



AGEING IN THE 21st CENTURY

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“The great secret that all old people share is that you really haven’t changed in 70 or 80 years. Your body changes, but you don’t change at all”

— Doris Lessing

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1. INTRODUCTION

1.1 WHY THIS TOPIC OF RESEARCH?

Everything started when I was in 1st grade of *Batxillerat*. My high school informed me that I would have to be involved in a project that would be part of my qualifications in this new school stage. This work could be done about any subject, preferably one that could motivate students to investigate and learn some new things.

I consider myself a person who loves to interact with both the youngest and the oldest. That is why I wanted my project to be related with a social issue.

Despite the final decision was hard enough to make, finally the principal subject about my project is ageing in the 21st century. One of the main reasons for my choice is that I think last generations are forgetting about the importance of older people in our society. Young people are not aware of the influence elderly have on them and sometimes tend to despise them.

One of the hypothesis on which my work is based is: Is living longer living better? What I want to know is whether, although clearly our society and new technologies allow us to live longer, they also allow us to improve our quality of life and have a happier life.

My passion for languages since I was little has brought me to do this task in English. I think it is a challenge for me and I want to prove that I can develop and express myself correctly in a non-native language. However, I'm considering a future related to the world of languages. If possible I also will try to go to an English speaking country for a while to learn different ways of life.

1.2. GOALS

My first goal and probably the most important one is discover new things about older people and empathize with them. Also I would like to make some useful research work and acquire new knowledge. For instance, I would like to know how older people live, what their day-to-day life is like, and see if they are happy. After all, it is a stage that

almost everyone is going to experience so we must know if our current society helps older people to have a good a quality of life.

Aside from investigating about the subject, another purpose would be to interact with older people as well as with people who work with them. Thus, I could listen to their point of view, understand them better and reach my own conclusions. It would be very interesting and I could go deeper in the subject in a more personal way.

The fact of developing this project in English is an added point of difficulty, but with it I want to improve my English level. I intend to be more fluent in this foreign language, improve my reading, writing and speaking skills and if possible learn new vocabulary. This has many advantages because as I previously mentioned I know my future will be strongly related with English.

In conclusion I have many expectations in this research work and I will try my best to achieve all my goals.

1.3. HYPOTHESES

Here are my hypotheses:

- Is living longer, living better?
- Does one sex live longer than the other?
- Are we still socially useful after 65?
- The older you get, the lonelier you feel. Myth or reality?

1.4. METHODOLOGY

My work is divided into two parts:

The theoretical part consists in 3 different sections. In the first one I wanted to prove that nowadays humans live more than 50 years ago. When this was done I found the reasons why we live longer now and I mentioned how our longevity is supposed

to be in a near future. The second section is a more biological part inasmuch I am doing the scientific *Batxillerat* and I am really into genetics and biology. So I thought it could be great to increase my knowledge in this area. Finally the third section is about getting to know better older people and their role in society.

The practical part is where I contrast what I have discovered and learnt in the theoretical part with my fieldwork. Through some surveys and interviews I compare the different points of views we have in our current society. Mainly I wanted to know if, in general, people think older people are well integrated in the society nowadays. This is why it is a difficult section to discover via books or Internet and I preferred to draw my own conclusions.

2. KEY CONCEPTS IN THIS RESEARCH

Ageing: Process of growing older that has a biological impact on both physical and psychological levels due to the passage of time.

Old age: Time term as of 65 years of age strongly related with ageing. It is considered as the last stage of life.

Happiness: Positive emotion related with the sense of well-being. It is a state of pleasure or satisfaction normally due to a positive thinking towards life.

Loneliness: Negative emotion that leads to sadness owing to feeling alone. It is normally due to the lack of company.

3. LIFE EXPECTANCY

Over the years we have realized the population is increasing more and more. Each generation has a greater longevity than the previous one and for that reason the older people have been gaining importance in our society. Nowadays, we know much more about the causes of what we usually call life expectancy.

Life expectancy is known as the average period of time a person is supposed to live. This average is determined by different factors such as genetics, physical and psychological conditions, environment or diet.

3.1 LIFE EXPECTANCY IN SPAIN

If we focus on the averages of life expectancy in 2015, we can appreciate that the global population at that time had a life expectancy of 71.4 years from birth. At the same time, if we investigate deeply, we find that Spain is included in the countries with the highest life expectancy at birth with a mean of 80.1 years in men and 85.5 years in women according to World Health Organization (WHO)¹.

Male		Female	
Country	Years	Country	Years
Highest		Highest	
Switzerland	81.3	Japan	86.8
Iceland	81.2	Singapore	86.1
Australia	80.9	Spain	85.5
Sweden	80.7	Republic of Korea	85.5
Israel	80.6	France	85.4
Japan	80.5	Switzerland	85.3
Italy	80.5	Australia	84.8
Canada	80.2	Italy	84.8
Spain	80.1	Israel	84.3
Singapore	80.0	Iceland	84.1

Averages of world life expectancy according to WHO

3.1.1 LIFE EXPECTANCY IN THE PAST (1970) AND NOWADAYS

In 1970 the Spanish population consisted of 34,040,642 citizens. In 2015, instead, the population had already increased to 46,528,966 citizens. So we have to look back at the end of the 20th century to get to know the main reasons why we are living longer. It must be said that at the beginning of the 20th century the highest impact of mortality was due to childhood illnesses especially in the neonatal age. It seems as if this problem has been little by little reduced to the extent that in 1990 infant mortality had declined by more than a half. There were important improvements such as a major

¹ Taken from: http://apps.who.int/iris/bitstream/10665/206498/1/9789241565264_eng.pdf?ua=1

control in the gestation period, new vaccines and injections to improve children's health, preventive measures for parents at the time of taking care of their babies, etc. Altogether, life's length increased a lot.

In 1970 the baby-boom began thanks to an improvement in the losses of the civil war. However, this fact was not one of the main points for living longer. The truth is that if we live more is because we die later. The proof is that in 1970 there were 3,290,672 senior citizens whereas in 2015 the number had risen to 8,831,141.

In 1970 cardiovascular diseases were a vast problem for the population as they caused about 120,898 annual deaths. Between 1989 and 2009 there was a large drop in deaths on account of cardiovascular diseases, mainly in the cerebrovascular ones, causing 117,393 annual deaths in 2015. This meant a huge gain in life expectancy. Specifically, 3.8 years in women and 3.3 years in men. This was such an advance that doctors named it cardiovascular revolution. Some experts say the improvement has been by reason of a better control in arterial hypertension as well as a bettering in medical care and an increased awareness of health prevention. Also the consumption of tobacco, one of the main risk factors, is reducing.

The mortality on account of respiratory ailments could be reduced too and life expectancy increased by 0.5 years for women and 0.6 years for men. Digestive illnesses decreased too and contributed 0.3 and 0.6 years. Once again these facts are thanks to new technologies and medical services that have come out.

From 2006 there has also been a slight decrease in tumors increasing 0.4 years and 0.2 years of life in women and men respectively. Among 1975 and 2000 cancer in Spain not only was elevated but growing. Men's mean was higher than the average of the European Union whereas women were under it. From 2006 the new techniques of early detection, the development of preventive measures and the progress of treatments have been helping a lot to reduce cancer mortality. Nevertheless nowadays is still one of the principal deaths for the population.

Other evidences we should take into consideration is the evolution Spanish people have made entailing nutrition. In the 60s and 70s we could not choose what to eat. Our

diet was limited and consisted in a 57% of vegetables, potatoes and cereals. We did not have either enough proteins or vitamins for example the ones that come from meat



Example of the Mediterranean diet

and fish. At the moment the Mediterranean diet is the most popular in Spain. This diet consists in replacing the ingestion of meats and carbohydrates for vegetables, fruits and monounsaturated fats. Following the Mediterranean diet not only helps to control weight and to increase well-being but also it improves the functionality of some organs such as the kidney and the heart.

This diet has gained importance lately considering that, thanks to it, Spain has a lower mean in cancer mortality with respect to other places.

The climate, oddly enough, is the last crucial factor left. On the one hand, it is related with the previous point. The Mediterranean climate is necessary to cultivate all the plant-based foods and without it we would not have our present resources. Spanish climate allows us to have sufficient rain water for our needs and makes our lives a bit easier. On the other hand, it depends on the environment that our genes work correctly. The climate could determine the way our DNA works.

Furthermore, as I said, at present the Spanish population is in a high position in the global statistics of life expectancy with a mean of 80.1 years in men and 85.5 years in women. What we now consider a high average compared with the previous ones is actually a low mean for what we could truly live. Our genetics in truth allow us to live around 120 or 125 years. By contrast just one Spanish person in every hundred is able to live more than a century.

3.1.2 LIFE EXPECTANCY IN THE FUTURE

Life expectancy has just started to increase. Nowadays our society is trying to find new ways to live longer and stop the aging process. It is for that reason that, in this section, I am explaining what our life length is supposed to be and how science will have improved in the not too distant future.

According to our current science, ageing is irreversible. It is a progressive process we cannot avoid. This is because our genes have the information about our longevity and as I previously said they allow us to live an average of 120 or 125 years maximum. Therefore, the anti-ageing effect is to achieve a good quality of life considering our genes.

Nowadays we know we cannot prevent aging, but life expectancy can greatly increase. Nevertheless, it is difficult to know with precision the mean period of existence we will live in a future.

As it has been demonstrated human's life expectancy is increasingly ameliorating. If this goes on probably we will gradually get closer to those expected 120 years of life. At the moment scientists are focusing on finding a solution that not only makes us live longer, but with better health and quality of life.

According to *Instituto Nacional de Estadística (INE)*, Spain is supposed to achieve an average of approximately 82 years in men and 87 years in women. This would situate Spain in the eleventh position of countries with more life expectancy between 2025 and 2030 with a mean of 84.7 years as reported by the *UN*. In 2050 the average will probably have raised to 87.3 and finally in 2100 we are supposed to live about 93.0 years (90 years for men and 96 for women). Still these predictions are not completely true as it is difficult to know with our present resources.

In the first place scientists are trying to prevent and cure the diseases that cause higher mortality. Meanwhile technology is also renewing and improving rapidly. So, as living longer is one of the main issues concerning our society, most of the research is aimed at this subject.

1. Nutrition:

After many studies, doctors and nutritionists have agreed that feeding is very important to help our organism to work much better. Nowadays we have the food pyramid that shows the adequate proportions we should take from each food and helps us to keep a healthy weight. In fact, weight is very important in order to live longer since it is often the cause of different diseases.



Current food pyramid

Currently we are working on an anti-ageing diet which consists in ingesting specific foods that will considerably help our organism. A clear example would be the relation between diet and a protein called P53. The function of this protein is to be alert if any mutation appears in the cell, detect it and fix it. Certain foods activate this protein, especially those foods containing vitamins C and D, selenium and cruciferae. These nourishments potentiate and manage the division of the cells and therefore prevent possible tumors. This means that a rich diet in plant products can lengthen life expectancy.

As well as the P53 protein, there are many other cases. For instance, our lifestyle can influence genomic instability. With a healthier way of life, some of the defects that occur in cells can be avoided. The methylation process can also be regulated with foods containing choline, trimethyl lysine or folic acid. That is to say, a diet that contains egg yolks, lettuce, lentils, cabbages, broccoli, beets and many others in the right measure.

The intestine and the liver help us to detoxify waste substances and through diet we can also intervene in the cleaning of their filters. The intake of bitter foods help the liver, and alkaline foods, which aid to keep the right pH of the urine, improve kidney's performance.

We could also influence the chromosomes through feeding by activating sirtuin proteins, which help the DNA to be well compacted while we grow old. For this reason

it is recommended to eat foods with turmeric, polyphenols (green tea or fruits such as grapes), resveratrol (red wine, grapes, peanuts, forest fruits...), isoflavones in small doses (soybeans, legumes, flax seeds, clover sprouts, some fruit like oranges...) and isothiocyanate (just like broccoli or cabbage).

We also have to be careful because with the excess of some foods we can get the opposite effect. For instance, some foods could accelerate the shortening of telomeres and thus age faster.

All these can improve our quality of life and even collaborate to make it longer. If we continue working and researching we will be able to make specialized diets for each case and each pathology taking into account the epigenome, the metagenome and the genome. This study, still under development, is called nutrigenomics.

