Department of Informatics

Master Degree in
Data Science

SUICIDES AROUND THE WORLD

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1. Introduction

WHO (World Health Organization) defines suicide as "an act of self elimination, deliberately initiated and performed by the person concerned, with full knowledge or expectation of its fatal outcome" (WHO, 1998).

The phenomenon of suicides is shrouded in mystery and intrigue. Why would someone want to end his own life? What could possibly drive someone to such a dark place?
Every year, thousands of people around the world take their own lives, and the reasons why they do such an extreme gesture are often left unexplained. This phenomenon is often overlooked but in the world it is responsible for about $800,000$ deaths, one every 40 seconds, and for this reason it is the twelfth leading cause of death worldwide. Globally, it ranks among the top three causes of death for people aged 15-44, along with road traffic accidents and cardiovascular disease.

It's clear that raising awareness about suicides is one of the major problems in our society and something has to be done to raise awareness about this tragic phenomenon.
Unfortunately, many people are still uneducated about the factors behind suicide and are unaware of the resources available to those who need help. To combat this lack of knowledge, it is important to educate ourselves and spread awareness about the issue so that fewer people feel lost and helpless.

The first step in raising awareness is to understand the causes of suicide.
There are many factors that can lead someone to take their own life, including mental health issues such as depression, substance abuse, or chronic pain. Other contributing factors may include financial stress, relationship problems, or psychic trauma.

Whichever the reasons may be, it is clear that suicide is a serious problem that needs to be addressed. If we can better understand why people

take their own lives, maybe we can find a way to prevent it from happening in the future.

The purpose of this report is not to understand why people are led to take their own lives, but to study how this phenomenon varies across the world and if there are predominantly factors, such as wealth index and unemployment rate, to take in consideration.

2. Description of the datasets

The dataset that we have kept in consideration is an integration about two different datasets, the first one containing information about suicides, and the second one with the unemployment index.

2.1. Suicides Dataset

The first dataset, which was taken from Kaggle, is composed by data about suicides since 1985 to 2016.
After a first glance to our dataset, we have decided to exclude for our analysis the biennial 2015 - 2016, due to a lack of data.
The dataset in question contains the following information:

- Country: world countries (string)

- Year: year of suicides reference (integer)

- Sex: male or female (string)

- Age: people age (string)

- suicide_no: number of suicide per country (integer)

- population: number of inhabitants per country (integer)

- suicides/100k pop: ratio between suicide and 100k population (float)

- country-year: union between country and year values (string)

- HDI per year: human development index (float)

- GDP per year: gross domestic product per each year (integer)

- GDP per capita: gross domestic product per income (integer)

- generation: people generations (string)

We have also created a new different column to make our works easier, the calculated field "suicides/pop_tot", which contains the ratio between number of suicides and total population by country (float).

2.2. Unemployment Dataset

Subsequently, through a research, we considered how the unemployment status of each person could be a major factor to pay attention to when we want to analyse the reasons that lead to suicide and the suicides trends, so it seemed interesting to expose a possible correlation between the two factors. In order to do this we found in the Eurostat website a new dataset that takes into account the percentage of population in labor force, i.e. in the set range of 25 to 74 years old, that finds itself in a state of unemployment. These data are also divided per each European country in a period since January 1983 to November 2022 (but for our purposes and given our suicide dataset, we considered just the period between 1985 and 2014).
In order to work properly, we edited the unemployment dataset, which is an Excel file, in such a manner that could have been correctly read by Tableau, placing countries, years and unemployment rate as dataset columns.

The unemployment dataset is structured as such:

- Country: 30 countries located in the european region;

- Year_Unmp: range of years from 1985 to 2014;

- Unemployment rate: unemployment rate for each month of every year.

3. A preliminary sight at the infographic

3.1. Our goals

The idea behind our work is to execute a detailed analysis regarding the amount of suicides in the different countries and compare them, when possible, with other indices, as the evolution of the per capita income or the unemployment rate, which characterise different countries or different continents.

Thus, our work is structured according to the following methodology:

- Analysis of suicides at a global level and then, changing perspective, a more in-depth analysis by geographical areas;

- Focus on suicides trend by gender;

- Analysis of the trend of suicides in relation to GDP per capita;

- Analysis of the trend of suicides in relation to unemployment rate;

- Analysis of suicides by age and generation.

3.2. Our hypothesis

- There will be a difference between the total amount of suicides per nations and the number of suicides divided by the population of each country;

- There will be areas and continents with different tendencies about the suicide rate;

- About male and female population, there will be an higher suicide rate regarding suicides for males than females. There will also be a correlation with economic factors such as unemployment rate;

- Affirm that there is a correlation between the suicide ratio of a country and its GDP per capita, focusing on the European continent;

- Verify that the suicide tendencies follow the variations related to the general unemployment, again focusing on 30 states of the European area, since 1985 to 2014;

- Verify that the amount of suicides is higher during the age range that varies between 20 and 50 years old and if it is a common factor among all generations.

4. Infographics

4.1. Suicides in the world

In this first infographic we create a panoramic about the trend of the amount of suicides in the world during all the period since 1985 to 2014 to evaluate which part of the universe is most hit by this phenomenon compared to others.
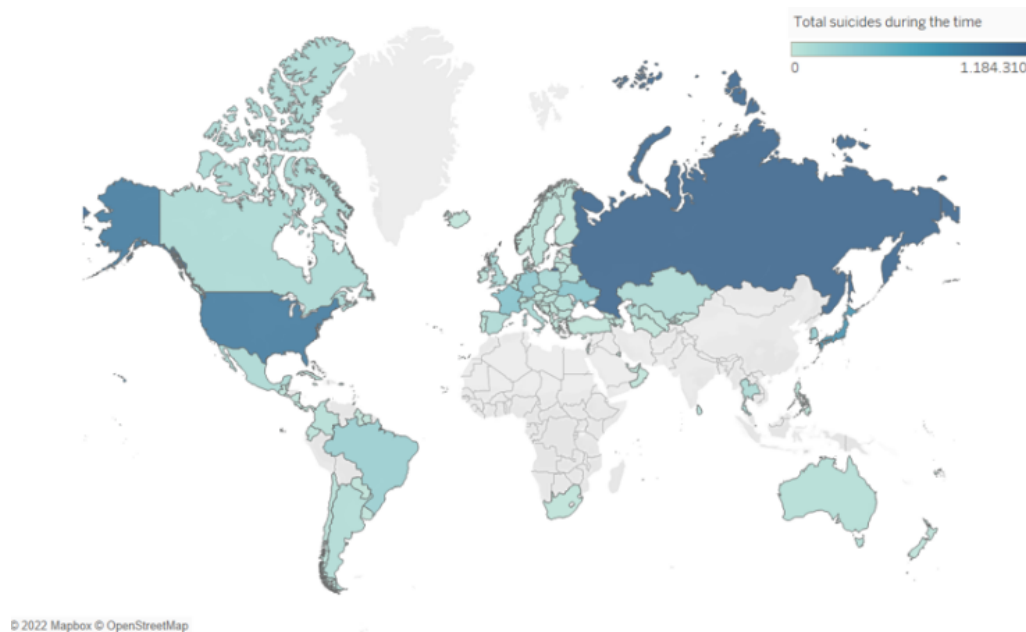

Figure 4.1: *Amount of suicides in the world since* 1985 *to* 2014

From the map we can highlight the geographical areas most affected by the phenomenon of suicides. At a first glance it could be noted, for example, how USA and Russia are more affected by the phenomenon than other countries, but we can easily guess how these assumptions are conditioned by the total population present in these states (it's intuitive that for the most populous countries, the number of suicides tends to be higher than for the others).

