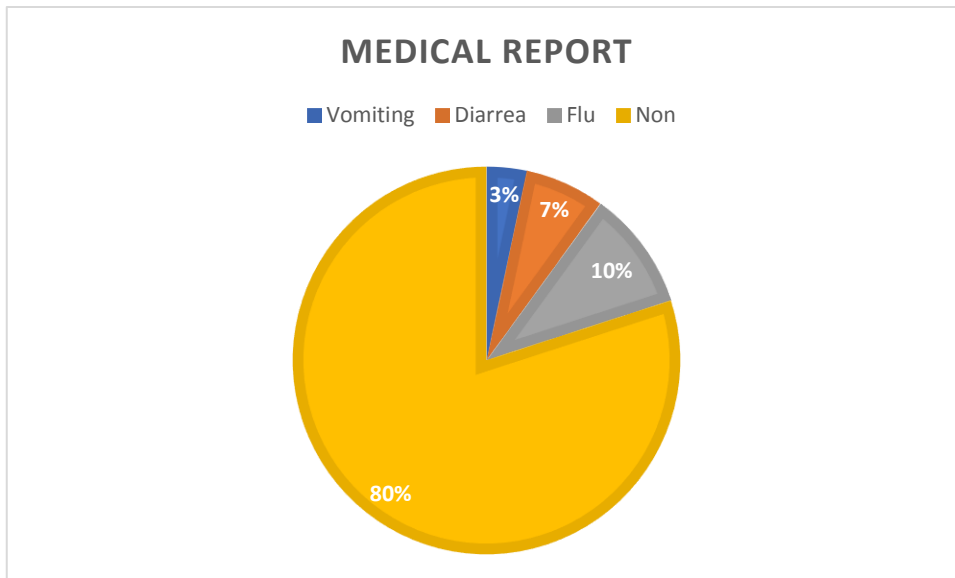


Figure 19: Medical Report

After analyzing the Item 8 it can be conclude that after three months of implementation of the culinary program in the community there has being few cases of infectious diseases caused by cross contamination, wrong food safety, etc. Letting 80% of the focus group out of the effect of common sickness.

4.2.9 Item 9: grocery list

4.2.10 Item 10: food planning chart use

4.2.11 Item 11: use of Pichincha's governments product program

ITEM 9	GROCERY LIST	ITEM 10	FOOD PLANIFICATION CHART USE	ITEM 11	USE OF PICHINCHAS GOVERNMENTS PRODUCT PROGRAM
X4	YES	X3	YES	X1	YES
X5	YES	X4	YES	X2	YES
X6	YES	X5	YES	X3	YES
X9	YES	X6	YES	X4	YES
X10	YES	X7	YES	X5	YES
X11	YES	X12	YES	X7	YES
X12	YES	X14	YES	X8	YES
X16	YES	X16	YES	X10	YES
X20	YES	X17	YES	X11	YES
X21	YES	X20	YES	X13	YES
X23	YES	X21	YES	X14	YES
X27	YES	X22	YES	X15	YES
X28	YES	X23	YES	X17	YES
X29	YES	X25	YES	X20	YES
X30	YES	X26	YES	X21	YES
X1	NO	X27	YES	X22	YES
X2	NO	X30	YES	X23	YES
X3	NO	X1	NO	X24	YES
X7	NO	X2	NO	X26	YES
X8	NO	X8	NO	X28	YES
X13	NO	X9	NO	X29	YES
X14	NO	X10	NO	X30	YES
X15	NO	X11	NO	X1	YES
X17	NO	X13	NO	X6	NO
X18	NO	X15	NO	X9	NO
X19	NO	X18	NO	X12	NO
X22	NO	X19	NO	X16	NO
X24	NO	X24	NO	X18	NO
X25	NO	X28	NO	X19	NO
X26	NO	X29	NO	X25	NO

4.3Dicussion

In order to improve family lifestyle, it is advice to acquire culinary knowledge and conscience about the importance of house meals, and science knowledge such as nutrition, hygiene, food implementation. (Rovner, A. J., Mehta, S. N., Haynie, D. L., Robinson, E. M., Pound, H. J., Butler, D. A., ... & Nansel, T. R. , 2010). Besides, the correct management of resources have a direct result on family's economies by learning how organize and qualify the budget that is dedicated to groceries. (Burney, 2002).