2. Physical activity:

According to the *National Heart, Lung and Blood Institute* (2016) "Physical activity is any body movement that works your muscles and requires more energy than resting"². The mentioned activity is essential because it balances calories consumption by burning calories. Hence, it helps to prevent diseases.

Nowadays the Mediterranean diet is one of the best existent diets but it has been proven that its combination with physical exercise would be much more effective. Although this combination is essential for mental health, at present only 53.5% of the Spaniards engage in some type of physical activity, whether periodically or occasionally. Reports made by the *National Cancer Institute* in United States show that people who exercise regularly live longer than those who do not.



Physical activity helps to live longer at any age

² Taken from: <https://www.nhlbi.nih.gov/health/health-topics/topics/phys>

A recent study called Oslo³ shows that half an hour of exercise six days a week reduces the risk of death from any cause by 40% no matter the duration or the intensity. Furthermore, those who practiced the physical exercise regularly with more intensity could live an average of 5 years more than sedentary people.

To quote Dr. I-Min Lee of Brigham and Women's Hospital (2013) "Every minute of exercise could lengthen your life seven minutes".⁴

3. Cellular reprogramming:

Science is constantly developing and recently some biologists have investigated about a possible intervention to prevent the deterioration of our cells. As we age, our cells, tissues and organs get deteriorated and it has repercussions on our health. It is for that reason that we tend to develop more diseases as we grow old. One of the methods, which is still developing, is called cellular reprogramming. It consists in introducing a combination of four genes called OSKM in the organism. It results the conversion of a specialized cell into a different cell type. This means we could convert a sick cell in a healthy cell.

This process was discovered in 2006 by the Japanese Shinya Yamanaka. Since then, a group of professionals have been experimenting with mice. When Scientists altered the ageing process of mice by changing the epigenome they noticed that mice had a faster healing of the lesions and a clear improvement in the quality of life.



Extraction of mice DNA

In respect of its application in humans, there are scientists who think it is possible to stop ageing in a future. By doing so we could prevent epigenetic changes and even ageing signs such as grey hair or wrinkles.

³ Taken from: <http://bjsm.bmj.com/content/49/11/743>

⁴ Taken from: <http://commonhealth.legacy.wbur.org/2013/03/minutes-exercise-longer-life>

4. CRISPR-Cas9 technology:

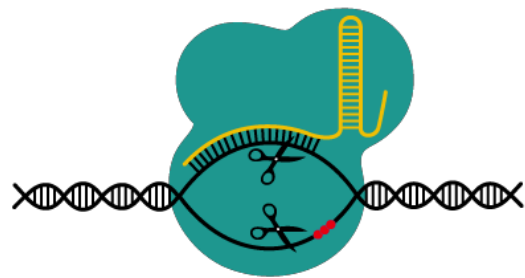
CRISPR technology is a new method which enables genome edition. It is a set of enzymes capable of cutting out any DNA sequence in the genome and making some changes through deleting or inserting new DNA.

The acronym of this invention comes from *Clustered Regularly Interspaced Short Palindromic Repeats*. This name began to be used in 1987 when the bacteria *Streptococcus pyogenes* was discovered by the Japanese Yoshizumi Ishino. This kind of bacteria was able to distinguish its own genetic material from the enemy viruses and therefore it could protect themselves.

In 1993 the Spanish scientist Francisco J. M. Mojica realized some microorganisms have a locus in the genome containing palindromic repeats without a clear function.

These short repetitions are what today is known as CRISPR. However, after each repetition there are short segments called "spacer DNA" originated by a previous virus contact. So the explanation given to virus inactivation was the following: CRISPR

sequences generate an RNA chain linked to Cas proteins. When the virus interacts with this complex, its genetic material gets degraded. Moreover, Cas proteins are able to integrate a portion of the virus DNA (spacer DNA) in the CRISPR sequences. Hence in possible future attacks the bacteria will be prepared.



Representation of CRISPR technology through a drawing

It was not until 2012 when a team of researchers tried to take advantage of this discovery and create a human genomic edition tool. This technology is going to be able to regulate gene expression, prevent and correct any mutations or defects in the gens, modify its function, etc. In a future, this will serve to cure what until now have been incurable diseases. It also will enhance transgenic foods or modify bacteria of industrial use.

5. Metformin

Metformin has been an antidiabetic drug since 1957. Nevertheless, in recent years some pharmaceutical companies have tested their products to discover their possible anti-ageing effect. Metformin was tested with animals and turned out to be one of the products with those characteristics.



Metformin tablets for diabetic people

Metformin was discovered by the Philippine Dr. Eusebio García about 1940. He thought it could treat malaria but it lowered glucose levels instead. Then he realized it could be used as a diabetic drug and in 1957 United Kingdom approved its sale. Later on it spread to other countries such as United States.

At present time the American authorities have endorsed humans testing. The study is called TAME (*Targeting Aging with Metformin*) and will involve 3000 men and women between 65 and 79 years old. It will analyze its preventive effect of diseases and on the longevity.

If metformin works, a 70-year-old person would have 50 years of biological health, what it means that we would be able to live in good condition up to 120 years. It could reduce our chances of falling ill.

4. AGEING: A MORE BIOLOGICAL PERSPECTIVE

At present growing old has become a nightmare for some people. It is for that reason that science is trying to find a way for living longer and also to rejuvenate or at least to age slower than nowadays. In fact, ageing goes beyond of what we currently understand.

4.1 CHRONOLOGICAL *VERSUS* BIOLOGICAL AGE

How many times in our life are we asked for our age? It seems as this question is a crucial factor for our present society. It is clear that, when we are asked for it, we always answer the amount of years we have or, what is the same, the number of laps the Earth has done around the sun since we were born. This figure is called chronological age.

The problem is the sum of the years we have does not really tell us how young or old we are. Furthermore, not everyone grows up in the same conditions. However, our society creates stereotypes and uses this information to categorize people. For instance, the old age are considered as the life stage of illness, deterioration and lack of autonomy and for that reason we have imposed the retirement age as soon as we are 65.

What many people do not know is that we actually have two types of ages. As I previously said, each person becomes older in a different rhythm and the birth date does not influence the biological age. This one consists in the period of time our cells and systems live in relation to the total average. It is the age we are truly regarded and it depends on genetics, lifestyle, the habits a person has, the climate, etc.

Nowadays we have different methods to calculate approximately our biological age. One of the most important discoveries is a genetic analysis made by the London University of King's College. This analysis could predict the likelihood of a person dying or identify high risks for developing dementia, apart from detecting if an organ is useful for a donation or not.

Now there are lots of tests which are supposed to give our biological information. The truth is that science is not ready yet to have reliable results, but probably in a near future we will know the exact age of our cells, tissues and organs. Then doctors could let us know if we have good habits and if it is not the case, we will have an opportunity to change them.

When we take all this information into account, biological age will be determinant for many things. For example, it is probably going to be crucial at the time an insurance company accepts a customer or when an enterprise needs to hire someone.

4.2 HOW DO WE AGE TODAY?

Growing old can be scary for some people after the age of 30 who stare at themselves in the mirror and realize they are a bit different than years or even days ago. What we can distinguish are just some visible signs of ageing but these are due to distinct processes that happened deep inside us.

For instance, intrinsic wrinkles are a usual sign due to passage of time. In fact, the majority of older people you have seen in your life have wrinkles. As time goes by, cell division becomes slower, what prompts a decrease of 1% annual of collagen reducing the firmness of the skin as of merely 20 years old . Furthermore, sweat, body oil and elastin also reduce their amount and quality making the skin thinner and less elastic. This is when we are more likely to have new wrinkles. We should also take into account external factors such as sun exposure, environmental pollutants and daily habits which help in the onset of stains and wrinkles on the skin.



Older person with signs due to the passage of time

Concerning gray hairs, which everyone associates with older people, they are actually a mistake produced during the hair pigmentation. More precisely, hydrogen peroxide is the perpetrator that prevents the production of melanin and, therefore, of such

error. So even though we grow older our hair will probably continue growing without any color.

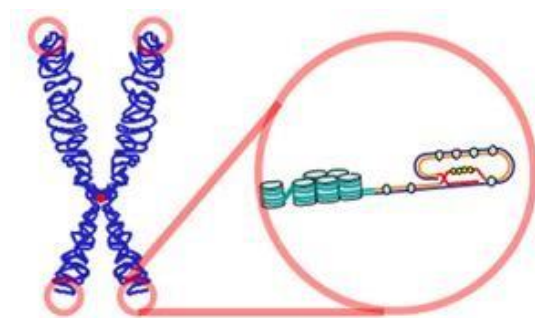
These characteristics previously mentioned are only aesthetic. Although they may seem an important issue as we age, they are not really that much relevant. If we start inquiring the ageing process from a biological point of view, we will discover why we are progressively losing our skills.

Why and how do we age? We find there are plenty of theories answering this question. Over the years, several scientists have exposed their own assumptions. Most of which are valid as nowadays it is considered that ageing is a multifactorial process. However, we are not sure about the exact explanation for ageing.

It is necessary to remember cells are really important for the functioning of our body. Therefore, in order to know how humans age, we have to investigate about their declining. In this section we will deal deeply about the four cellular causes by which we age.

Firstly, we refer to genomic instability when an accumulation of defects appears in our genes because the functionality of adult stem cells decreases over the years. What we mean by defect are some mutations that occur in the DNA due to various factors to which the DNA is exposed or they simply appear spontaneously. The defects emerge in an adult stem cell and when it replicates passes these defects to the next cell. Thus, finally they will be in the whole organism.

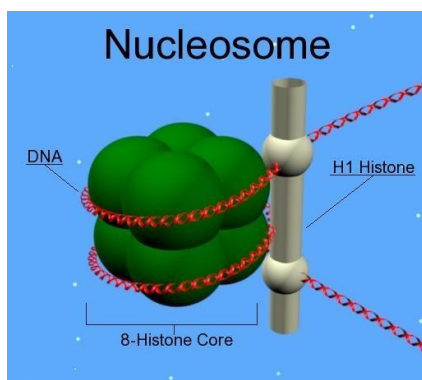
Secondly, we go through the telomere shortening. Telomeres are the ends of the chromosomes and their function consists on protecting them. The problem is every time a cell replicates they get shorter. Hence, the more we live, the shorter the telomeres will be. In fact, cells come to an end when the telomeres can no longer replicate as chromosomes would be unprotected. When this happens it is called state of senescence.



Chromosome with its telomeres

In the third place, epigenetic alterations are also one of the main agents of greying. The epigenome is the connection of all the epigenetic marks. These marks enable cells to express genes at the right moment and quantity. Accordingly, what the epigenome does is to allow a correct functioning of our organism making for example that our cells acquire different functions. This is possible because the epigenome facilitates the expression of only the necessary genes in each cell without altering the DNA structure. To put this in perspective, I would say the epigenome is the head of the genome since it has chemical compounds that permit to regulate and modify the activity of its genes basically taking its control.

Over the years some epigenetic alterations come out. These alterations occur in several situations. One of them is in the methylation process where a good organization in the methyl groups is a key factor to regulate the genes, either by turning them on or off. With the passing of years, this process gets deteriorated because some methyl groups get lost or appear with no reason and some changes in DNA methylation patterns usually happen. This provokes that some genes get silenced or activated when they are not supposed. This can explain some progressive changes in our organism as pulse or blood pressure.



Histones compacting DNA

Another situation is when alterations occur in histone proteins. Each cell has a DNA of 2 meters in length which is wound around histones. These histones compact DNA within the chromosomes but sometimes as we age they suffer alterations and DNA coils worse. These alterations affect to its degree of compaction as well as they make more space for proteins related to gene expression to bind DNA causing new mutations.

The fourth and last cellular cause of ageing is the theory of accumulation of waste products. This theory explains that cells accumulate more toxins than what they can remove. With the passing of years, a pigment of old age called lipofuscin is formed. This matter accumulates in cells which cannot be regenerated such as neurons and as we get older causes their deterioration.