Anyway, we need to develop these assumptions in a more concrete manner by implementing targeted and in-depth analysis in order to be able to give certain and complete information; consequently (on the basis of what we obtained from this map) some ad hoc investigations will be carried out to better understand the analysis of our phenomenon.

4.1.1 Analysis of suicides divided by groups of 100k people

Now we decided to change our approach with the data, considering no more the data as sums and totals but weighted on a precise amount of population, in particular we focus our attention to the column "suicides/100k pop".
So we plot a barchart in which we visualize the average of the number of suicides / 100k inhabitants per state since 1985 to 2014.
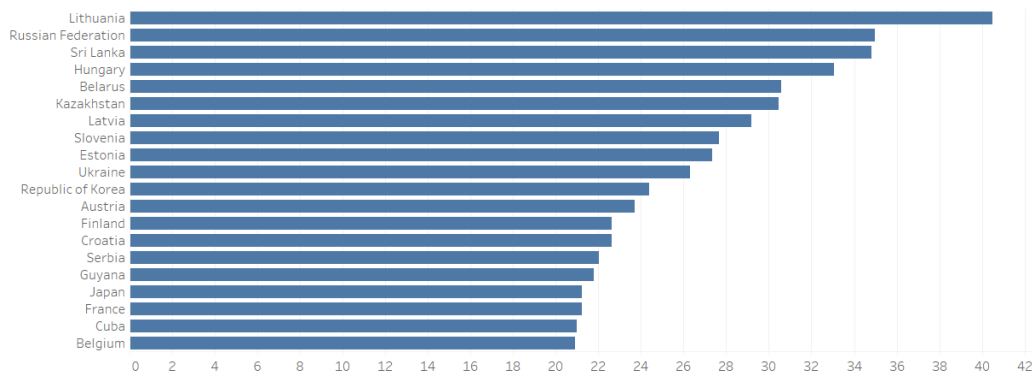

Figure 4.2: *Average of the rate suicides/100k population since 1985 to 2014*

We can easily and immediately notice how the situation has changed compared to the previous graph. In fact we have a different situation between the states, and now in prominence we don't necessarily have states with a huge population, but with a high suicide rate (as Lithuania or Sri Lanka, that weren't so relevant before), while a nation with a great population as United States doesn't have the same prominence as before.

We wanted to highlight that, so we create a graph that makes a comparison between the amount of the absolute number of suicides through the years (represented by the yellow columns) and the relative number, that again is computed as the average of the number of suicides / 100k inhabitants, now represented with the position of the blue circles.

It is clear that countries with low population are conditioned by that factor when we analyse the total number of suicides, while this influence doesn't affect our weighted data.
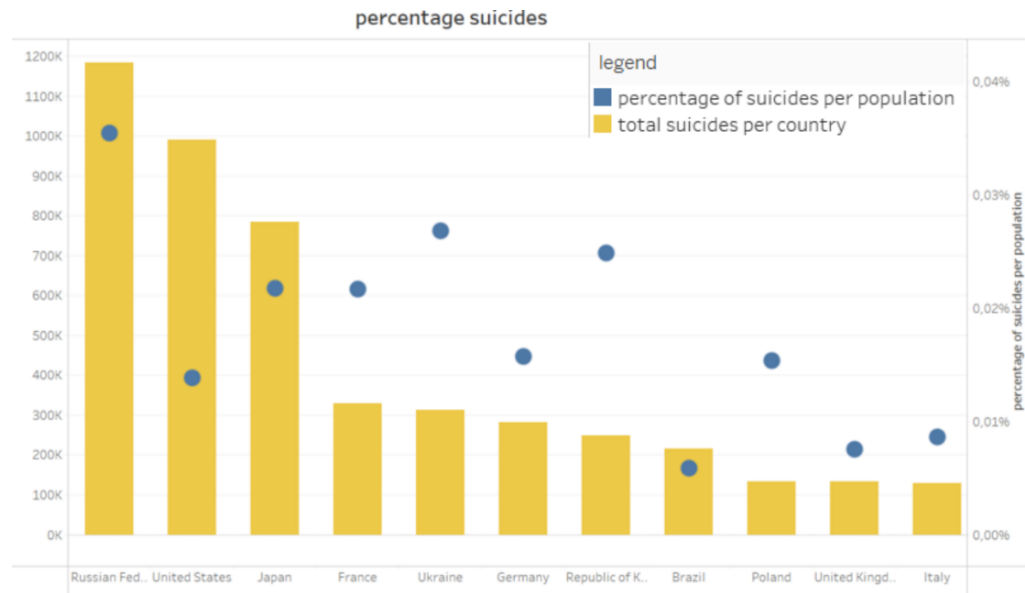

Figure 4.3: *A comparison between absolute and weighted data*

Changing our perspective, grouping the states into geographic zones we can easily see that Eastern Europe is the area with the highest suicide ratios, at least among those for which we have a considerable amount of data. In fact, 4 of the first 5 leading nations belong to that geographical area. In graph 4.4 we can see how 8 nations out of the top 10 are Eastern Europe's (and one of the other two - Kazakhstan - is a former Soviet republic). That's a consideration that we are going to develop also in the next point.
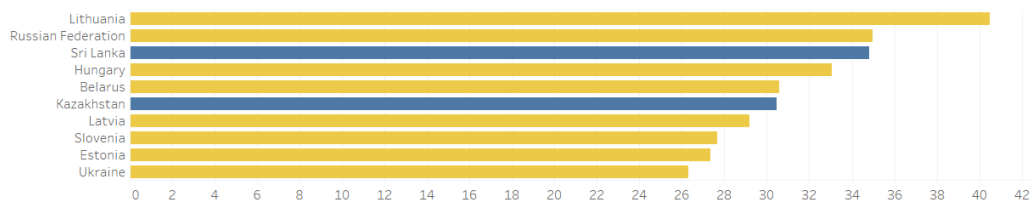

Figure 4.4: *In yellow, Eastern Europe's countries*

In conclusion, we think that an approach like this one, in which we consider data divided by population rather than absolute values, is so much more transparent, efficient and useful for what we are willing to look for, so basically we're going to exploit that from now on.

4.1.2   A more detailed research divided by countries

Like we said before, we don't have data regarding a lot of countries, in particular we have a huge lack of data in Africa, Asia and Oceania. So we decided to work on the other three continents, grouped in our analysis into macro-areas.

So we consider these three macro-areas, Europe, northern and central America together as a single geographical zone, and south America, that we're going to analyze separately.