The culinary education and knowledge has had a deep turn around the world with the mundialization and the development of the agri industrial era as well as the way the world consumes food today and the level of importance it is putting into it at the time of preparing dishes. A significant amount of food is wasted every day not only in mass

distribution but mainly in households, this is the result of the lack of culinary knowledge. (Jörissen, 2015).

Governments are more and more worried by the fact that today in the world we can perceive every year many cases of malnutrition causing overweight in the society having as a result the development of important diseases. (Slater, 2013).

Today the world evolves at very fast speed so and communities have forgotten the importance of family nutrition and culinary practices. (Jabs, 2006)

The humanity is trespassing through a hard-economic situation that forces masses to immigrate to the bigger cities in order to subsist, as a result many communities have lost their culinary values and have forgotten their culinary roots. (Hashimoto, 2006).

In Ecuador, there are many factors that have a high impact on the nutrition and wellness of the society such as: inappropriate quantity and quality of meals, low rate income in the household, poor culinary practices and food safety and insalubrious water conditions. (Coordinating Ministry of Social Development, 2008).

In the other hand, Ecuador is an agricultural country that produces big amounts of food it is considered the country with more biodiversity per square meter in the world and exports to the other countries, since agricultural commercialization has important rules for exportation tons of food is wasted in the farms. (Khoury, 2014).

Today many families in Ecuador have malnutrition, this is alarming considering that Ecuador is a productive country and has a lot of food offering to the small population,

also many bacterial infections are detected in the hospitals usually as a result of food contamination spoiled ingredients or contaminated water, in addition many families struggle with economic problems, this is the result of lack of budget administration. this is the result of the lack of knowledge and the lack of care that is given to educate families.

A good way to see a change in all this negative impact is education societies in order to be aware about the importance of culinary education in the household and how its application can significantly impact the lifestyle of families and improve the whole society in all of its aspects. (Gomez-Castellanos, 1990).

To acquire knowledge of the culinary basis specially housewives that are in charge of the administration of goods and food preparation for each of the family member this could have a great impact in the way they live. (Ternier, 2010).

Culinary education can be applied in different ways in the society, for instance, chefs who professionally work with this knowledge can apply these skills to make a business productive and working up to their highest skills in order to satisfy their customers. (Johnson, 2002)

Nevertheless, not only chefs can be able to apply this. The culinary education and nutrition wellness has been applied as part of studies in the school around the world but this type of subjects is still considered as the least important. Currently in Ecuador even though there are many interesting existing products there are few culinary techniques, and for many areas non. As a result, families consume almost the same food every day.

Culinary education can bring many important habits of daily life that impact lifestyle. Such as culinary hygiene and food safety education, this will enrich the family wellness avoiding diseases and food cross contamination nutrition is an important aspect that culinary can rapport to the consumption of different ingredients. Culinary pacification can also help with income budgeting but also avoid food wasting. (Burney, 2002).

The knowledge of food preparation and culinary techniques can be applied in order to develop new dishes and use existing agricultural products to cook in different ways, also in case of massive production conservation techniques can encourage mothers to save products and avoid waste householders to keep products longer, as a result of the application of different food techniques and good habits culinary identity evolves pushing the different families to create new dishes and acquire deep knowledge of the different products that they can use at the time of cooking. (Short, 2003).

4.4 Conclusion

This research has been guided two different surveys. The first one has the objective to understand and measure demographic characteristics and the second aims to obtain the impact of the culinary program in the community taking in consideration the different sections. Seven items have been highlighted which represent the key quality characteristics to take in consideration of each household. The second survey is indeed to

answer the impact of the culinary program among the participants, which involves developing a strong framework to measure the participant intake of the process in short term conditions. The grouping of both have help on the organization and anticipation of the project. The author has contributed with important factors that must be implemented in regular lifestyle and culinary conditions. According to the measurements in the eleven items in survey two it is possible to contribute in the creation of new questions and fields of study, the author opens the path to further investigation and project development specially in the governmental sector considering that the results of the questions show the following positive outcoming: The increase of culinary knowledge and product identification, the implementation of nutritional values in their daily consumption, there has being turning point considering the importance of applying hygiene principals and understanding the food planning have given importance to consumption habits.