Some scientists suggest there is another cellular cause that explains why we grow old. This theory is called free radical theory. Our body is composed by atoms with electrons gravitating around them. If these electrons leave their orbit they become free radicals. This uncoupling can be due to the consumption of oxygen, the stress or the exposure to environmental toxic products. These scientists account this situation could be harmful for our organism since a chain reaction occurs jeopardizing cells, tissues and even organs.

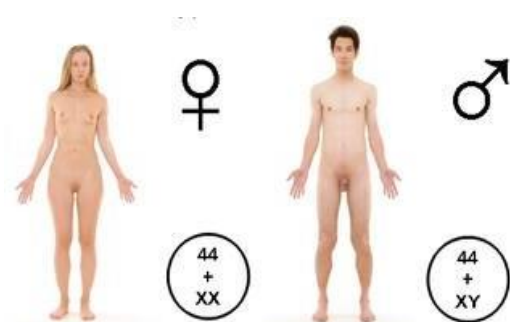
This theory though is a debate between doctors and scientists. While some of them believe it is a crucial fact in ageing, others deny it. In fact, nowadays they have conducted some research and free radicals could do just the opposite, slow down ageing.

All these theories among others try to explain why with the course of time we lose little by little our faculties. However, although there are many of them, we do not know the exact reason why we age. This issue has been a mystery for many years since humans have been looking for its cure from the beginning of time.

4.3 DOES ONE SEX LIVE LONGER THAN THE OTHER?

In a previous section we have seen the averages of life expectancy at different times and different places. All those averages have something in common: women have a higher longevity than men. The difference between the means is remarkable but which is the reason of such imbalance?

The gender is determined by the chromosomes X and Y. Women have two chromosomes X whereas men have a chromosome X and a chromosome Y. Here we have the first reason why women live longer. Having two chromosome X means women have the double of copies of each gen. That is to say that if one starts working



Sex determination in humans

badly they still have the other. Men do not have this advantage and that is why they often experience more illnesses.

This fact it is not the only one of which chromosomes are responsible. It has been proved that women have a better immune system and that is why the immune system depends on the X chromosome. Having a better immune system increases the number of antibodies and hence women are less affected by viruses and bacteria.

Up to now, men have always been in general taller than women. This implies they have more cells than women and therefore they have more probabilities to have mutations or defects in cells.

Another evidence the statistics show is that men usually develop cardiovascular diseases earlier than women. As we have seen, these diseases are nowadays the major cause of death for both sexes. However, the distinction between them is that men are likely to develop this kind of disease from the age of 30 or 40. Women instead tend to develop it a mean of 10 years later. The biological explanations suggest it is probably because thanks to the menstruation women have higher levels of estrogen. That means these hormones keep arteries stronger and more flexible. Estrogens have other functions which benefit women too. On one hand, they act as antioxidants against free radicals and, on the other hand, they activate an enzyme called telomerase which protects the telomeres. After the menopause, their level of estrogens decreases and it is when they have more probabilities of developing a disease.

An agent perhaps not so important is that normally women take more care of their health than men. Men tend to not be concerned about going to medical revisions so it is more difficult to detect if they have any disease before its most notable symptoms appear.

To conclude, the answer of “Does one sex live more than the other?” is definitely yes. In this section I have mentioned some of the reasons of this difference of longevity between sexes but probably there are many others yet to be discovered. What we do not know yet is if this inequality will be solved in a near future. Nevertheless, we are supposed to live the same because we have the same information in our genes.

5. THE IMPORTANCE OF OLDER PEOPLE

5.1 WHAT DOES “OLD AGE” MEAN?

When we speak about old age we refer to the last decades of human life when we are approaching the mean age a human being is supposed to end their life. At this stage our body tends to get deteriorated and that causes physical, cognitive, emotional and social changes.

This vital cycle of life does not have a specific starting age, since each person ages in a different way. Its beginning depends on health and the attitude we decide to take. However, in following sections, we will remark that society has imposed the age of 65 as the start of old age due to labor policy reasons. The completion for old age is obviously death.

5.2 RETIREMENT

Retiring is stop from working in exchange for a pension during the rest of our lives. The most common type of retirement is called ordinary and it is applied when a person arrives at the age defined by the law. In most countries, the retirement age is around the age of 65.

Retirement is a right regulated by the Social Security of each country. However it is the State that offers income for retired people until their death. These funds that the State has to pay retirees come from active workers. That is because a portion of their salary is discounted in order to be used for pensions.

The end of working life is a relief for some people, but for others it may be the beginning of a difficult stage, where they do not feel useful or valued any more. In fact, everyone experiences retirement in a different way. It depends on the satisfaction and the labor involvement each one has. Retirement leaves a vacuum in some people since they do not set new objectives and they lose their interests. However, it can be a release for others and they take advantage of it doing things that they could not do for lack of time before.

A retired person is subject to a change of role. Each worker has a specific function in society but when this stage of life ends, older people will have to find their own role.

5.3 SOCIETY TOWARDS OLDER PEOPLE

As our life expectancy increases, the number of older people is also getting bigger. Spain is one of the countries with the major number of older people in the world and, in fact, by 2020 it is predicted that they will represent 25% of the population.

Still bearing in mind the importance older people has in our society, people's perspective on them tends to be negative and globalized.

5.3.1 STEREOTYPES

The word stereotype comes from Greek. *Stereos* means 'solid', and *typosis* is translated as 'impression'. Therefore, a stereotype is a common idea or thought of a social group applied to a group of individuals. Age-related stereotypes usually inform us about the personality or the role of a specific life stage. In the case of older people, they are often misleading and negative.

What people usually relate to older people is that they are dependent, they have illnesses and fragility, they are alone and isolated, they have memory problems and they are not able to adapt to changes.

We tend to think that older people are equal and we could not be further from reality. Most elderly people remain autonomous and live with a partner or alone. In fact, the 89.8% of older people have an owned property according to a survey done by the *Instituto Nacional Estadística (2014)*.

While it is true that memory problems are aggravated by age, society is in some way responsible for that. If we stimulate in a correct way older people making them feel useful their skills would stay much better.

As far as they do not adapt to changes or they are always bad-tempered is very subjective. Each person has a different personality and it does not change by the fact of being over 65.

Another common error in society I will have to deny is that older people do not contribute to society and are not productive.

5.3.2 OLDER PEOPLE'S ROLE



Old man helping younger generations

Third age is considered as the age of the experience. Older people have been gaining wisdom and knowledge during all their lives and therefore can guide younger generations. However, some older people feel socially excluded, since society does not count on them when it comes to making decisions. Society believes they are outdated and that they do not understand current problems.

Retiring can make us feel as if we could not contribute to society and that nobody needs us. That is why many times older people get isolated and end up in depression. No one likes to feel useless.

Older people can feel part of society by doing leisure activities such as walking, doing physical activity, going to memory lessons, reading or even caring for grandchildren. In addition, they can help younger generations by providing advice, orientation, knowledge, etc.

A growing number of older people decide to contribute society by doing activities such as directing any type of education cycle, participating in associations for older people,



Older people as volunteers

becoming a volunteer in organizations or hospitals and even contributing by making tourism. Everyone chooses their own way for continuing being an active member in society.

Nowadays the population is afraid of ageing. That is why science is getting closer in the solution to reverse or delay ageing. We should consider that this is, in part, due to the stereotypes society has created and imposes upon us. We do not want to age since we think everything is going to be bad.

5.4 PUBLIC SOCIAL SERVICES FOR OLDER PEOPLE IN SPAIN

Social services were created by the State. This kind of services must be public in countries with a democratic state since it is necessary to achieve social welfare. There are many older people who at some point in their life decide to make use of social services. These services are very varied and are intended exclusively for older people. There are services provided to entertain people who are bored after their retirement, activities that help them to preserve their faculties (memory classes, gymnastics...) or even social health care for those who can no longer be independent. Therefore, depending on each one's needs they will use one service or another.

The objective of these services is encourage the integration of some groups of people in the society as well as solve their social difficulties and improve their quality of live.

5.4.1 RESIDENTIAL HOMES

Residential homes are an alternative accommodation for those pensioners who cannot live longer on their own. Their stay can be either temporary or permanent. However, the objective of the residential home is help older people with their difficulties trying to maintain as much as possible their autonomy.

Within what is the accommodation of the residential home they have services such as rehabilitation, social and psychological care, a surveillance of the state of health, personal care (cleaning, washing of clothes, chiropody etc.) and activities to entertain them.

Residential homes can be either public or private centers. The public ones are part of the protective action of the Social Security system whereas they have a longer list of access requirements. For instance, for becoming a user of the public residential home they have to be registered in the municipality where the residence is located in the previous two years.

5.4.2 ADULT DAY-CARE SERVICES

Adult day-care services are a daily accommodation system which offers assistance and supervision to older people from 65 years. It is a place where older people can spend their time during the day doing activities and then they can go home to sleep. It is usually compared with a school but for old people. Normally their schedule is from 9:00 a.m. to 7:00 p.m. as a working time.



Oldermen playing cards in an adult day-care center

It is an option really recommended for older people who start becoming dependent because in the adult day-care service they are treated by a team of professionals. Nevertheless they can also spend time home interacting with their nearby environment. This way they do not feel as a completely dependent person.

5.4.3 HOME ASSISTANCE

Home assistance helps to extend and facilitate the accommodation of older people in their own domiciles. There are three types of home assistance that are usually combined:

1. Personal assistance: people who use this kind of service need help to accomplish their everyday routine. That is to say, personal care, hygiene, nutrition, medication intake...
2. Household chores assistance: The auxiliary offers relief in household chores as well as maintains a revision of domestic appliances.
3. Psychological and social support: It is allocated for those who feel alone or isolated. The assistant makes company and helps the older person in the daily comings and goings outside their home. Older people are also aided in the accomplishment of administrative and sanitary procedures.

Auxiliaries perform a wide range of services with the objective of improving older people's quality of life, without depriving the autonomy and safety of the people they are caring for.

City councils are responsible for the allocation and evaluation of those public home assistance services.

5.4.4 IMSERSON TRIPS

This service provides older people low-priced group travels to tourist sites. To be able to travel with the Imsero they must be pensioners over 55 years. These should charge the pension either because of their retirement, widowhood or other reasons.

Imsero trips consist in a round trip and an accommodation with full board. The hotels are selected by Imsero and bedrooms must be shared. Furthermore, a healthcare policy is included in the trip as well as the hotel medical service.

The access to the possibility of the Imsero trips is through a filling of an online application. Older people who fulfill the requirements just have to wait to see if they have been selected or if they are in the waiting list. The characteristics that are taken

into account at the time of the selection are the age, the amount of the pension and their previous trips.

Imsero trips are a service intended to older people's entertainment. They enjoy the trip at the same time they are improving their quality of life, their health and they prevent the dependence.

5.5 HAPPINESS AND LONELINESS IN OLDER PEOPLE

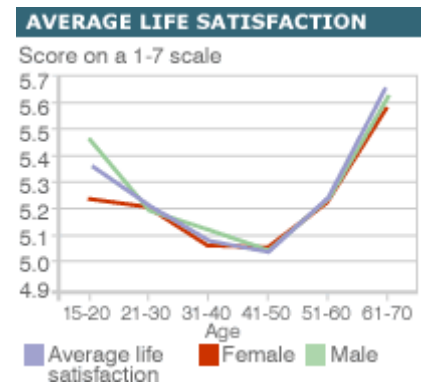
Sometimes stereotypes do not let us appreciate the advantages of old age. While it is true that this stage of life has many disadvantages, it also has some advantages. Society, especially young people, usually sees only diseases, decrease of cognitive abilities, loss of social status and loneliness when they think about old age. Thus, that is probably why we fear old age.

Although it can sound strange as we grow up our mood, our sense of well-being and the capacity of control stress keep improving. This means we have emotional benefits and normally happiness gets involved. This may seem a bit contradictory because, if we age, our faculties are reduced and that is why we tend to relate it to depression. However, the vast majority of older people are happy.

Lot of research has been done to find the reason of this fact. Nevertheless, no exact explanations have been found. One theory suggests that as we age we learn to appreciate small details of life. We realize our life is limited and has an expiration date. Experience helps us to identify big matters of life.

Researches as the one done by *Sam and Rose Stain Institute for Research on Aging (SIRA)* in San Diego (California) show that young people are more stressed than people in old age. The investigation consisted in several studies. One of them consisted in more than 1,500 San Diego residents who were between 21 and 99 years old. They should answer questions about their levels of worry, stress and anger and the results were clear. All of the final graphics showed a constant decrease. That is to say that younger generations felt more pressure on them.