So we report the maps of these three continents, in which with a scale of colors we still represent the average of the ratio suicides/100k population.
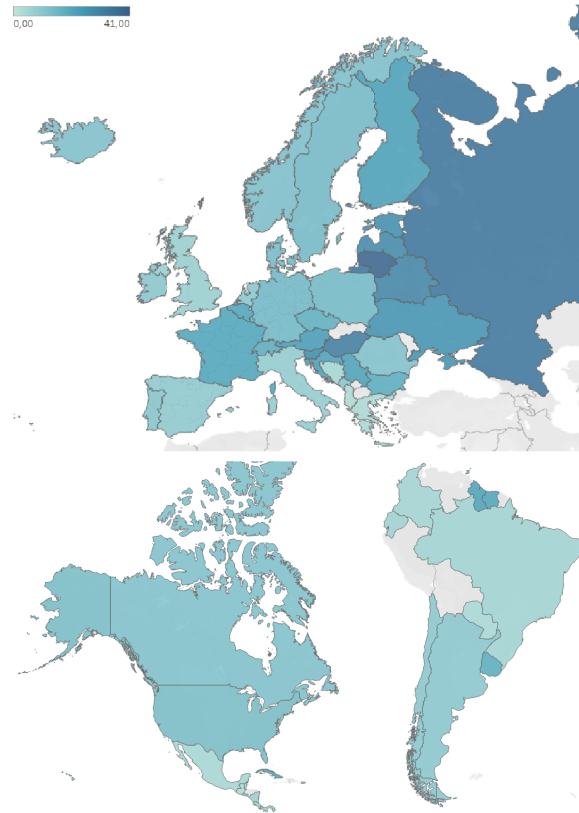

Figure 4.5: *Weighted data in our three areas*

We can clearly immediately visualize how Eastern Europe is the geographical area with the highest suicide rate, consistently with the previous point.
Comparing the three maps, we can observe that Western Europe's countries and the most developed American states, i.e. The United States and Canada, have approximately the same general situation, while South American and

Central American nations, which tend to be less developed, present lower rates.

4.1.3   Focus on suicides trend by gender

To work on this point, we begin asking ourselves if there are any differences between the ratio of the suicides regarding male population and female population. We focus our study on the three states that we have already seen having the highest amount of suicides through the years: Russian Republic, Japan and the United States.

Thus we intend to use these three countries as a sample of all the states for which we have data. We consider this sample as a representative one because as we have said these are the three states with the highest number of suicides, and these are also three of the four states with the greatest population (with Brazil), and furthermore they represent three different continents. By the way, for transparency, we tried to discuss the same themes with all the data we have and we haven't found significant differences, so we decided to proceed with this sample.
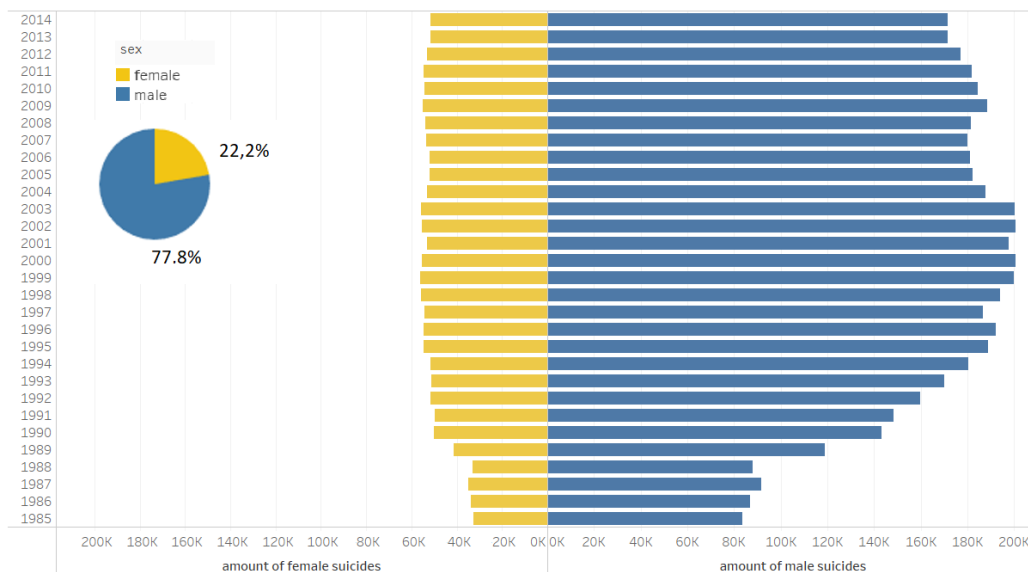

Figure 4.6: *Amount of suicides separated by gender*

So we created a plot in which we have the sum of the suicides in these three countries through the years, separated between males and females.

As we can see looking at the pie chart on the left, there has been a lot

more male suicides than female, with a ratio higher than 3 : 4 (the percentage of male suicides over the total is about 78%). This one is a result that impressed us a lot while we were working on the project: we actually expected a difference between males and females, but surely not that large. So we asked ourselves which could be some reasons for that result, and we thought that maybe we could find something relevant comparing these results with the unemployment rate, which we have dealt with in point 4.3.

But that one wasn't the only result that surprised us. As we can see looking and the population chart, we have a huge peak with both male and female suicides in correspondence of the period 1989-1990, and honestly that's a situation that we met several other times in the course of our work.
We initially thought about a socio-political explanation: these years were the ones of the fall of the Berlin Wall and then of the end of the Soviet World, so it's probably quite consistent that the number of suicides has increased during that period.
Although we were quite satisfied with this explanation at first, that didn't justify why the number of suicides didn't begin to decrease after that years. So we decided to analyze our dataset carefully and we discovered that there wasn't any data regarding the Soviet states, and even Germany, before these years. For example, we have Germany's data just after 1990, and Russia, Belarus and Ukraine's just after 1989, 1990 and 1987 respectively.
In conclusion, we weren't on the wrong track while we considered the political disorder of these years as the main reason, but we had to develop that hint in terms of our data.

4.2. GDP per capita

Up to now we have analyzed how the amount of suicides varies for different countries, we have discovered which country is the most afflicted by this problem and we have studied the variation of this phenomenon between males and females.

Therefore, we decided to study how the suicides vary in relation to the variation in GDP per capita for Europe. In particular we decided to take into consideration only European countries for two different reasons: the first one is that there is a high completeness in data, secondly we think that, being Europe an approximately equally developed part of the world among all its states, the GDP index can have a greater influence in this case than regarding less developed countries.
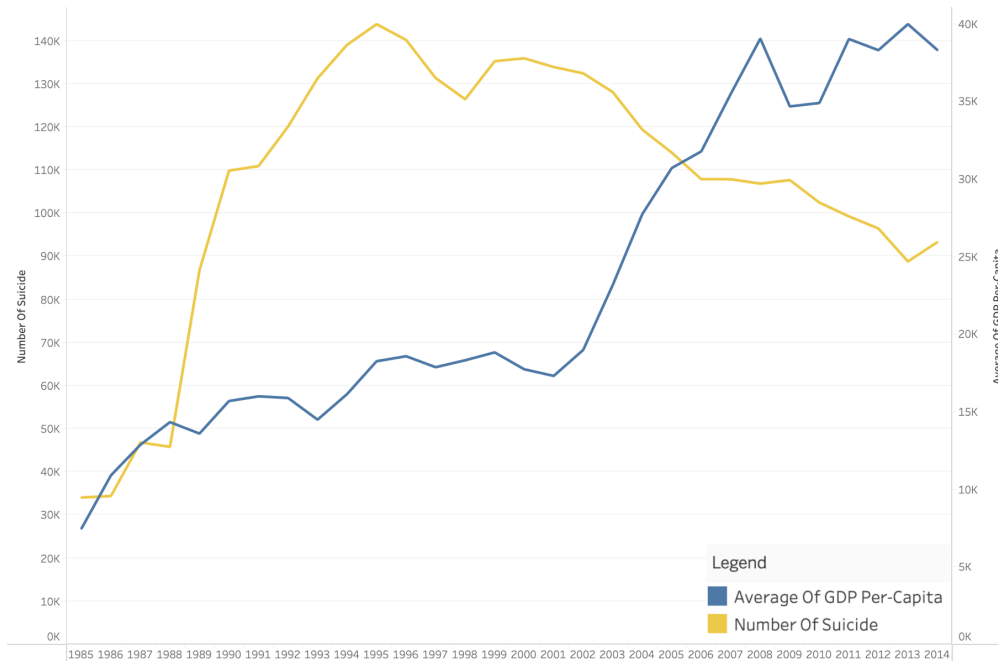
Figure 4.7: *The amount of suicides through the years in Europe compared with the GDP trend*

