PROJECTPROPOSAL

Italian healthcare system

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Introduction

Global aging is increasing rapidly, from 461 million people over 65 in 2004 to an estimated 2 billion people in 2050, which has major implications for the planning and delivery of health and social care (Brivio, et al., 2019). Due to the rapid increase in the elderly, the pressure on care increases. In addition, it should be noted that people live at home longer and move less quickly to a nursing home.

The COVID-19 pandemic is also causing major changes in healthcare, worldwide. A lot more people get admitted to hospitals, but also staff struggle with the virus themselves, which means that fewer staff are left to take care of these people. In addition, a lot of appointments, that did not have to take place immediately, where postponed to later. This means that these appointments need to take place sometime in the future, which keeps the pressure high in hospitals etc.

Both cause a large increase in the demand for healthcare, which means that people are lagging behind the facts within the care sector. The shortages in healthcare are also becoming increasingly apparent. The illustration above provides an overview of everything that the COVID-19 virus has brought with it.

Requests for help to partially solve this problem are coming from many countries, including Italy. This project will take place in Italy, where the problems with shortages within the healthcare will be examined. The question from the supervisors of this project is as follows: *"How can we ensure that the shortages are filled and that the care recipients receive the care they need?"*

To look at solutions to this problem, a number of meetings were held to come to the core of the problem. After a number of meetings it became clear that something had to be done about this problem, so we looked at the best way to take on this problem and come up with a solution. The problem that is becoming clear is that there is a major shortage of healthcare professionals, as a result the care recipients do not receive the care they need.

This project will therefore look at the accessibility of care for vulnerable people. In addition, the shortages within the care sector will also be examined, just as possible solutions to this.
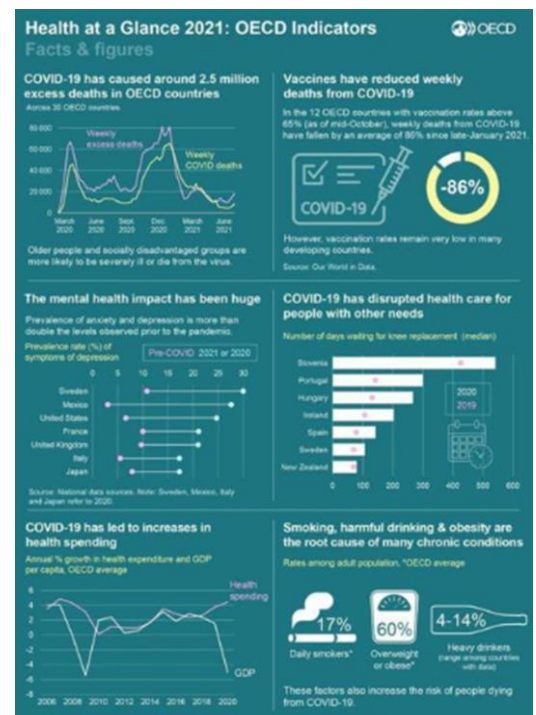
Problem and question

Cause

In order to get a good overall view of the problem and the question that arises from it, a number of meetings have been planned with the supervisors. During the first meeting, it was said that Italy's healthcare system is somewhat outdated, making it unprepared to cope with major changes, such as the COVID-19 pandemic.

Also the funding of healthcare is different per region. The state looks at how many people live in a specific region and what kind of illnesses are common in this area, due to this they give resources that go with the region. The state gives more money to the regions that need it more. Because of this system there is a competition between the regions about the healthcare and how it is organized. Because of this, a lot of healthcare professional look for different places to work. A place where they get a higher salary.
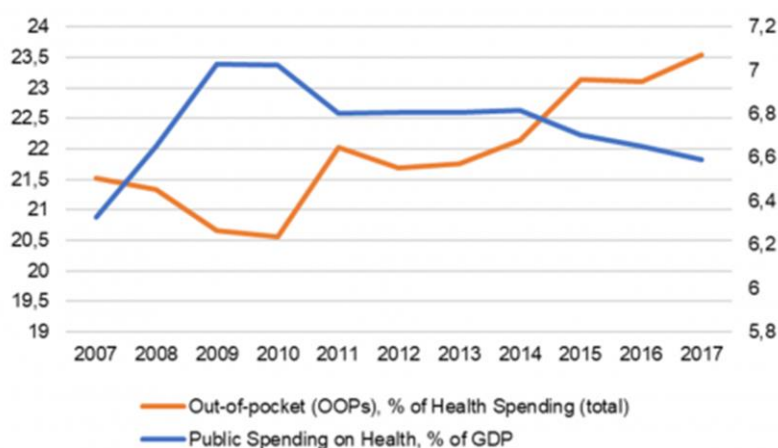
After a few meetings, it is clear that the lack of healthcare professionals is a big problem. This is something the supervisors want to look into.