According to the different personal interviews the author can perceive the necessity of developing educational programs for emerging societies in Ecuador, the perspectives of the population aim a higher level of understanding and learning new skills in order to improve their life style.

As far as is concerned to the analyzed surveys it can be understood that the questions can be examine deeply and more precisely, in order to achieve more specific data and to deliver more information about the different characteristics that the project can bring to the society.

This research has contributed in order to develop different sectors of the area: the productivity considering the potential of the natural resources, the social adopting better lifestyle conditions and implementing innovative ideas to rich better quotidian standards. A turning point in health center in order to focus on the education of the community. All this can also complement existing projects such as: “National living Plan” held by the government.

To summarize there are important impacts of culinary education as part of the regular knowledge of an individual. It is crucial to have a decent lifestyle. Nevertheless, culinary knowledge is perceived in a professional way, developing communities are key candidate to acquire knowledge and understanding on it in order to improve their lifestyle and wellness. Thus, the community “el progreso” in Pedro Vicente Maldonado can be important part of this enriching capacitation.

After analyzing all the territory and the history of community el Progreso it is possible to conclude that this area has the potential and the need to be part of a Culinary awareness program in order to improve their household lifestyle and community development, this area has an important diversity of products and culture that will allow the improvement of the health of each of the community members, will help them improve their economy and develop a culinary identity for the community.

This awareness program can have a high impact not only in the area of el

Progresso but also for the surrounding communities, by understanding the importance of the Hygiene also the local health department located in Pedro Vicente Maldonado can benefit from this type of program and apply it for surrounding communities.

Acquiring culinary knowledge can influence in the creation of new products that might increase the incomes of the community and develop possible new business.

By knowing Culinary techniques, the community can rapport in the conservation of the environment by conserving products in a better way and avoiding the waste of massive production, knowing how to cook allows the locals to know what to make with the leftover products from the zone.

4.5 Recommendations

During the Awareness program, it is crucial to set standards and organized processes to guarantee the efficiency of the information and attention of the participants, all this information need to be justified with certified studies and data.

Therefore, a complete manual of the different sections need to be given to each of the participants with the objective that each of the students assimilate understand and experience all the capacitation and can repeat it individually and apply it in their lifestyle.

It is recommended to the participants to constantly review the written program in order to adapt simultaneously the different culinary practices and make them part of their daily life.

An important way of measuring the effects of the capacitating program is to have community meeting where discussion about the condition of the members and look up of the Health progress. In the Health center.

The financing of a culinary awareness program can have an important impact in the community, short term and long term, that has a direct improvement of their health, economic situation, might push authorities to implement clean sources of water, and develop new dishes in order to contribute to the identity of the zone and have a new touristic attractiveness.

It is recommended to follow step by step in order to have a better analysis of the program and improve the different insights this will allow not only to improve their skills but will also have an impact externally, motivating other regions and community to prepare their habitants to have better lifestyles, innovate their cuisine, avoid sickness, improve their economy and develop their identity.

It is important to settle Culinary educating programs in order to admit the importance of knowing the food and explore new path of innovation for the different regions of the country.