As we can see by the European plot above, the GDP per capita slightly affects the trend of suicides, in fact the GDP index tends to grow over the years and in correspondence with the greatest increases we can also find the steepest decreases in the amount of suicides.

4.3. Unemployment rate

Now we move on analyzing the relationship between suicides rates and the unemployment index, taking into account the European area, as it has been particularly meaningful throughout our research and given our dataset.
For this point we have decided to integrate our starting dataset with another dataset, this time related to European unemployment rates.

It is established and known that one of the main reason behind the practice of suicide is the lack of employment that puts people in a consequential state of neediness and misery, so it seemed interesting to us to further parse and investigate this relationship, taking advantage of the tools provided by a visual representation, and see, given our datasets, if this common assumption

about suicides is relatable or not.

Thus for this series of graphic representations we have considered these two main values, of particular significance: the average unemployment index and the average rate of suicide per 100 thousand people, all filtered by the years since 1985 to 2014 and by 30 states taken from the European area.

Firstly we looked how both the average unemployment index and the average rate of suicide per 100 thousand people changed over the previously described period of time.
Using this first representation we observed how in some periods of time there is a similar trend between these two values, for example in the period since 1985 to 1993, or since 2000 to 2007.
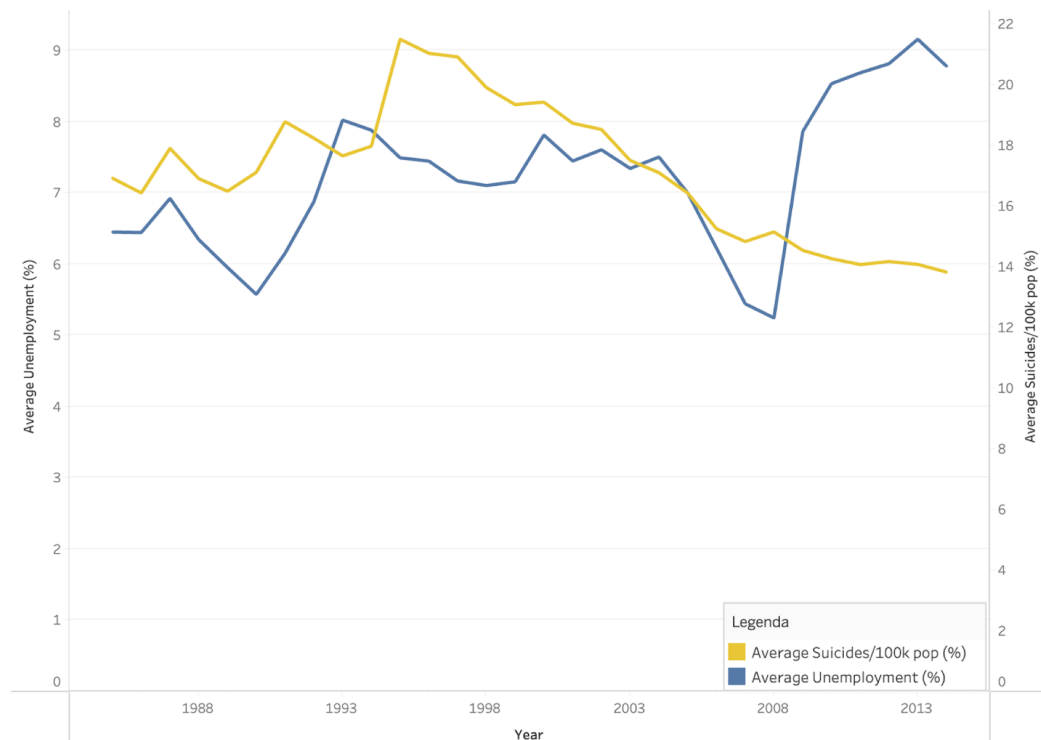

Figure 4.8: *The amount of suicides through the years in Europe compared with the unemployment rate*

It is possible to say that in these periods of time there could be a relationship between the two values, as the trend of suicides seems to follow the course of the unemployment rate, which could be reasonable, since the state of employment creates the conditions and gives the resources for an individual to

sustain himself and gives him the opportunity to be happier and independent, so when the value related to unemployment increases or decreases the other will follow consequently.

However, there are also periods, for example since mid to late 90s, and following the year 2008, where this "rule" does not occur, so, given our dataset, it's not always safe to say that these two phenomena are strictly correlated. Furthermore it is particularly interesting that no major spike in suicide deaths took place after the American real estate market crisis in 2007, which caused a general increase in unemployment, although it hit Europe with a minor impact. The overall trend of suicide, whatsoever, seems to decrease since the mid 90s after a peak reached in 1995 of about 21 suicide per 100,000 people.

In the following chart we further inspect this relationship with a scatter plot, this time taking into account the 30 states of our unemployment dataset, in order to see, across every country, how this correlation presents itself.
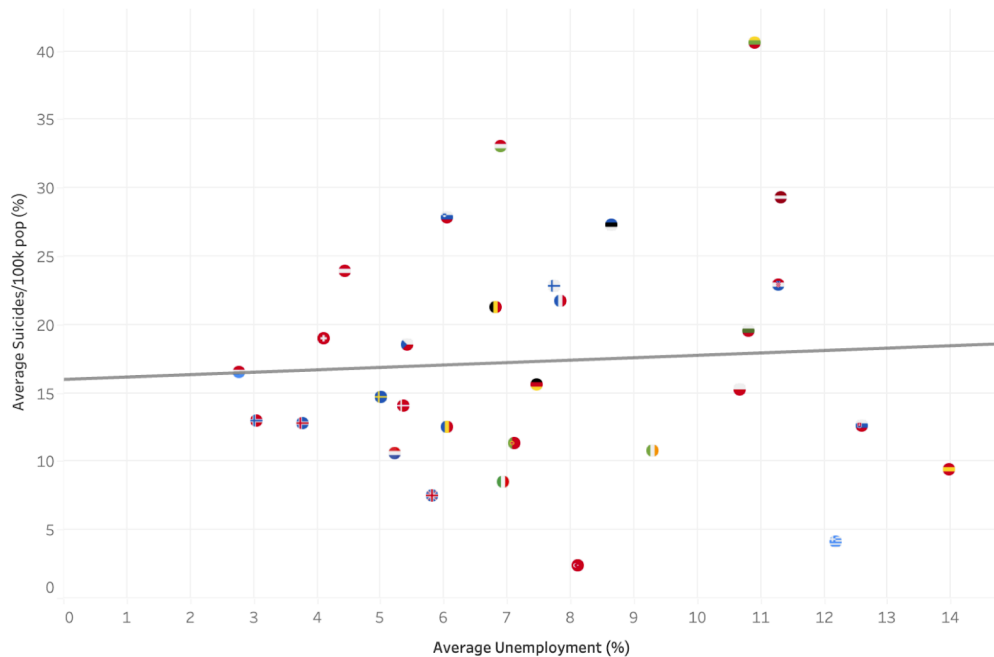