Happiness can be described as a parabolic graph. Usually childhood and old age are the stages of life when we are happier and that is because we are more optimistic. Happiness is strongly related with optimism. Older people tend to see the positive part of live although we think is just the opposite. The other part of San Diego's study consisted on 500 volunteers aged between 60 and 98 years, who lived independently and who had suffered from various diseases, such as



Happiness parabolic graph

cancer, heart failure, diabetes, mental problems or other types of illnesses. The surprising fact was that the most optimistic people did not always coincide with those who had better health. Therefore, happiness depends once more on your attitude.

Older people, in fact, can adapt better to life due to their cognitive and emotional strategies. So at this point we are refuting again one of the established stereotypes. Even if we say the vast majority of older people are happy we have to take into account that happiness also depends in the circumstances and each one's quality of life.

In old age happiness can coexist at the same time with sadness or loneliness. But as older people accept better sadness, they are more confident and manage it better.

Although happiness is really common between older people, loneliness is even more common. According to the statistics done by the UK almost three-quarters of the older people feel lonely. Nevertheless, not only the elders that live in residential homes are the ones who feel alone. People who live on their own or even the ones that coexist with their partner accept they also feel lonely sometimes. This is because it is not the same being lonely than feeling lonely.

You can feel lonely by several reasons. For instance, feeling weak or useless, having a labour vacuum, experiencing the deaths of the partner or friends, or spending time without speaking to a friend, neighbour or family member (isolation).

It is usually said that the older you get the lonelier you feel. This sentence is true but sometimes we get confuse about its meaning. The fact of being lonely is usually

misunderstood and mixed with depression. Not everyone that feels lonely has to stay depressed. Hence, older people tend to feel alone because they have completely changed their perspective about life: They have different goals, different role in society and most of them have experienced the loss of close people.

6. AGEING: FACTS, FIGURES, CHALLENGES AND RESPONSES

After having finished the theoretical part I decided to do some fieldwork. Through different resources I would be able to affirm or deny my hypotheses and, in addition, give more information.

This section tries to see the different opinions that exist in the current society regarding older people. It is for this reason that the following interviews and surveys are aimed at people of different stages in life.

6.1. INTERVIEWS

The main objectives of these interviews are:

- Learning more in depth about the subject that I am studying. As my work is closely related to how much we care about older people nowadays, I wanted to talk to someone who have worked with them so he or she could tell me about his/her own experience and opinions.
- Verifying or denying some of my hypotheses. My main hypothesis is: Is living longer, living better?. To prove it I wanted to interview somebody over 100 years. This way I could learn from his/her day-to-day and see if he or she is happy or not.

6.1.1. ENTREVISTA AMB DANI MANCHEÑO, ANIMADOR A LA CLÍNICA SOCIO SANITÀRIA DE MOLINS DE REI

El Dani Mancheño és un noi de 23 anys. Va estar treballant a la clínica socio sanitària de Molins de Rei com animador durant 3 anys. El Dani considera que va ser una experiència nova i molt recomanable. Gràcies a aquesta feina afirma que se n'ha adonat de la importància de la gent gran:

A: Quin és el perfil de gent que viu a la residència?

D: És un perfil de gent gran entre uns 60 i 100 anys per dir-ho d'alguna manera, 100 pot ser no diria tants, però més o menys. Són gent que o bé la família no pot cuidar d'ells i estan en un estat bastant crític per poder viure sols a casa, o bé perquè necessiten atencions més específiques o més centrades.

Hi ha de tot, hi ha gent molt espavilada i molt divertida, que li agrada la conya, o hi ha gent que està bastant amargada, molt enfonsada o altre gent que està futuda i morirà en breus. Hi ha una mica de tot, no es pot especificar massa.

A: Com és la vida a la residència?

D: Doncs mira, es lleven a les... depèn. Clar, per exemple, a la planta on jo estava hi havia 50 places i hi han 4 o 5 auxiliars, depenent del torn. Aleshores van llevant, potser els primers es lleven a les 9 o a les 8 i els últims a les 10 o a les 11. Clar, ha passat una estona de 8 a 11 i inclús hi ha alguns que es queden al llit perquè no els poden llevar. Després esmorzen sobre les 10 o les 11, quan es lleven. Normalment, a mesura que es lleven esmorza cadascú. Estan una estona per allà mirant la tele o per exemple, a la planta que jo estava no hi havia activitats pel matí, però a la de dalt sí que n'hi havia. Doncs això, fan activitats o el que sigui, dinen i a la tarda tornen a fer activitats o fan la mig diada... Més o menys es bastant lliure, poden fer el que vulguin, no obligues a ningú a fer res, si volen fan la migdiada i sinó doncs no. Si es poden estirar i aixecar sols sí que la poden fer, si els has de posar tu i tal s'hauria de valorar el cas. Total, tornen a fer activitats, van a sopar sobre les 7 o 8 i finalment a dormir. No tothom fa activitats, com he dit les fa qui vol, i no tots els centres fan tantes activitats, potser fan una hora, dos hores, tot el dia...depèn. Més o menys és així la vida.

A: Els que hi viuen acostumen a tenir moltes visites de familiars o amics? Se senten sols?

D: Hi ha de tot, la veritat. Hi ha gent que les famílies la venen a veure cada dia i hi ha gent que no venen mai. Així que sí, hi ha gent que se sent molt sola i és dur que vingui una dona i que et digui " El meu fill fa una setmana o un mes que no em ve a veure" o

“ la meva família m’ha deixat aquí aparcada i ara no em venen a veure, només volen els calers...”, no ho sé, francament hi ha de tot. Però jo me’n recordo d’una senyora que tenia 7 o 8 fills i tenia cada dia, matí i tarda, algun dels fills allà amb ella, s’anaven alternant, i cada dia ,matí i tarda. Però clar no sempre és possible això.

Jo crec que en general sí que se senten sols, perquè encara que vingui un familiar una estona se senten tancats, però això depèn. No m’atreuria a dir la majoria perquè allà també hi ha molt bon rotllo amb les infermeres, els auxiliars...és com molt familiar també, però sí que hi ha moments en que se senten molt sols i una gran part segur.

A: La gent gran, està integrada a la societat o els hem deixat de banda?

D: Els hem deixat de banda, totalment. Arriba un punt que si no et vals per tu mateix ja no serveixes per a res i t’aparquen allà. Avui en dia és molt difícil per a una família cuidar a un avi. Per exemple, abans sí que les dones no treballaven i cuidaven més de les persones grans, igual que es cuiden els nens, es cuidaven els grans. Ara que treballa tant el pare com la mare, l’home com la dona, és difícil fer-se càrrec d’una persona durant tot el dia. És lògic que estiguin a les residències perquè una família no se’n pot fer càrrec. Per això jo considero que els hem deixat de banda, els que estan a residències estan apartats i surten poc, no fan res. Totes aquelles coses quotidianes que ells feien ja no les fan.

A: Quin paper creus que té la gent gran avui en dia?

D: El paper de la pena. És veritat, sempre escoltem “Ai pobret em fa pena”, “Ai pobret està allà tancat”, “Ai pobret està sol o sola, em fa pena”... Jo crec que ara aquest és el seu paper, però clar, jo no ho penso això. Jo diria que les persones grans són, per dir-ho d’alguna manera, els nostres creadors i els hi devem tot a ells. No els podem deixar allà aparcats, i si ho fem almenys que sigui en un bon lloc, en bones mans i on tu sàpigues que estarà bé.

Haurien de tenir un paper molt més important del que tenen. Com a mínim ens hauríem d’en recordar més, jo inclòs, del nostres avis i avies. Hauríem de tenir més consciència

d'ells ja que al cap i a la fi, hi haurà un punt en que ja no estaran. Jo, personalment, he après molt de la gent gran i és una llàstima que els estiguem apartant.

A: És possible ser feliç a certa edat i viure en una residència?

D: Sí, i tant que és possible. Hi ha gent que és feliç perquè ho assimila i ja sap per el que està allà i pot arribar a ser feliç. Jo crec que això és com a tot arreu, no? També hi haurà gent més jove que viu amb la família i no serà feliç o sí que ho serà. Depèn molt a on estiguis i com et prenguis tu la vida. És veritat que hi ha molta gent gran que es pren la vida amb ganes i d'altres que arriben a un punt que s'amarguen a sí mateixos, són molt negatius. Per tant, depèn molt de la persona i del entorn que tingui.

A: Què fa feliç a la gent gran?

D: La família, la seva família. Que els vagin a veure, que facin coses amb ells, que surtin un diumenge i se'n vagin d'excursió, que els portin a dinar fora, etc. Si està a una residència que el treguin , que el vagin a buscar, que el treguin a passejar, a passar el dia fora... això és el que els fa feliços. I jo això ho dic basant-me en tot el que em deien, ells m'ho explicaven i els encanta.

A: Quina seria la teva funció a la residència?

D: La meva funció com a animador era, com diu el nom, animar una mica el que és la planta. Dintre de la meva funció d'animador tenia moltes funcions com per exemple buscar coses que els entretinguin o que els hi siguin útils per les malalties que tenen. Tenen artrosis? Doncs buscava coses on havien de moure les mans. Que tenen Alzheimer? Buscava jocs o activitats que els hi puguin anar bé per a la memòria. També una de les coses que havia de fer i que a mi m'encantava era xerrar amb ells, seure'ns i que m'expliquessin coses, que m'expliquessin la seva vida. Jo els preguntava coses i a ells els hi encanta que els escoltis, xerrar, explicar-te la seva vida...és una passada. Per tant, el meu paper era aquest, amenitzar una mica la seva estada allà i que passessin una tarda més divertida, més entretinguda i que no se'ls hi fes tant pesat.

A: Què és el que més t'agrada de treballar a una residència?

D: Els petits moments de bogeria que tenen alguns usuaris o pacients perquè ens reiem moltíssim. En alguns moments els vols matar però en altres moments et diuen alguna broma, una tonteria o algun comentari i et reies. Són aquests petits detalls en que no t'ho esperes i espontàniament tots estem rient. Això és molt gratificant. Jo he treballat amb nens i amb gent gran i la gent gran és molt més agraïda que els nens. Et donen les gràcies per qualsevol cosa. De fet, quan vaig marxar em van fer de tot.

A: Que t'emportes de la teva feina a la residència?

D: Jo crec que el primer que m'emporto de la residència és en part haver-me familiaritzat amb la mort perquè pacients que tenia a les animacions de sobte desapareixien. El primer cas va ser quan vaig arribar un dilluns i vaig preguntar per una dona que es deia Benita a la que m'estimava molt i de sobte em salta un i em diu "Benita ha muerto, Benita murió el sábado" i jo em vaig quedar molt impactat. Llavors el següent cop també vaig veure que se'n duïen a una persona que ja havia mort i és una cosa que impacta però que alhora et fa fort, et fa familiaritzar-te amb això. Arriba un punt en que sí que t'afecta però ja no tant, això és una de les coses que me'n porto, he après a viure amb això. Jo he estat 3 anys i clar, en 3 anys s'han mort bastants dels que tenia, i a vegades si que veus que moriran d'aquí a res i d'altres cops és d'un dia per l'altre.

Altres coses que me'n porto és que jo no coneixia el col·lectiu de la gent gran i creia que se'm faria molt difícil treballar amb ells i que va, ha sigut súper divertit. Clar, jo ho comparo molt amb els nens que és amb el que més he treballat i, al ser adults, ja pots fer bromes diferents i jocs més d'adults. Jo com que sóc molt de broma i de molestar, a ells els hi encantava, em tenien com el seu nen. Jo feia el *tonto* i a ells els hi agradava i em seguien el joc i s'ho passaven molt bé.

En conclusió jo crec que la gent gran no es mereix estar aparcada en una residència i es mereix molt més. Anar-los a veure, estar amb ells, fer-los riure i aprofitar i fer que gaudeixin el que els hi queda. Hem de potenciar els casals, els centres de dia per la

gent gran i fer-ne més. Els centres de dia van súper bé. Van allà com si fos una escola, estan entretinguts i després dormen a casa, això és el que necessiten. Molta de la gent gran que està sola a casa i no sap que fer al final acaba en una residència perquè s'han anat deteriorant, haurien d'estar a centres de dia, on fan feina i a la tarda-nit van dormir a casa. Això és el que els hi agrada, estar entretinguts. En definitiva volen sentir-se útils.