References

- Secretaría Nacional de Planificación y Desarrollo. (2013-2017).
<http://www.buenvivir.gob.ec/>. Retrieved from Plan Nacional del buen vivir:
<http://documentos.senplades.gob.ec/Plan%20Nacional%20Buen%20Vivir%202013-2017.pdf>
- Ambuludi, F. (2014). *Plan de desarrollo y ordenamiento territorial*. Retrieved from www.pedrovicentemaldonado.gob.ec.
- Apolo, M. E. (2000). *Los mestizos ecuatorianos y las señas de identidad cultural*. Ecuador: Eskeletra Editorial.
- Autonomous Decentralized Municipal Government of Canton Pedro Vicente Maldonado. (2015). Retrieved from <http://www.pedrovicentemaldonado.gob.ec/index.php/mi-canton/territorialidad>
- Burney, J. &. (2002). Burney, J., & Haughton, B. (2002). . *Journal of the American Dietetic Association*, 39-45.
- Coordinating Ministry of Social Development. (2008). *desarrollosocial.gob.ec*. Retrieved from www.desarrollosocial.gob.ec: <http://www.desarrollosocial.gob.ec>
- Coral, C. (2017). *ELABORACIÓN DE UN PRODUCTO AGROTURÍSTICO PARA EL RECINTO "EL PROGRESO" EN PEDRO VICENTE MALDONADO, PROVINCIA DE PICHINCHA*. Quito.
- ENSANUT-ECU. (2012). *National report of health and nutrition*. Quito:
<http://www.ecuadorencifras.gob.ec/salud-salud-reproductiva-y-nutricion/>.
- Ferrin, N. (2017). *Personal report about the territory of Pedro Vicente Maldonado*. El Progreso.
- Ferrin, N. (2017). *Personal Testimony*. El Progreso.
- Ferrin, N. (2017). *Questionary set for the community "El Progreso" General characteristics*. "El Progreso", Pedro Vicente Maldonado.
- Ferrin, N. (2017). *Questionary: Basic needs of the community "El Progreso" in Pedro Vicente Maldonado*. Pedro Vicente Maldonado.
- Ferrin, N. (n.d.). Culinary awareness El Progreso. *Logo Culinary awareness El Progreso*. <https://www.canva.com/design/DACXBRrqiI7g/BNyzC5z0Xah2ypLkOWobUw/edit>, Pedro Vicente Maldonado.
- Ferrin, N. (n.d.). Culinary Lab. *Culinary Lab*.
<http://magnetplanner.2020.net/virtualplanner/UI/Pages/VPUI.htm?Lang=&Debug=No&SkipIntro=Yes&LoadDesign=2a2cf44d2c6549f6a45df8be6e5f3937&IsShareDesign=1&ssotoken=gS+wZYvFLHaZCpUHW1dyuuc8mX4G2FhRq4d8IHxFSd4=&UIContext=MAGNET>, Asociacion de Ganaderos.
- Ferrin, N. (n.d.). *Culinary Panel*. Word.
- Giraldo, D. (2017, March 10). Owner of Rancho Don Dario. (N. Ferrin, Interviewer)
- Gomez-Castellanos, L. &. (1990). Earnings and education in ecuador: evidence from the 1987 household survey. . *Economics of Education Review*, 9(3), 219-227.
- Government of Pichincha Province*. (2015).
- Hashimoto, A. &. (2006). Selling Canadian culinary tourism: Branding the global and the regional product. . *Tourism Geographies*, 8(1), 31-55.
- INEC- Ecuador. (2015). *Inmigration in Pedro Vicente Maldonado*. Quito:
<http://www.ecuadorencifras.gob.ec/institucional/home/>.