Figure 4.9: *Correlation between suicides and unemployment rate per each country*

4.4. Age and generation

4.4.1 Age

After having analysed suicide rate in relation with GDP per capita and with the unemployment rate, we decided to take a step back and analyse the amount of suicides in relation with age and generation.

The first step was therefore to take into consideration the total number of suicides and analyze the proportions based on age.
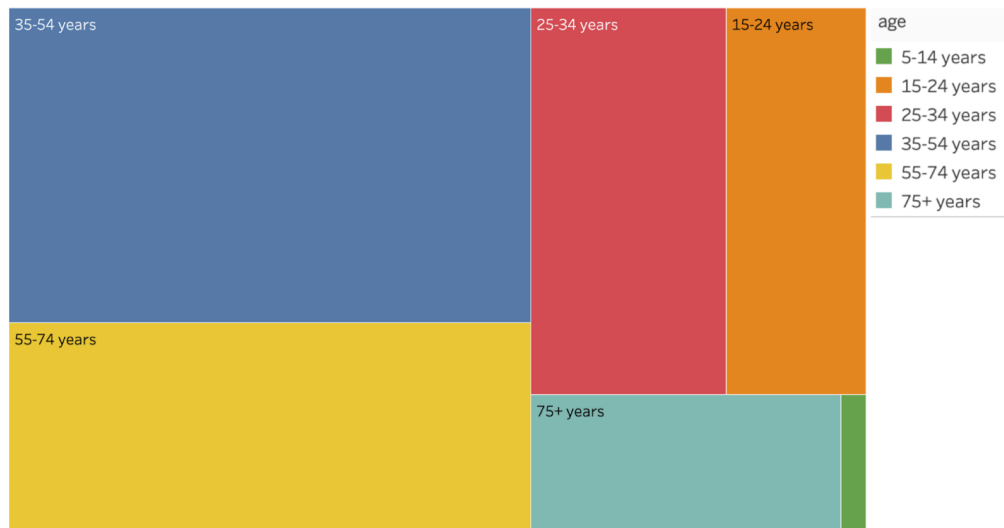So we created a first rectangles plot to see the differences about the data proportions.

Figure 4.10: *The amount of suicides per age range*

We can immediately notice that the hypothesis which we have assumed are partly true, partly wrong.
In fact the age range with the highest number of suicide is 35-54 years old, and this is consistent with the hypothesis, but on the other hand it is directly followed by the dupla 55-74 and only then we meet the set 25-34.

Therefore it is a duty to correct the hypothesis saying that the highest amount of suicides is actually concentrated between 25 and 74 years of age with a largest peak in the range between 35 and 54.

4.4.2 Generation

Now we are willing to analyze how suicides are distributed according to different generations.
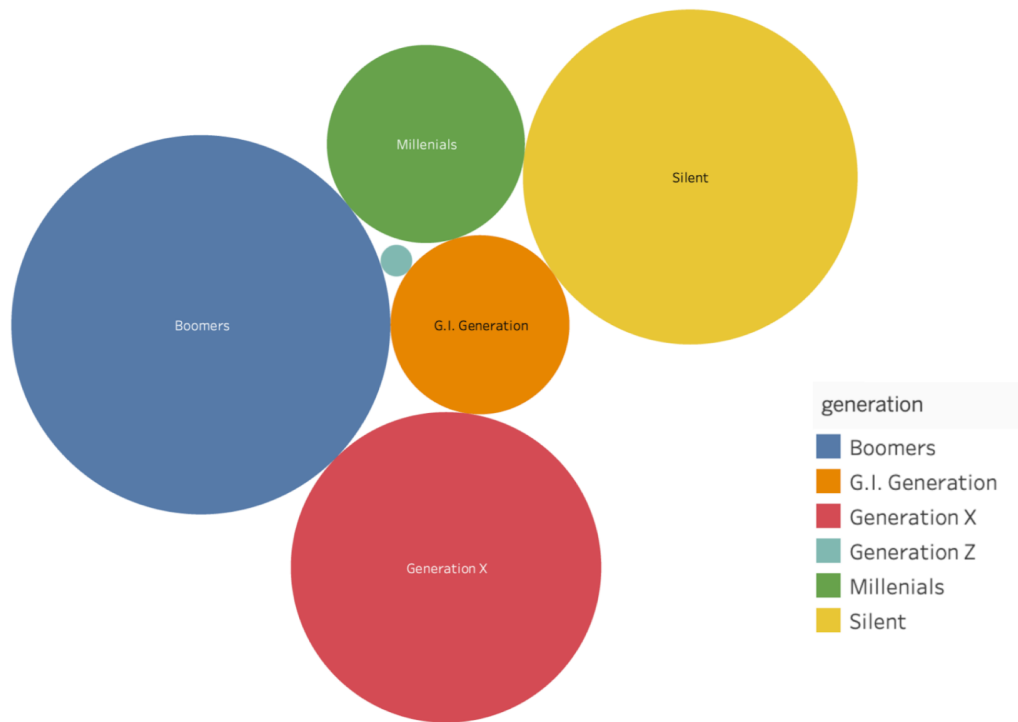

Figure 4.11: *The amount of suicides per generation*

After this first bubble plot we can notice that the generation with the largest number of suicide is the Boomer one, followed by Silent and Generation X.

But how do generations' suicides variate according to the age?
Are we sure that what we have assumed in previous rows is correct?