6.1.2. ENTREVISTA AMB LA VICENTA ARMENGOL, UNA DONA QUE PASSA DELS 100 ANYS!

La Vicenta Armengol és una dona de 108 anys. Actualment està a la residència Teresa Duran a Cornellà de Llobregat. Va ser ingressada a la residència amb l'edat de 104 anys per causes familiars. Tot i així ella es considera una dona feliç i afortunada de tenir una vida tan llarga:

A: Per què es troba a la residència?

V: Jo vaig venir aquí per uns dies i d'uns dies s'han fet molt temps però estic bé, són coses de la vida.

A: Quina és la seva rutina habitual?

V: Quan acabo el dia ja no me'n recordo de tot el que he començat. Passen moltes coses aquí. No hi ha res com que passin coses per poder-les explicar. Jo faig el que jo vull, coses que a mi m'agradin. Coses que no m'agradin els hi dic "Bueno això no, això ho deixeu per un altre any". *[Riu]* Menjar mengem bé però a mi m'agrada menjar del que tinc gana, que no em vinguin amb punyetes.

A: Què és el que la fa feliç?

V: A mi em fa feliç veure coses per poder-les explicar, coses maques i no ho sé... no hi ha res com viure per veure coses. Ja veuràs quan tingueu la meva edat les coses que haureu vist. Cada dia coses noves.

A: És possible ser feliç a la seva edat i viure en una residència?

V: Sí, de moment sí. L'any que bé ja en parlarem perquè a cada any hi ha coses noves. Aquest any cada dia sóc feliç i cada dia hi han coses noves. M'agrada estar aquí però faig les coses al meu gust.

A: Estaria d'acord amb la frase “quan més gran et fas, més sol et sents”? Per què?

V: Potser una mica sí, però jo sempre tinc família, una família molt gran. Si venen molts jo els hi dic que no cal.

A: Com va ser la seva jubilació? Troba a faltar anar a treballar?

V: Ja no me'n recordo. Em vaig jubilar ja gran però tantes coses han passat que ja vaig traient coses de la memòria.

Abans sí que m'hagués agradat treballar més però ara ja no treballo. Ara ja no estic per res, vull viure per mi i ja està.

A: Es sent privilegiada per superar els 100 anys de vida? Per què?

V: Sí, jo estic molt contenta. Mentre estigui bé sí. Si ve ara un *atropell* em sabrà greu. Jo estic bé així com estic. Viure al meu gust seria tots els anys que passen viure'ls bé.

A: Li agradaria viure molts més anys?

V: Els anys a vegades també cansen. Pels anys que fa que estic aquest món, tampoc cal córrer. Gràcies a Déu de moment em trobo bé.

A: Considera que la gent gran està integrada a la societat o els hem deixat de banda?

V: No, no ens han deixat de banda. Quan més passa el temps més ve estan. Mentre passa el temps la gent és més gran i si té coneixement i veu totes les coses bé, està més a gust de veure que encara conserva el coneixement.

A: Quin paper creu que té la gent gran avui en dia?

V: Ens conformem en tot, però veiem les coses i quan veiem que una cosa no està bé ho diem. Diem: "Això no està bé, una altra cosa *bueno*, però això no". Tenim molta experiència. La vida és així, quan més coses passes més coses aprens i més coses saps.

A: De quins serveis dedicats a la gent gran ha fet ús en els últims anys?

V: Aquí a la residència em tallen el cabell però ja no tant, no estic per tantes punyetes. De tant en tant em tallen les ungles però ja esta.

A: Actualment es viu millor que fa 50 anys?

V: Sí, fa 50 anys vaig passar coses de joventut. Potser n'hi havia una mica massa de problemes. Ara no, ara es viu millor. Jo vaig anar poc a l'escola, després a treballar. Abans era una època i ara n'és un altre. No hi ha res com viure aquesta època millor que l'anterior. Val més no pensar-hi amb lo d'abans, ja ha passat. Hem fet un canvi molt valent però ens hem acostumat a tot.

A: Vostè és molt positiva veritat?

V: Ui sí. Es que la vida s'ha de passar així. Tot ho vols bo però sempre hi ha algun entrebanc. Jo he viscut coses dolentes però ja les he passat així que ja està. La vida és així i prou.

A: M’han dit que li agrada molt la poesia a vostè, se’n recorda d’algun vers?

V: Abans m’agradava molt. M’agraden molt els versos però dir-los ara no, no estic per tants romanços jo. Bueno, abans dèiem:

“Catalunya ha sigut noble
però ja ha perdut el nom,
de farsants i d’*embustersos*
que dominen a tothom.
Mentre hi hagi aquesta farsa
i no la puguem escombrar,
Catalunya va per terra
i de pitjor se’n veurà.”

A: Quins consells donaria als més joves per viure millor?

V: Els joves d’ara no escolten el que diuen les dones d’abans. Nosaltres veiem les coses abans i si no ens agrada ho diem. El meu consell seria que em segueixin a mi, el que jo faig i llavors estaran bé.

6.1.3. ENTREVISTA AMB LA MONTSE, NÉTA DE LA VICENTA ARMENGOL

La Montse és una de les nétes de la Vicenta. És una dona de 56 anys satisfeta de poder cuidar la seva àvia tant com ella ho va fer durant la seva infància. La Montse ens comenta que la Vicenta és una dona de molt caràcter i amb ganes de seguir gaudint de la vida malgrat viure a una residència.

Aquí us deixo l’entrevista:



La Vicenta i la Montse el dia del’entrevista

A: Per què la Vicenta està a una residència?

M: La Vicenta està a la residència perquè la meua mare va tindre un infart i ja no en podia fer-se càrrec. Aleshores jo i la meua germana treballem i ens era impossible cuidar-la. La Vicenta es troba a la residència per una força major. La vam ingressar per una malaltia de la mare, sinó jo crec que no l'haguéssim portat mai a una residència a la iaia. Tot i així ella va ingressar quan ja tenia 104 anys i va viure sola fins als 90 i pico.

A: S'hi ha adaptat bé a la residència?

M: Sí, el primer dia ens va preguntar a veure a on la portàvem. Nosaltres li vam dir que era un hotel. Després ja li vam dir i ens vam quedar parades perquè mai ha fet cap queixa ni res. Ella diu que està bé i això és lo important. Mai a tornat a dir de tornar a casa, s'hi ha adaptat molt bé.

A: Quina és la seva rutina habitual?

M: Doncs ara l'aixequen una mica tard, cap allà les 10:30. Llavors esmorza, la renten i després seu en una saleta, mira la tele, mira la plaça on moltes vegades hi juguen nens... tot això fins l'hora de dinar. Aleshores a vegades fan la mig diada i a la tarda berena, continua mirant la tele i al vespre sopar i a dormir.

A: Què fa feliç a la Vicenta?

M: A ella el dolç, els pastelets. És el que més li agrada, normalment quan venim li portem pastelets de crema. A part d'això també li agrada que la vinguem a veure i poca cosa més m'imagino. Ella ja és feliç a la seva manera.

A: És possible ser feliç a la seva edat i viure en una residència?

M: Ella jo crec que sí. Altre gent que veig no però la iaia crec que sí. Ella esta feliç, potser amb la seva edat ja el cap no sap ben bé on és ja. Ella porta a la residència 3 anys o 4 però sempre canta i riu. Jo m'imagino que deu ser feliç.

A: Estaries d'acord amb la frase “quan més gran et fas més sol et sents”? Per què?

M: Això potser sí. Clar, és molt diferent viure en una unitat familiar on hi ha tots els néts, els fills, els besnéts...i de cop i volta que et portin a un lloc on no tens cap vincle familiar no és de les situacions més agradables. Tot i així dins d'aquestes situacions hi ha gent que s'hi adapta més i en aquest cas la iaia s'hi ha adaptat. També és veritat que la venim a veure, les visites nostres són freqüents.

A: La Vicenta té moltes visites?

M: Generalment ens té a nosaltres, les nétes, i la mare ja no pot massa, ve de tant en tant. A vegades hi venen nebodes de Cervelló o alguna veïna. Les seves amigues la majoria son totes mortes, ja no queda ningú de la seva edat. Clar, les amistats se te'n van. Això va relacionat amb la pregunta anterior, ella ha anat vivint les morts de les seves amigues però ella incorporar-se en dir que li queda poc de vida mai.

A: Consideres que la gent gran està integrada a la societat o els hem deixat de banda?

M: Jo crec que els hem deixat bastant de banda. Sí, perquè és molt fàcil avui en dia deixar als avis a la residència i desentendre's. Hi ha molta gent que se'n desentén i jo crec que ells han fet molt per nosaltres, pels fills, pels néts, per tots. Jo crec que els hem de cuidar més perquè ells ens han cuidat a nosaltres.

A: Quin paper creus que té la gent gran avui en dia?

M: Els que estan actius tenen un paper molt important avui en dia. Tenen tota la història, saben la història i porten molts anys. La iaia a viscut tot un segle, ha viscut les guerres, el bé i el mal, ha viscut tot tipus de vivències. El poder-ho explicar i transmetre et dona una riquesa de valors, això és indiscutible.

La iaia sempre ha estat una dona treballadora, ha passat la guerra i ha passat situacions molt difícils per poder cuidar i mantenir a la seva família, tant als germans com als fills. D'història d'ella n'hi ha molta.

A: De quins serveis dedicats a la gent gran ha fet ús la Vicenta en els últims anys?

M: Doncs ara fa ús de la residència i quan vivia sola tenia una senyora que li venia per ajudar. Amb ella passejaven una mica, li feia companyia. I ara doncs els serveis de la residència: la perruqueria, la podologia, la higiene, l'alimentació...

A: La Vicenta t'ha donat alguns consells per viure bé?

M: Sí, algun que altre. La Vicenta és molt forta. A ella sobre els 90 anys li van trobar una mica de càncer de mama i la van operar, li van treure tot el que era el tumor. Al cap d'un més o dos va anar a la doctora de rehabilitació i li van dir que no li calia, que era molt àgil. Això era perquè ella cada dia al dematí feia uns estiraments i exercicis i això sempre m'ho ha fet tenir present.

Un altra cosa era quan anàvem a la platja, ella sempre ens deia que ens faríem velles de seguida si anàvem a la platja. Ella mai s'hi ha banyat però mai m'hi ha dit el motiu. Quan em veia maquillada també em deia que no era bo, aigua i sabó i prou.

6.1.4 CONCLUSIONS FROM THE INTERVIEW

After having done these 3 interviews, my conclusions are:

- It is possible for older people to be happy despite living in a residence. The three people interviewed affirm that happiness at a certain age is still present. Everyone agrees that it depends on the attitude that each person adopts in light of life.
- To the question of what makes older people happy, both the entertainer and the family member answered the family. This is true since Vicenta mentions it a couple of times during the interview. Vicenta adds that seeing new things every day to explain them is her greatest satisfaction. This would be related to the fact of feeling useful that Dani commented.

- Both Dani and Montse recognize that today's society leaves older people aside. Vicenta, on the other hand, does not believe so. That could be because younger generations consider it is really easy to ignore older people nowadays. They feel as if leaving them in a residential home is the easy way and thus the most popular. They notice some older people feel useless because they are a bit excluded from our present society. The reason why Vicenta does not think the same could be because she considers that she is already too old for working or to do something for society considering her answers. She is 108 years old and she just wants to relax.
- According to interview responses, the role of older people is to provide knowledge and advise younger generations. Still, Dani believes that their role should be more than this.
- As the time goes by, it is true that you are gradually feeling lonelier. This is because you are losing people in your environment such as relatives or friends. Regarding loneliness in the residence, it depends a lot on the person. In Vicenta's case, she receives many visits and she said it is not one of the reasons to feel a little lonely. For other people, though, it is a reason.

I could draw many other conclusions from these interviews. However, I only mentioned the ones in which the 3 people interviewed give similar answers and, therefore, they provided more solid conclusions.