- Johnson, L. J. (2002). Chefs' perception of the importance of nutrition in menu planning. *Pakistan Journal of Nutrition*, 1(2), 85-88.
- Jörissen, J. P. (2015). *Food waste generation at household level: results of a survey among employees of two European research centers in Italy and Germany. Sustainability*.
- Khoury, C. K.-V. (2014). Increasing homogeneity in global food supplies and the implications for food security, 111(11), 4001-4006. *Proceedings of the National Academy of Science*.
- Morales, M. (2017, March 15). (N. Ferrin, Interviewer)
- Morales, M. G. (2017, March 9). Responsible of the Library. (N. Ferrin, Interviewer)
- National Assembly Ecuador. (2017). *Ecuador's Constitution book*. Quito, Pichincha, Ecuador : www.asambleanacional.gob.ec/es/leyes-aprobadas.
- National Information System. (2014). *sni.gob.ec*. Retrieved from <http://sni.gob.ec>: <http://sni.gob.ec/web/inicio/descargapdyot>
- Nourishinteractive. (2017). *www.nourishinteractive.com*. Retrieved from [www.nourishinteractive.com](http://www.nourishinteractive.com/kids/healthy-games/24-my-plate-usda-five-food-groups-healthy-messages): <http://www.nourishinteractive.com/kids/healthy-games/24-my-plate-usda-five-food-groups-healthy-messages>
- Onedifference. (2017). Retrieved from [onedifference.org](http://www.onedifference.org): http://www.onedifference.org/en_UK/the-one-foundation/
- Pazos, C. S. (2010). *Permanencias culturales y culinarias del Manual de Cocina de Juan Pablo Sanz en Quito (Ecuador): protocolos, cocina tradicional y formas de preparación*. Quito: Universidad Andina Simon Bolivar.
- Publica, M. d. (2017). *salud.gob.ec*. Retrieved from <http://www.salud.gob.ec>: <http://www.salud.gob.ec/unidad-de-nutricion-guias-y-manuales/>
- Rio Arronte Fundacion. (2012, June). <https://agua.org.mx/biblioteca/purificacion-del-agua-metodo-sodis/>. Retrieved from agua.org.mx: <https://agua.org.mx/biblioteca/purificacion-del-agua-metodo-sodis/>
- Rovner, A. J., Mehta, S. N., Haynie, D. L., Robinson, E. M., Pound, H. J., Butler, D. A., ... & Nansel, T. R. . (2010). Rovner, A. J., Mehta, S. N., Haynie, D. L., Robinson, E. M., Pound, H. J Perceived benefits, barriers, and strategies of family meals among children with type 1 diabetes mellitus and their parents: focus-group . *Journal of the American dietetical Association* .
- Sampieri, R., Fernández, C., & Baptista, M. d. . (2014). *Metodología de la Investigación (Sexta ed.)*. . Mexico City: McGraw Hill Education.
- Short, F. (. (2003). Domestic cooking skills-what are they. . *Journal of the HEIA*, 10(3), 13-22.
- Slater, J. (2013). Is cooking dead? The state of Home Economics Food and Nutrition education in a Canadian province. . *International Journal of Consumer Studies*, 37: 617–624. doi:10.1111/ijcs.12042.
- Ternier, S. (2010). Understanding and measuring cooking skills and knowledge as factors influencing convenience food purchases and consumption. . *Studies by undergraduate researchers at Guelph*, 3(2), 69-76.
- USDA. (2000). *.cnpp.usda.gov*. Retrieved from United States department of agriculture: <https://www.cnpp.usda.gov/Dietary-Guidelines-2000>
- USDA, C. f. (2017). <https://www.cnpp.usda.gov>. Retrieved from [cnpp.usda.gov](https://www.cnpp.usda.gov): https://www.cnpp.usda.gov/sites/default/files/archived_projects/FGPLargeGIF.gif
- Weston, R. O. (2009). *La cocina de los Incas: costumbres gastronómicas y técnicas culinarias*. Universidad San Martín de Porres, Escuela Profesional de Turismo y Hotelería, 2001.

Annexes

Annexe a)



Annexe b)

a)Cuadro 23. Población en el área urbana y rural por sexo – Pedro Vicente Maldonado							
Sexo							
2010 2001							
RURAL		URBANO		RURAL		URBANO	
Población	% Población	Población	% Población	Población	% Población	Población	% Población
Hombre	3982 54,08%	2753 49,51%	3322 55,08%	1977	50,25%		
Mujer	3381 45,92%	2808 50,49%	2709 44,92%	1957	49,75%		
Total	7363 100,00%	5561 100,00%	6031 100,00%	3934	100,00%		
Fuente: Censo INEC 2010							

Annex c)

Nivel de instrucción más alto al que asiste o asistió	TOTAL	%
Ninguno	803	7,13%
Centro de Alfabetización/(EBA)	87	0,77%
Preescolar	141	1,25%
Primario	5071	45,01%
Secundario	2246	19,93%
Educación Básica	1328	11,79%
Bachillerato - Educación Media	726	6,44%
Ciclo Pos-bachillerato	74	0,66%
Superior	572	5,08%
Postgrado	34	0,30%
Se ignora	185	1,64%
Total	11267	100,00%
Fuente: Censo INEC 2010		

Annex d)

Cuadro 32. Cobertura de salud PVM

Cobertura de Salud	
Indicador	Total
Número de camas por 10.000 habitantes	12
Tasa de médicos por 10.000 habitantes	23
Fuente: AEE- GAD PVM	