Luckily, the type of rectangle chart used in the previous point can help us, so we exploit it also for this analysis, keeping the same set of colours to indicate the same generation as before.
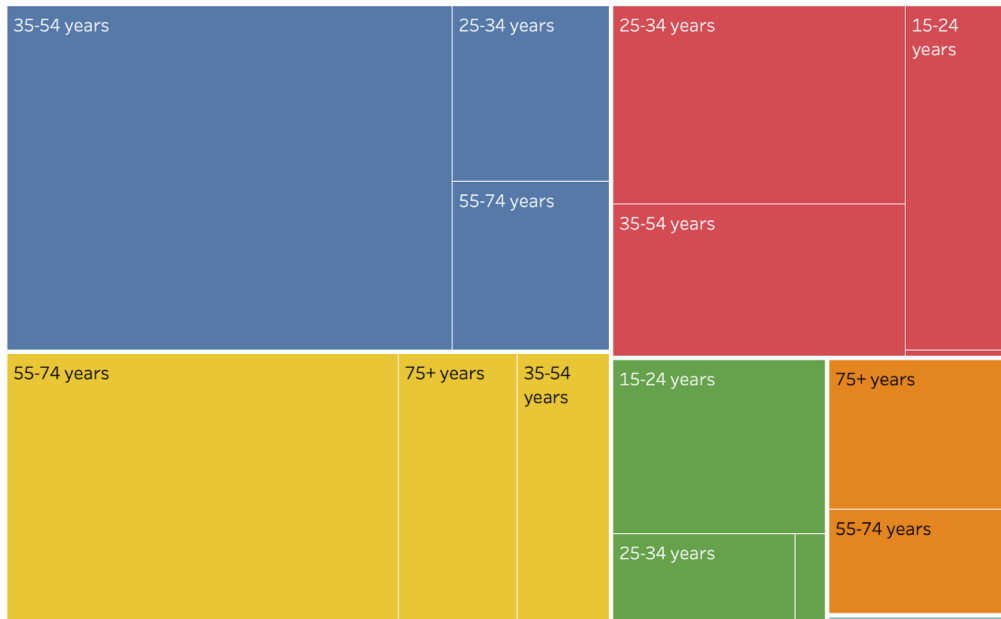
Figure 4.12: *Final graph with the amount of suicides both per age range and generation*

It is immediately clear that what we said in the "age" section is consistent with the **Boomer generation**. However, the situation is obviously different for all the other generations.

We can take in consideration **Silent generation**, since they are the second generation per suicides number. It is evident that the highest number of suicides are referred to range 55-74 and not to the 35-54 one, which results to be very tinier.
We can find a possible explanation for this data bias by checking the period to which the Silent generation refers. In fact this generation is the one that belongs to those born in the period since 1928 to 1945, and since we have data starting only from 1985 it means that the youngest Silent that we can take in consideration is already 40 years old. So in our dataset, and consequentially in our analysis, we can't have any suicide of a Silent generation individual younger than 40 years old.

Similarly, we can meet the exact same problem while looking at the other generations.
Members of **X Gen.** are born between 1960 and 1980 and that means that we can take in consideration just under 65 years old people. That's the rea-

son why we have such a small amount of suicides for over 60 people.
Instead, for **Z Gen.** (1997-2012) and **Millenials** (1980-1996) we have less
data and they are obviously related to the lowest age groups.
On the contrary, for **GI Generation**, which belongs to the period since 1901
to 1924, we have only suicides related to the oldest people, because they can't
be younger than 60 in our dataset.

Therefore, after having analysed the number of suicides of different genera-
tions based on age, we can not yet assert that the Boomer generation is the
one with the highest amount of suicides because, as we have seen, regarding
the other ones we only have partial data and these do not cover all the period
they should.

5. Assessment

There are different ways to evaluate an infographic:

- Qualitative - Quantitative
  This types of evaluation are respectively characterized by two different kinds of methods: the heuristic evaluation, which aims to highlight the problems of usability and readability of the infographic with a psychometric questionnaire, which is used to evaluate some quality dimensions of the interaction of the users; and the user test, which has the goal of observing user interactions with the infographic through specially designed tasks.

- Absolute - Comparative
  An absolute rating assesses whether an infographic is 'good', while a comparative evaluation compares two or more infographics to understand if there is a significant difference between the two and which of them is the best one.

- Formative - Summative
  Formative evaluation is carried out during the development phase to correct the infographic and re-evaluate it before the final version.
  Summative evaluation is instead carried out at the end of the development phase to verify that the product meets requirements and expectations.

5.1. Users

The infographic must be consistent with the user's expectations, it has to put him at ease with simple but at the same time complete elements.
It must not contain elements of confusion or that lead to some kinds of mistakes. It also aims to lead the user to ask himself questions and to solve them through it.

To balance the cost of the operation and on the other side its effective accuracy, we decided to involve for our evaluation of the infographic a number of 24 users.

5.2. Heuristic evaluation

As already anticipated in the previous point, heuristic evaluation is the process in which the users evaluate the infographic and respond to specially created tasks to identify problems and doubts about it. The output thus obtained is a list of problems that need to be settled out in the final infographic.

The heuristic evaluation that we have created consists of five different tasks that cover all the different macro areas of the project. Users will be asked to answer a simple questionnaire but at the same time also to speak and think aloud in order to express doubts and questions, allowing us to understand even the smallest problems related to the infographic in question. During this phase all the errors made by the same users in responding to the tasks will therefore be noted and the execution time for each task will be taken into account.

5.2.1 Our tasks

Our five tasks consist in answering the following five questions:

1. Take into consideration the two graphs on page 1 (Global suicides overtime) and page 2 (Suicides per 100k inhabitants), both showing the number of suicides by country.
   Which one is the graph showing the country that has more suicides in relation to the population?

2. Look at the graph on page 3 (Comparison between suicides and percentage).
   Which of these three countries - USA, Russia and Japan - has the highest number of suicides in relation to the country's total population?
   In other words, which major country is more afflicted than the others by this phenomenon?

3. See the violin chart on page 6 (Comparison male vs female total suicides).
   Does the phenomenon of suicide mostly affect males or females?

4. From the graph on page 8 (Comparison between average unemployment and suicides/100k population in Europe), can we say with certainty that as unemployment rate increases suicide rate increases too?

5. Considering the infographic on page 10 (Total suicides composition by age range), what is the age range most affected by suicides?

This phase of heuristic evaluation took place entirely through the use of a PC.

The infographic was shown through a story created with Tableau (click here to see it), while the psychometric questionnaire was submitted to users via a google form.

It's also notable that users had full control of the device, they could scroll forward and backward across the history with the only "constraint" of thinking aloud so that we could record all the problems encountered by the users themselves.

5.3. Psychometric questionnaire

For the realization of the psychometric questionnaire we decided to adopt the Cabitza-Locoro scale, and then to conclude it with a final request for an overall evaluation of the whole infographic. This scale allows the assessment of the quality of the infographic on a scale of 1 to 6 for the following four fields:

- Utility

- Clarity

- Informativeness

- Beauty

Figure 5.1: *The Cabitza-Locoro scale in our google form*

5.4. Results

This section will report all the results obtained during the evaluation phases of the infographic and the psychometric questionnaire.

5.4.1 Heuristic test

This test has the purpose of evaluating the work done so far with a "think aloud" protocol, taking into account all the problems encountered by the users throughout the navigation between the infographics and expressed aloud, from which we can be able to figure out how to improve our work.

We involved 3 different users, who found themselves to deal with these three main problems:

User 1	Right after the evaluation phase, since no problems arose, the user has been asked what he thought and what he would like to improve about the infographics. Thus he expressed a doubt about the graph on page 3 (figure 4.3), which seemed to him non easily understandable.
User 2	Regarding the first graph (figure 4.1), the user claimed he didn't notice a clear difference between the colors referring to the scale.
User 3	The user expressed some doubts about the graph showing the correlation between suicide and unemployment rates (figure 4.8). He suggested to remove labels to refer to the specific country, and to replace them with more immediately visible and obvious colors.

After having collected and analyzed all the problems encountered, we made some little changes to the data visualization.

1. We added to the graph on page 3 a more clear and explanatory title, so that it could be easier to fully understand which is the topic we are willing to show with the graph.