6.2 PREPARING THE SURVEYS

The aim of these surveys is also providing more information to verify or deny my hypotheses. For that reason I have had a personal contact with older people and society in general. But the interviews are in Catalan for the comfort of the respondents.

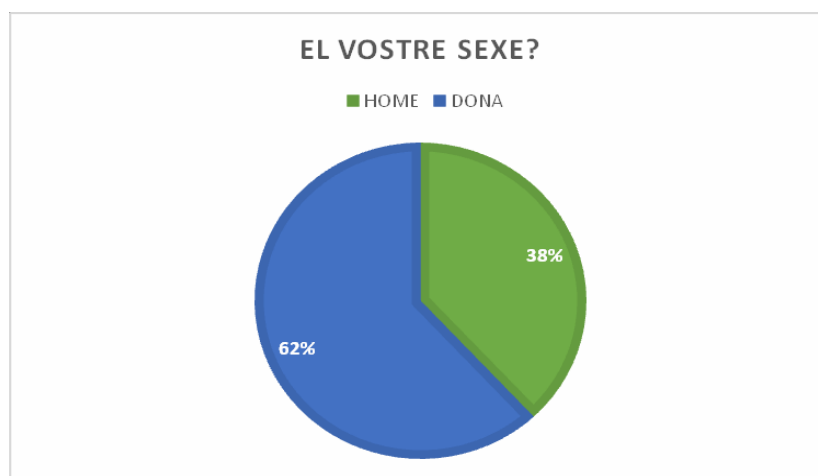
I have done two different surveys. The first one was aimed at people over 18 years of age. Therefore, with it, I want to corroborate the different general opinions society has about ageing. On the other hand, the other survey is aimed at older people who use

adult day-care services. In it I have focused on people over 60 years of age. Therefore, I could obtain a general perspective based on their own experiences.

6.2.1 ENQUESTA AL CASAL DE GENT GRAN: FER-SE GRAN

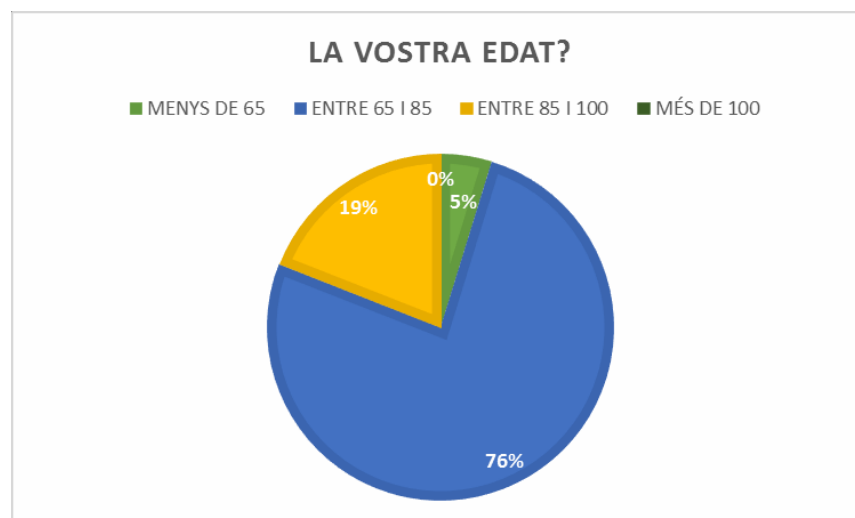
I surveyed 21 older people attending Carlit's day centre (Barcelona). I went there the 4th of October of 2017.

1. Sex of the people who have participated in the survey



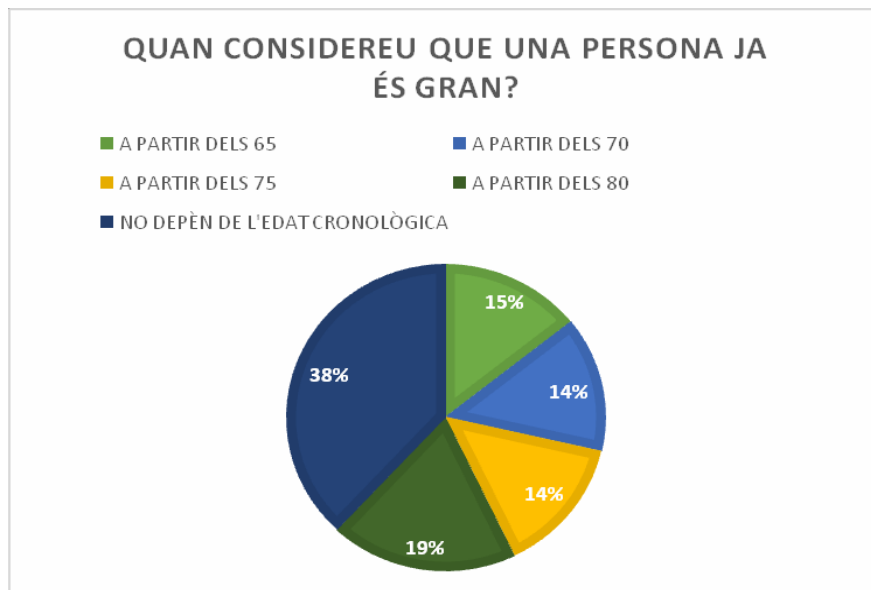
A female majority has participated in the survey, 62% women and 38% men.

2. Age of the people who have participated in the survey



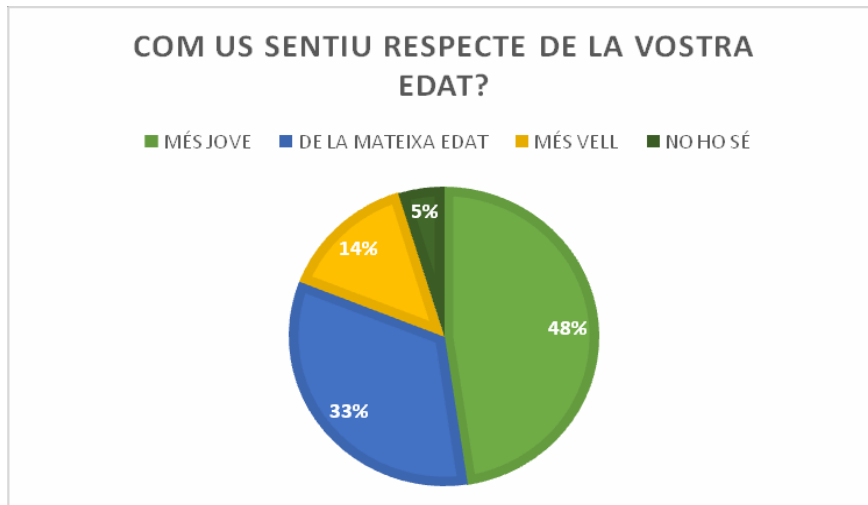
76% of the participants are between 65 and 85 years old. The 19% is between 85 and 100 years old. Only a 5% of the participants are under 65 and nobody was over 100. All of them are retired.

3. Age at which a person is considered as old



This question comprises answers with fairly even percentages. 38% of the respondents believe the fact of growing old does not depend on chronological age. The 19% think at 80 years you are already old. This result coincides precisely with those people who have already experienced the rest of the ages and they did not feel old yet. However, the 15% have chosen the age of 65 since it is the age when the vast majority of people get retired. Finally the age of 70 and the age of 75 get 14% each.

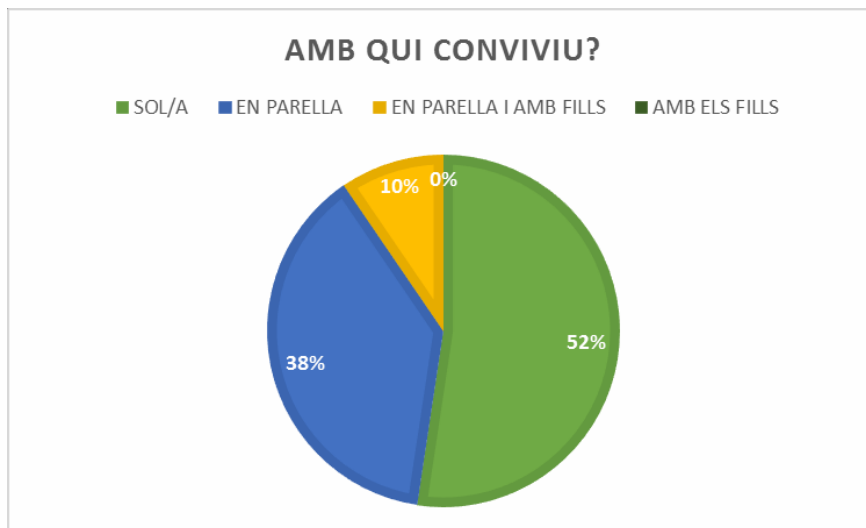
4. How do they feel about their age?



Almost the half of the respondents consider themselves younger than what they really are, specifically 48%. This percentage is followed by 33% of those who do not consider themselves older or younger, the ones who are in accordance with their age. In 14% there are those who feel older and, finally, the 5% do not know what to answer.

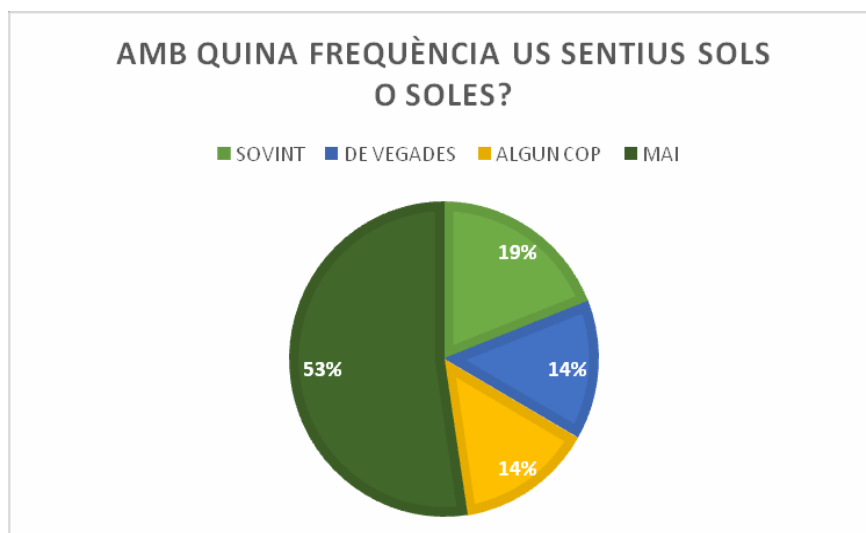
Normally, if you feel younger, it is because you feel capable of accomplishing your day-to-day activities and feel that you still have energy for living life. But feeling older could mean you have lost your faculties faster than those who are around you and are your same age. In fact, it depends on the way of ageing everyone has and the attitude they decide to take regarding life.

5. Way of coexistence



A little bit more than the half of the participants live alone. The other half is divided into two: 38% live with their partner and the other 10% live not only with their partner, but also with their children. Thus, no one lives only with their children. According to this information we can refute again the stereotype that all the older people are dependent.

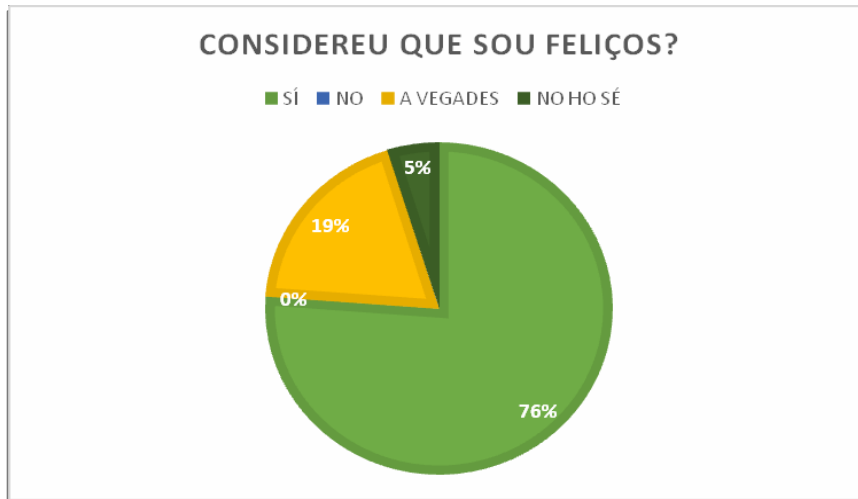
6. Loneliness frequency



The majority of the surveyed people, that is 53%, affirm that they never feel alone. On the contrary, 19% said they often feel alone. The remaining percentage is divided

into two equal parts of 14% of those who sometimes feel alone or those who only do feel it sporadically.