Fuente: Censo INEC 2010

Cuadro 33. Unidades médicas Cantón PVM

No	Centros de Salud Públicos y Privados	Ubicación
	Nombre	
1	Hospital General	Pedro Vicente Maldonado
2	Centro de Salud IESS	Recinto San Vicente de Andoas
3	Centro de Salud IESS	Recinto La Celica
4	Centro de Salud IESS	Recinto Paraiso Escondido
5	Centro de Salud MSP	Pedro Vicente Maldonado
6	Cruz Roja Ecuatoriana	Pedro Vicente Maldonado
7	Fundación para asistencia médica al Ecuador (*)	Pedro Vicente Maldonado
8	Clinica San Agustín FAME (*)	Pedro Vicente Maldonado
9	Policlínico Jaramillo (*)	Pedro Vicente Maldonado
10	Policlínico Dr. José Quezada (*)	Pedro Vicente Maldonado

Fuente: Subcentro de salud (Departamento de Estadística)

Annex e)

carboh	proteins	Dairy	Grains	ITEM 5	WATER PURIFICATION METHOD	ITEM 6	OBSERVA TION OF REFRIGER	ITEM 7	FOOD WASTE ANALYSIS POUNDS PER MONTH	WEEK1	WEEK 2	WEEK3	WEEK4	ITEM 8	MEDICAL VISIT OR DISEASE
2	1		1	X1	DESINFECTIO	X1	4	X1	11	2	4	2	3	X1	NON
3	1	1		X2	DESINFECTIO	X2	4	X2	10	3	3	2	2	X2	NON
	1		1	X3	DESINFECTIO	X3	5	X3	7	2	2	2	1	X3	NON
2	1	1		X4	DESINFECTIO	X4	5	X4	10	2	4	2	2	X4	NON
2	1	1		X5	ULTRAVIOLET	X5	2	X5	11	3	3	2	3	X5	NON
2	1	1		X6	DESINFECTIO	X6	2	X6	8	3	2	1	2	X6	NON
1		2		X7	NON	X7	3	X7	10	2	5	1	2	X7	NON
1	1	2		X8	DESINFECTIO	X8	4	X8	10	1	6	2	1	X8	NON
1	1		1	X9	DESINFECTIO	X9	3	X9	13	3	5	2	3	X9	FLU
2	1			X10	DESINFECTIO	X10	3	X10	9	2	4	1	2	X10	NON
3	1	1		X11	DESINFECTIO	X11	3	X11	7	2	3	1	1	X11	NON
3	1	1		X12	DESINFECTIO	X12	3	X12	7	2	3	1	1	X12	NON
2	1		1	X13	DESINFECTIO	X13	4	X13	12	4	5	1	2	X13	FLU
2	2		1	X14	DESINFECTIO	X14	3	X14	12	3	4	2	3	X14	NON
2	1		3	X15	DESINFECTIO	X15	4	X15	8	2	2	2	2	X15	NON
2	2			X16	DESINFECTIO	X16	4	X16	12	2	4	3	3	X16	DIARRREA
2	1			X17	ULTRAVIOLET	X17	2	X17	10	3	3	2	2	X17	NON
3	1		1	X18	NON	X18	2	X18	10	3	3	2	2	X18	NON
2	1	2		X19	DESINFECTIO	X19	3	X19	8	2	2	3	1	X19	NON
2	2	2		X20	DESINFECTIO	X20	3	X20	13	2	6	2	3	X20	VOMITING
1	1			X21	DESINFECTIO	X21	3	X21	11	3	4	2	2	X21	NON
	1	1		X22	DESINFECTIO	X22	4	X22	10	2	3	2	3	X22	NON
	1	1		X23	DESINFECTIO	X23	3	X23	10	3	2	3	2	X23	NON
	1	1	2	X24	DESINFECTIO	X24	4	X24	10	3	2	3	2	X24	DIARRREA
2	2	1		X25	DESINFECTIO	X25	3	X25	14	2	4	5	3	X25	FLU
2	1	2		X26	ULTRAVIOLET	X26	4	X26	8	2	2	2	2	X26	NON
2	1	2		X27	NON	X27	4	X27	9	2	3	1	3	X27	NON
3		1		X28	ULTRAVIOLET	X28	2	X28	11	3	4	2	2	X28	NON
1		1		X29	DESINFECTIO	X29	1	X29	10	3	2	3	2	X29	NON
1	1			X30	DESINFECTIO	X30	4	X30	8	3	2	1	2	X30	NON