2. To solve the second problem, we simply increased the scale of colours of the graph 4.1, to make sure that it would be clear which state has the highest amount of suicides than the other, even in the common case in which their numbers result to be very close.

3. Finally, regarding the graph 4.8 we decided to eliminate the labels, to "color" the dots referring to the different states using their flags.

5.4.2 Heuristic evaluation

We decided to dispense the heuristic evaluation we have already presented to six people, who had to carry out the five tasks we provided. For each user, we asked to provide us the following personal data: gender, age (to select from age groups), level of familiarity with the topic (to choose between three options; beginner, average expert and full expert) and education level.

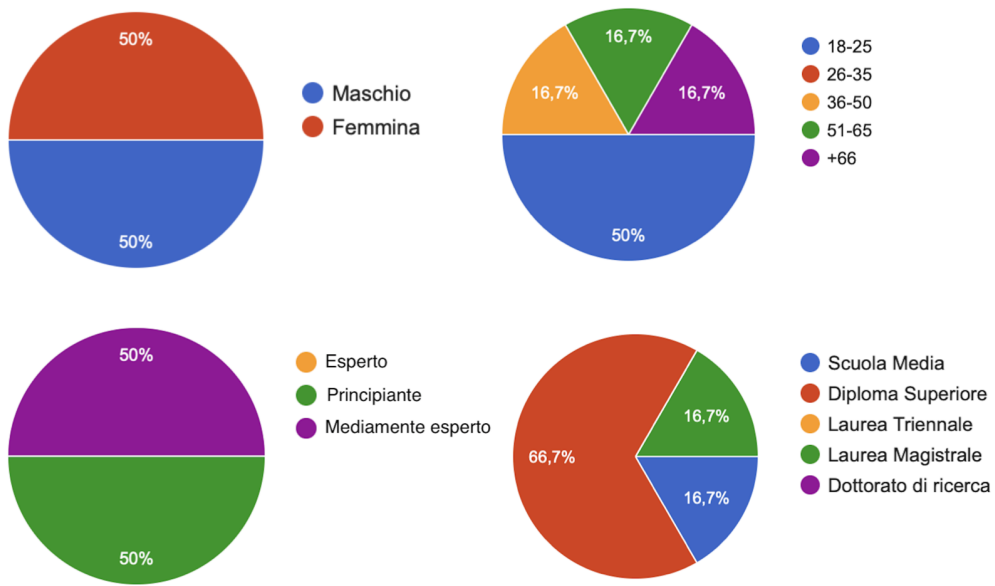| ID	Sex	Experience level	Age	Education level
User 1	M	Beginner	18-25	Higher Diploma
User 2	M	Average expert	51-65	Higher Diploma
User 3	F	Beginner	66+	Higher Diploma
User 4	M	Average expert	18-25	Master Degree
User 5	F	Average expert	36-50	Higher Diploma
User 6	F	Beginner	18-25	Secondary school

Figure 5.2: *Pie charts about our users' general information*

We now report the data we have collected about the time taken to solve each task and any mistakes made.

Task	ID user	Execution time (s)	Execution modality*
Task 1	User 1	73	C-S
	User 2	62	C-S
	User 3	40	C-S
	User 4	80	C-S
	User 5	55	C-A
	User 6	75	C-S
Task 2	User 1	95	C-A
	User 2	120	C-S
	User 3	100	C-A
	User 4	90	C-S
	User 5	110	E-S
	User 6	85	C-A
Task 3	User 1	32	C-S
	User 2	45	C-S
	User 3	35	C-S
	User 4	23	C-S
	User 5	42	C-S
	User 6	61	C-S
Task 4	User 1	65	E-A
	User 2	95	C-S
	User 3	100	E-S
	User 4	50	E-S
	User 5	52	C-S
	User 6	74	C-A
Task 5	User 1	20	C-S
	User 2	15	C-S
	User 3	25	C-S
	User 4	30	C-S
	User 5	25	C-S
	User 6	33	C-S

* in the context of the execution modality, C stands for "corretta" (correct) and E for "errata" (wrong), S stands for "solitaria" (alone) and A for "assistita" (assisted).

The task resolutions registered as "assisted" are obviously the ones characterized by any kind of help or explanation both on the graph and on the question's meaning.

Now we have collected the reasons behind the errors for each task:

Task	Description of error
Task 2	The user claimed to have made the error because, according to him, he was misled by the second question of the task (that, translated from Italian, says "in other words, which is the country most affected by this phenomenon?"). In his opinion, if there wouldn't have been this second question he would have done the task right.
Task 4	All the three errors referring to this task have the same reason behind: according to all the three users who made it wrong, there wasn't a such significant correlation to answer "yes, but just in some situations".

Luckily, about tasks 1, 3 and 5 no errors were recorded. In particular, for tasks 3 and 5 no request for help has even been made.
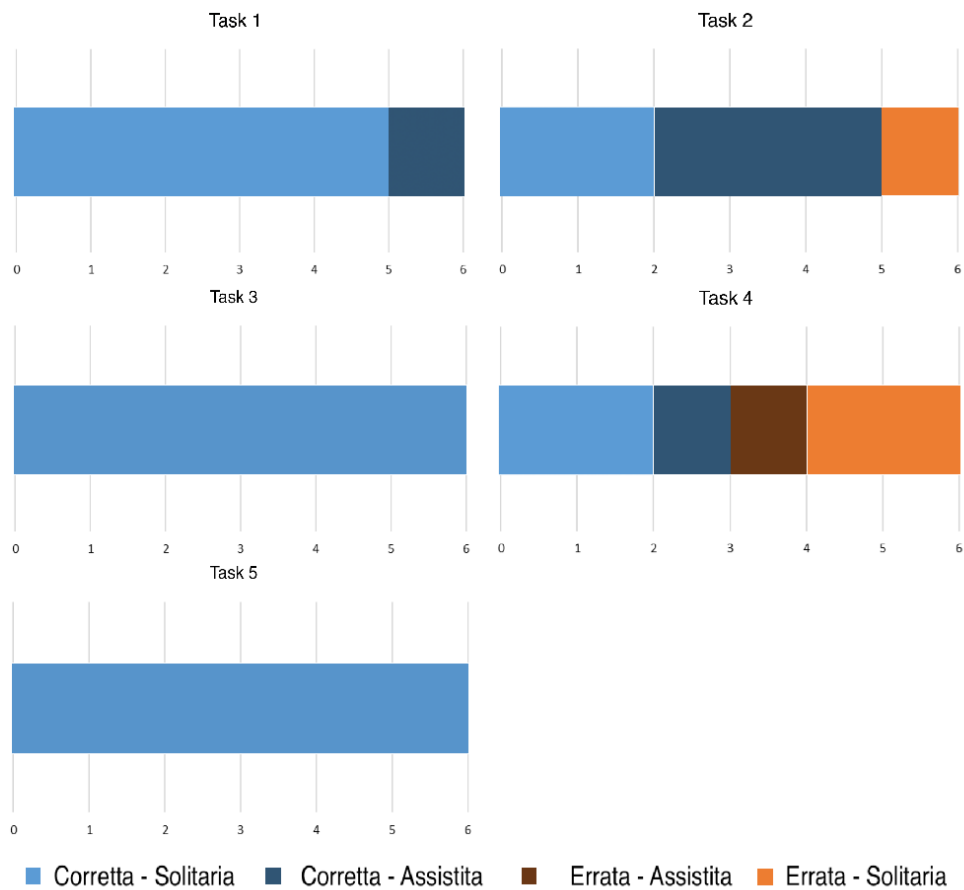