7. Happiness frequency



The vast majority consider themselves as happy. 19% of the participants recognize they feel happy only at times and 5% did not know what to answer. However, neither of them felt unhappy or sad all the time.

These percentages coincide with the research done in San Diego. Older people tend to be happy and that is due to the fact that they are more optimistic.

8. What makes them happy?

1a persona: "El relax – No problemes"

2a persona: "Anar vivint"

3a persona: "Trobar-se bé / La família"

4a persona: "Tot lo bo"

5a persona: "Ser activa"

6a persona: "Tenir parella"

7a persona: " Trobar-me bé de salut i la meva família també"

8a persona: "Participar i ajudar"

9a persona: “Distreure’m”

10a persona: “Reunir-me amb el fill i el nét”

11a persona: “Sentir-me útil”

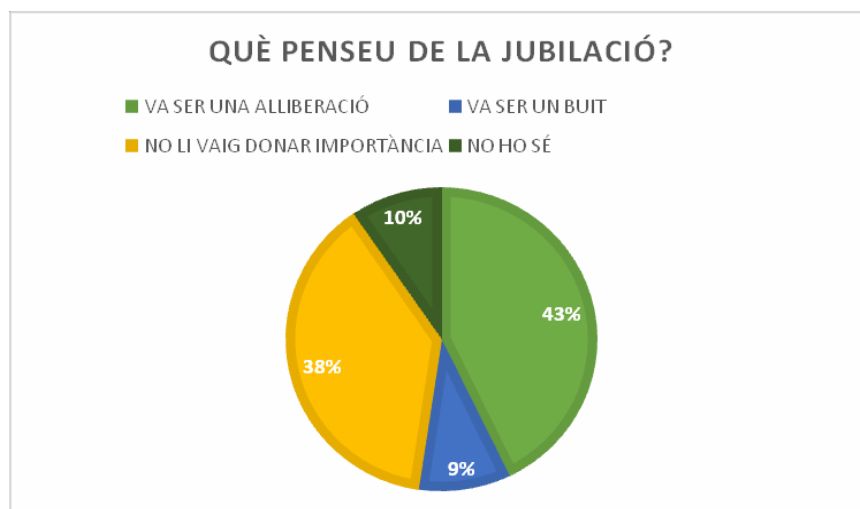
12a persona: “Fer esport i estar amb amics”

13a persona: “La vida”

The rest of the people did not answer this question. In general, they feel happy when:

- They have people who they love close to them (family, partner or friends).
- They can enjoying life because they are healthy.
- They feel useful (doing activities and getting amused).

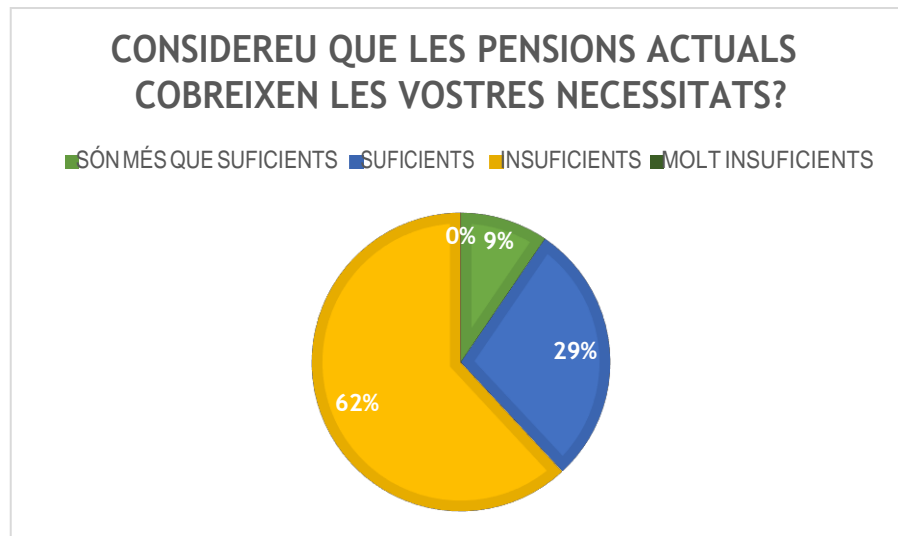
9. Retirement



Retirement was a relief for the 43%. This percentage is followed by 38% of the ones who did not give importance at the fact of becoming retired. The next percentage is 10%, which belongs to those who did not know what to answer and fairly close, with 9%, the ones that felt a vacuum.

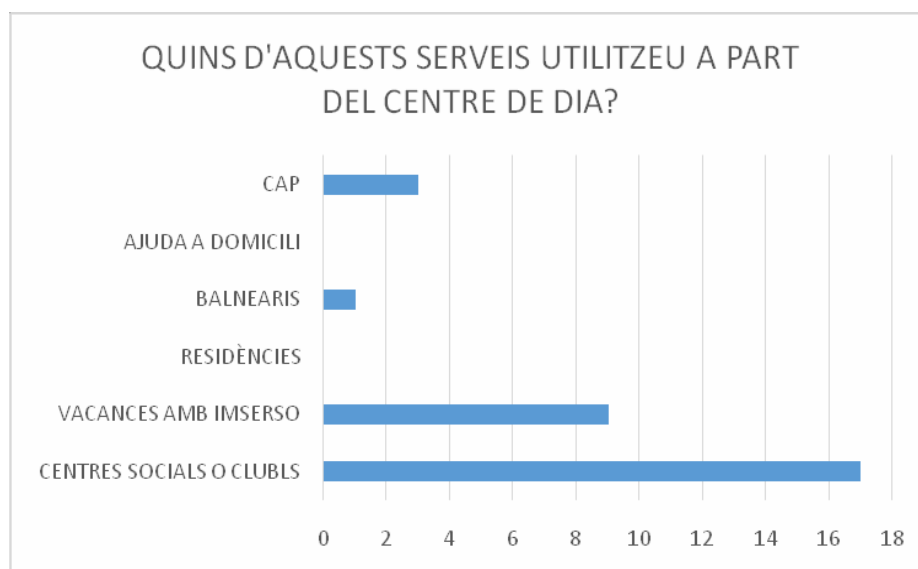
This results coincide with the fact that there are different ways to take retirement. Normally, the ones who feel a vacuum feel that their role in society is not really clear.

10. Pensions



The vast majority, 62%, claim that pensions nowadays are insufficient. On the contrast 29% think they are sufficient and the 9% affirm they are more than sufficient. Therefore a 38% believe pensions are enough whereas the other 62% believe they are insufficient.

11. Social services

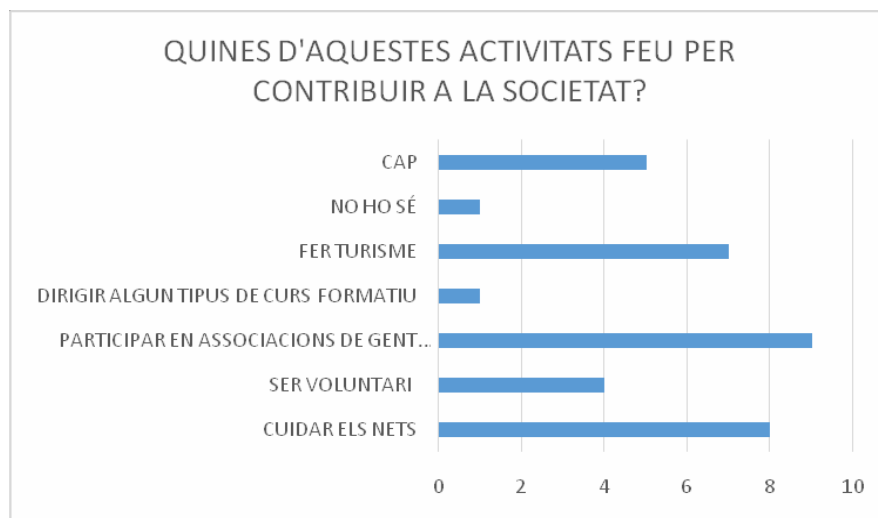


Not everyone answered this question. However, in this case, more than one option could be chosen. 3 people said they do not usually use any other service a part from

the adult day-care center. A part from that, the most popular social service is social centers or clubs since 17 of the 21 people answering the survey affirmed using them. 9 people also make use of lmerso trips and only one person goes to health resorts.

No one chose home assistance or residential homes but this was predictable considering the people surveyed are part of an adult day-care center.

12. Older people's role



This question works exactly in the same way than the previous one. 5 people answered they do not usually do any of the mentioned activities and 1 person did not know what to answer.

What most people do is participating in older people's associations (9 people). This is followed by 8 people taking care of their grandchildren and 7 people travelling away. 4 people assured to be volunteering in different institutions and only 1 person is teaching some kind of education cycle.

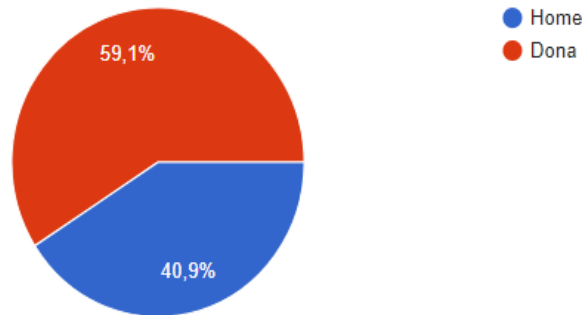
6.2.2 ENQUESTA GENERAL: LA SOCIETAT I LA GENT GRAN

This survey has been developed to know the opinion society has in general about the elderly and on the fact of aging. This survey was available online and 176 people answered it.

1. Sex of the people who have participated in the survey

El vostre sexe?

176 respuestas

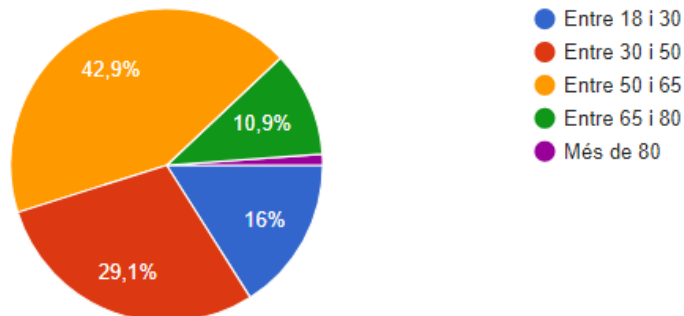


A female majority has participated in the survey, 59.1% women and 40.9% men.

2. Age of the people who have participated in the survey

La vostra edat?

175 respuestas

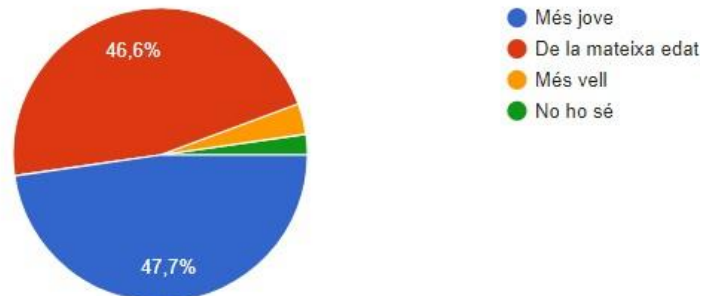


42.9% of the participants are between 50 and 65 years years old. The 29.1% is between 30 and 50 years old. This percentage is followed by a 16% of young adults aged 18-31 and 10.9% of older people aged 65-80. Only a 1.1% of the participants are over 80. Therefore, in this case the vast majority is not part of old age.

3. How do they feel about their age?

Com us sentiu respecte de la vostra edat?

176 respuestas

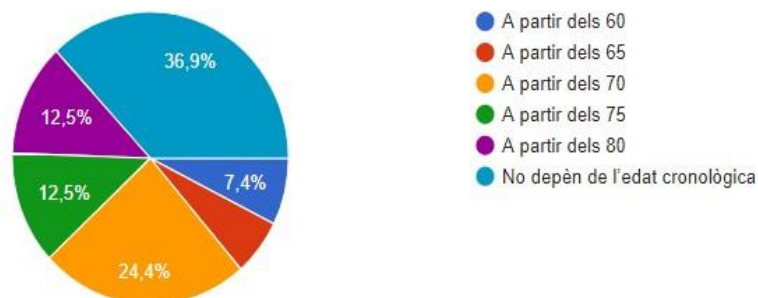


Almost the half of the respondents consider themselves younger than what they really are, specifically 47,7%. Practically the other half, 46.6%, do not consider themselves older or younger, they are in accordance with their age. Just 3.4% of the respondents feel older than what they really are and, finally, 2.3% do not know what to answer.

4. Age at which a person is considered as old

Quan considereu que una persona ja és gran?

176 respuestas

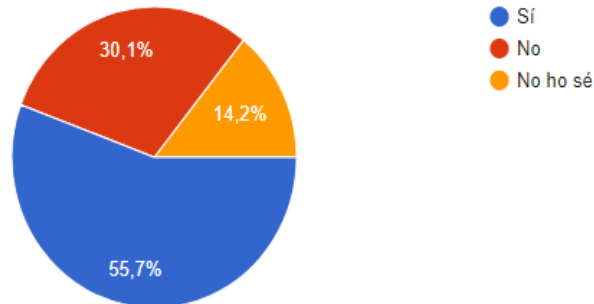


This question comprises a wide range of different opinions. 36.9% of the respondents believe that the fact of growing old does not depend on chronological age. The 24.4% think that at 70 years you are already old. This percentage is followed by people who believe that when you arrive at 75 or 80 you are already old (12,5% both). 7.4% have chosen the age of 60 and just the 6,2% of the participants chose the option over 65 years old.

5. Are older people adapted to society?

Creieu que la gent gran està ben adaptada a la societat?

176 respuestas

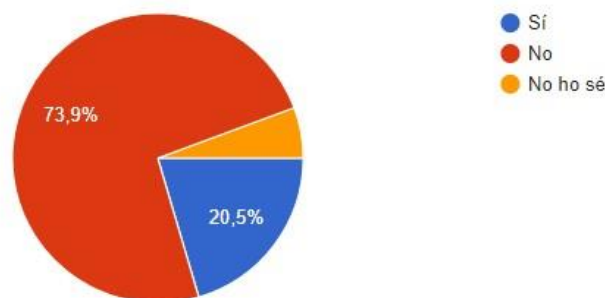


More than the half of the people surveyed, the 55.7%, answered that older people are well adapted to society. On the contrary, 30.1% believe they are not. However, 14.2% of the participants did not know what to answer.

6. Current society and older people's problems

Creieu que la societat actual es preocupa suficient pels problemes de la gent gran?

176 respuestas



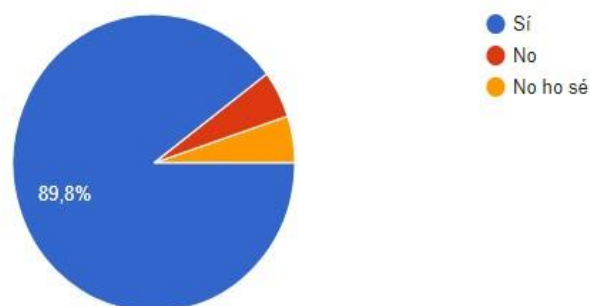
The vast majority, 73.9%, believe that the society does not care enough about older people's problems. On the other hand, 20.5% think society does care. Finally, 5.7% of the people surveyed did not know what to answer.

Surprisingly most of the people who answered that society does care were people over 60. This is probably due to the fact that they are more optimistic and they only worry about big issues.

7. Some new tasks for older people

Creieu que seria bo que la gent gran, de forma voluntària, pogués tenir algunes tasques d'unes hores de durada a la setmana de manera que la seva experiència i coneixements siguin útils per a la societat?

176 respuestas

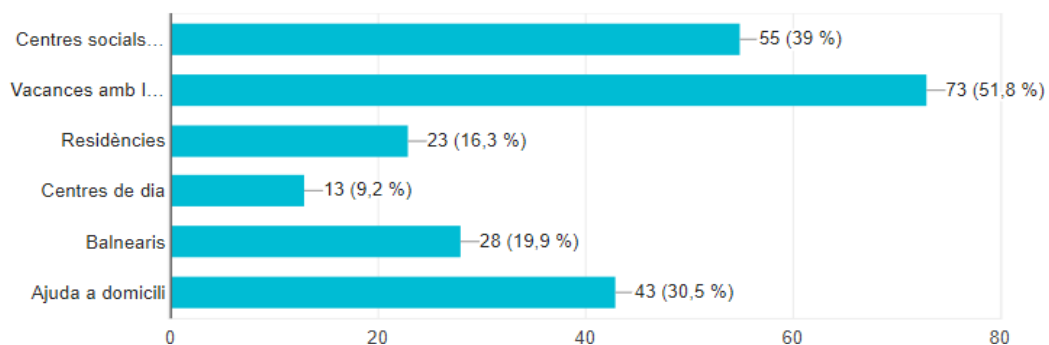


Almost everyone thought it is a great idea. Only 5.1% of the participants did not like the idea and an other 5.1% did not know what to answer.

8. Social services for older people

Quins d'aquests serveis utilitzeu o utilitzen els vostres familiars?

141 respuestas



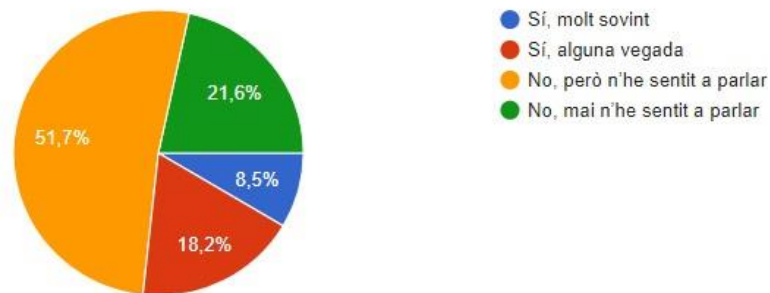
More than the half of the respondents, 51.8%, answered that some of their relatives usually go on Imsero trips. 39% also use social centers or clubs and 30,5% use a home assistance. In minor percentages such as 19.9% there is health resorts.

Residential homes are next with 16,3%. Finally the least used services are adult day-care centers.

9. Anti-ageing products

Algun cop heu fet ús d'algun producte antiaging / antiage?

176 respuestas



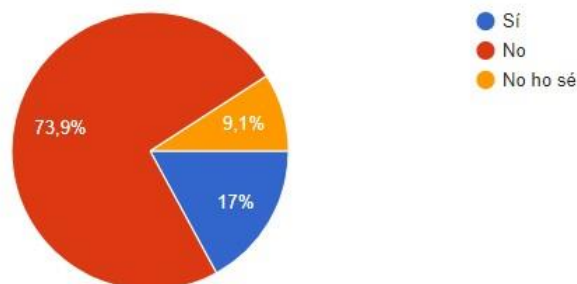
51.7% of the people who answered the survey said they know what an anti-ageing product is but they have never made use of it. 21.6% have neither used it nor know what it is. The 18.2% recognize they have sporadically used it. Finally, 8.5% use it frequently.

According to what I have observed, there are people who use the product but are not aware of it. Currently the majority of aesthetic products are anti-aging to get the customer's attention.

10. Older people's pensions

Creieu que les pensions actuals permeten a la gent gran tenir una bona qualitat de vida?

176 respuestas



The vast majority, 73.9%, claim that pensions are not enough nowadays. On the other hand, there is 17% of people who think current pensions are sufficient. The 9.1% of the surveyed did not know what to answer.

6.2.3 CONCLUSION FROM THE SURVEYS

After having surveyed almost 200 people, my main conclusions are:

- Most adult people consider themselves younger than what they really are. I have come to the conclusion that it is probably because of the stereotypes related to older people or old age. We are afraid of ageing because our perception of it is a loss of quality of life. Also it could be due to the fact that, if we feel that we still maintain our faculties and we do not have any disease, we relate it to feeling young. Old age is not synonymous with deficiency or dependence, so we should break down stereotypes and see that ageing is not a bad thing.
- As we grow older we add years to the age where one begins to be considered as older. That is why younger people have chosen ages closer to retirement age, while those approaching to that age have lengthened it to 70, 75 or even 80.
- Inmerso trips and social centers are the most popular social services. These are generally intended for those older people who are independent. However, dependent people have to make use of a social service, they usually choose residential homes before adult day-care centres. We have to take into account that adult day-care centers are more beneficial for older people because during the day they are entertained and then at night they can sleep in their own beds. Therefore, they feel more free. My opinion is that we must inform people more about the existence of these centers and make clear that residential homes are not the only option. Many people do not know about adult day-care home benefits.

- Pensions are a problem that will increasingly become bigger. Currently the majority of both the younger generations and older people think that pensions are not enough. Each year the total percentage of older people will grow and, therefore, there will be more problems to pay for pensions. We should start looking for solutions to this problem before it reaches us.

7. FINAL CONCLUSIONS

In this section I am going to state the conclusions about the hypotheses:

The **first hypothesis** (*Is living longer, living better?*) has been proven. Living longer does not always mean living better but it mainly does. Our society is ready to age because our science and technology is continuously developing. Nowadays there are lots of researches which do not only seek that people live more, but also better. Improving our quality of life is always the priority in science due to the fact that our genetics allows us to live up to 120 years. Therefore, the answer is yes as long as our personal circumstances enable us.

In addition, the older people surveyed responded that, in general, they are happy. Their optimism and emotional skills allow them to have a good life.

The **second hypothesis** (*Does one sex live longer than the other?*) has also been proven. Although we have the same information in our genes related to longevity women usually live longer than men. In life expectancy statistics there is a clear difference between sexes. If we look at the chart in pag.9 we can appreciate women tend to live between 3 or 6 years longer than men. Moreover, in my theoretical part I have mentioned some of the reasons why this happens. For example, our sexual chromosomes, women's menstruation, the fact that men tend to be taller than women...

The **third hypothesis** (*Are we still socially useful after 65?*) depends in the way you see it. The age of 65 is normally the retirement age. As we have seen during this project there are different ways of experiencing it. Of course we are still useful after 65 but sometimes older people feel useless because society do not take them into account for many things. There are lots of alternatives to take after stopping working. The main fact to continue being active in the society is keep setting goals and be confident in yourself. The personal attitude makes the difference between feeling part of the society or not.

The **fourth hypothesis** (*The older you get, the lonelier you feel. Myth or reality?*) is true. Almost three-quarters of the older people feel lonely according to a study done by the UK. They feel lonely by several reasons. For instance, feeling weak or useless, having a labour vacuum, experiencing the deaths of the partner or friends, or spending time without speaking to a friend, neighbour or family member (isolation). Nevertheless, this sentence can be misunderstood. The fact of being lonely is usually confused with depression. Not everyone that feels lonely has to be depressed. Hence, older people tend to feel alone because they have completely changed their perspective about life: They have different goals, different role in society and most of them have experienced the loss of close people. Moreover, in the survey almost the half of the participants recognised feeling alone sometimes.

Last but not least, I would like to say that, despite all the work, effort and dedication that I have put in, I believe that I have fulfilled my goals. I had the chance to walk in older people's shoes and thanks to it I have learned a lot of new things.

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9. ACKNOWLEDGEMENTS

First of all, I would like to thank my Research work tutor Ana González for her useful and constructive suggestions, her patience and the time she has spent helping me in this project.

I would also like to acknowledge the help of the people who aid me in my fieldwork:

- To Vicenta Armangol, Montse Biernes and Dani Mancheño for answering the interviews, making me enjoy a good time and explaining to me so many things.
- To everyone who filled out the surveys.
- To my grandad and my granny who did their best to help me to getting some of the interviews and surveys.

Finally, I wish to thank my parents and friends for all their support and encouragement.