Figure 5.3: *Users' performances on the five tasks*

After having analyzed all the kinds of errors occurred, we proceeded by taking in consideration the execution times for each task. To do so, we created a violin plot, aiming to have immediately clear the variation of the execution times in carrying out the tasks.
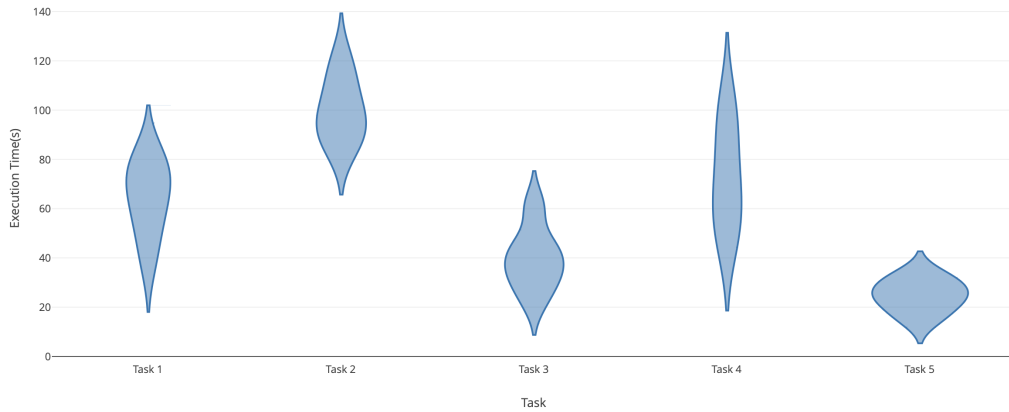

Figure 5.4: *Violin plots showing the distributions of the execution times for each task*

Looking at these plots, we can instantly notice that the execution times regarding tasks 3 and 5 are relatively low, or at least lower than the others. There's probably a correlation with the fact that tasks 3 and 5 are also the ones for which no error was ever made, while regarding the tasks that were found to be the most difficult (tasks 2 and 4) times are more heterogeneous and tend to be higher.

5.4.3 Psychometric questionnaire

Finally, we provided the psychometric questionnaire with the Cabitza-Locoro scale to 24 users. We now report with the bar charts below (figure 5.5) the analysis regarding the data we collected.

Valuta la qualità dell'infografica riportata in questa pagina dando un valore da 1 (pochissimo) a 6 (moltissimo) a ciascuno dei seguenti aggettivi.
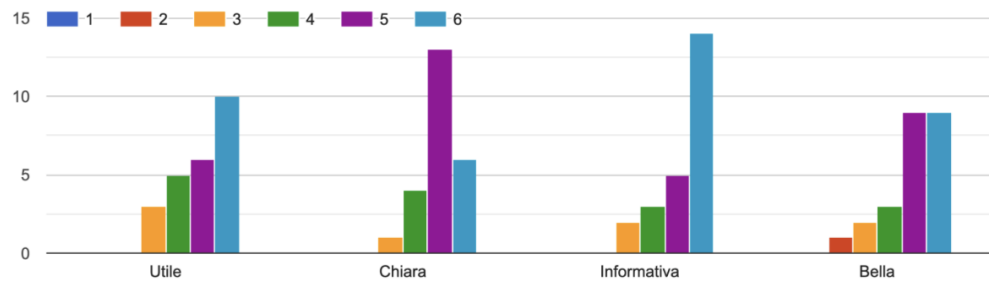
Valuta infine l'infografica indicando un valore di qualità complessivo da te percepito.
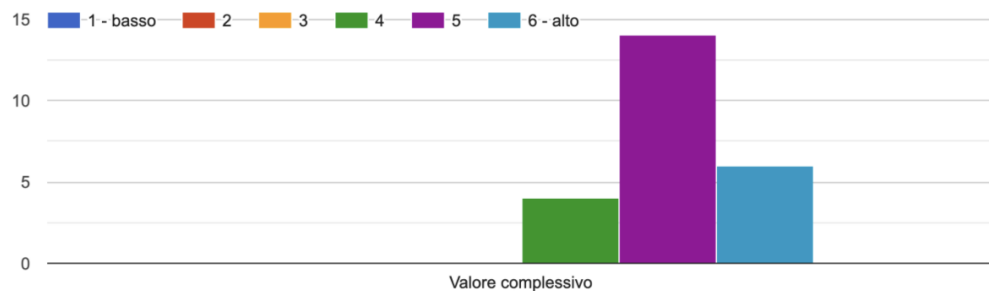

Figure 5.5: *The results of the Cabitza-Locoro scale administered to 24 users*

As we can see the infographic has been appreciated by most users, with 4 as the lowest grade given for total value. Even if the majority of users described themselves as "beginner" (58, 3%) on the subject of suicide, they found the infographics mostly clear (roughly 54, 2% gave a score of 5) and informative (58, 3% of users gave a score of 6, the maximum one).

6. Conclusions and future developments

As we have seen across the assessment phase, our work has been appreciated by the people subjected to our questions; particularly we are glad that we have received a positive response about clarity and informative aspects.

From our point of view, we think we can say that our analysis have aroused a fair amount of interest because the topic we decided to address is surely an argument of general concern, curiosity and debate, and, as we understood in the course of our work, is full of cliches and false beliefs in the public opinion.

We certainly would have loved to explore other aspects, as the reasons that could lead people to commit suicide, or even more delicate matters like euthanasia, but considering that we thought all our project to be exploited by inexpert people, and above all considering a huge lack of data about these topics, both for privacy, moral and political reasons, we decided to focus just on the aspects that we have actually covered in our final work.
Despite all that, this hint is surely a good start point for some future projects, involving more accurate social analysis.

As we said, we found out that the topic of suicides wasn't as clear to us as we thought, but there are a lot of shades we weren't fully aware of. In fact, analyzing our hypothesis in hindsight, i.e. with a proper feedback given by our data, we can notice how there are some inconsistencies between our first previsions and the final outcomes.
We firmly believe that this is a crucial point and something to think over, because perhaps more accurate and precise information and education from an early age could avoid and prevent many suicide cases, while in our opinion nowadays suicides are still a taboo subject treated too dismissively and not effectively.

Changing perspective, from a purely practical point of view we think we can consider ourselves very satisfied about our work, since we are a group

with people from different backgrounds, and none of us have ever had the chance to work with Tableau before (many even ignored its existence).

We believe that this tool is very helpful to represent data in a graphical way, making it easier to understand the phenomenon itself. We also think that Tableau may prove to be very useful throughout our future working career. Moreover, we learnt how to choose the best graph in all circumstances, aware that the first idea is not always the best to represent our information.

If you are struggling with suicidal thoughts, it is important to seek help. There are many resources available to you, and you don't have to go through this alone. If you need someone to talk to, please don't hesitate to reach out.

If you have suicidal thoughts or you think you may know someone who does, call 02 2327 2327 or, on whatsapp, 324 011725, or as an alternative visit www.telefonoamico.it.