Problem analysis

After the Covid 19 pandemic, though some
 problems already existed before that, it turned out that the healthcare system in Italy has its shortcomings. The resources for, for example, a nursing home have been greatly reduced over the years due to budget cuts. This means that elderly people with or without chronic illnesses cannot always get the help they need and/or have to wait for a long time. The aging population, together with the neglect of the aging population in recent years, means that, for example, there is not enough staff to cope with the influx of older people and thus care demands.

There are lessons to be learned from the current COVID-19 pandemic. For example, the Italian decentralization and fragmentation of health services seems to have limited timely interventions and effectiveness and stronger national coordination is needed.

Because of an increase in the 'out of pockets', as you can see in the image, together with payments and the years of budget cuts in the public care system, healthcare is a lot less accessible for the people with a low SES, social economic status (De Falco, 2019)

Out-of-pocket (OOPs), % of Health Spending (total)
Public Spending on Health, % of GDP

In addition, the capacity and financing of the health care system should be more flexible to deal with exceptional emergencies (Armocida, Formenti, Ussai, Palestra, & Missoni, 2020). For example more ways to hire nurses and health professionals faster, to intercept the sudden increase in care questions. According to the answers that got collected through the interviews, this is something that is currently and for the future most needed.

Nursing home Cortina d'Ampezzo

The head of nursing in a nursing home in Cortina, has said for example that there are only three nurses actively working in a home with about 60 residents. The nursing home got help from the public sector but during Covid all nurses got called back to the hospitals because of the shortages. One of her reasons for the shortage of nurses is that the younger generation of nurses is less interested in working in the elderly care, because of a lack of passion and interest. The younger generation prefers working in a place where they can make more money.

In Italy the payment for nurses is 40% less than in the rest of Europe. Someone who works in retail has a comparable salary as a nurse working in a nursing home, even though there is a difference in responsibilities and workload. Also, the Covid-19 pandemic brought a lot of mental health problems for patients and staff. The facilities do reach out to get the staff the care they need, but there is a lot of shame and the worry that they will lose their job if management finds out.

In addition, you are more assured of a job in the public sector. A lot of nursing homes in Italy are part of the private sector. These facilities don't get the help they need, for example in finding more nurses, from the national healthcare system.

The nursing home in Cortina, Casa di Riposo, is part of the private sector and welcomes people with a low need of assistance. It was at first designed to be an open and social home where people could come together and do activities as one community. The care homes are built to be social not to be isolated, so when Covid came there was not a good option to separate the elderly living in the homes. Therefore the virus had the opportunity to spread faster. As told by the director of Casa di Riposo, the home was not prepared for an infectious disease, so isolation of patients during the covid pandemic was difficult. The home is wondering how this will go in the future, and they have to look at the buildings again to keep it a social community facility but it also needs to be able to prevent rapid spread of infectious diseases. This is something that is going to be an important topic to take into consideration for future plans.

According to the deputy mayor of Cortina the work during Covid became harder, the way people worked and lived has changed. The management of the work and the everyday life was chaotic and isn't working but it is understandable because no one was prepared.

The main problem of the healthcare system right now in Cortina, according to the deputy mayor, is the lack of access to care. The main hospital is far away and there aren't enough doctors and nurses in Cortina.

In the public health sector for example in the hospital, the shortage of staff was a big problem. Hospitals had to close entire departments to accommodate covid cases, the number of health personnel was not nearly enough to assist all the patients. This also led to an increase in postponed appointments and diagnoses, which put already vulnerable people even more at risk.

If we take a look at addiction facilities we see similar difficulties.

Casa Aurora

"The healthcare system is old, it is not prepared for new challenges such as covid-19"
*   - Director of Casa Aurora.*

Casa Aurora provides services to mothers struggling with addiction. It's a residential community where all the mothers live together. The services consist of various types of group psychotherapy, individual psychotherapy and social/employment reintegration support. Patients are sent in by state-run pathological-dependency facilities (SerD), from both the Veneto region and the rest of Italy.

An example of a model that is used in the facility:
1. Assessment of mothers personality and their parental competence;
2. Indirect assessment of the children through information gathered from the perception that the mothers and educators have of the children;
3. Direct assessment of the children;
4. Possible therapy interventions to implement

This model proposes a possible way of evaluating the mother-child relationship and both members individually, in order to implement a therapy path aimed no longer only at mothers, but also their children. During the therapeutic phase one, they focus on the health of the mothers. During phase two they focus on the rehabilitation of the woman back into society, like finding out what their passions are and learning life skills like cleaning and cooking. The main goal of the facility is to get the mothers as independent and self-reliant as possible. During the interview it was noticed that the institution is experiencing difficulties in strict procedures and protocols along with the budget, limiting the provision of care to frail mothers.

Villa Renata

"The view on (ex) drug addicts is old just as the healthcare system itself after covid 19, which makes it harder for the clients to reintegrate in society"
-Manager and psychologist at Villa Renata.

Villa Renata is a home for addicted young adults between the ages of 18-25. The villa Renata therapy community provides residential care services, therapy-rehabilitation treatment and socio-occupational reintegration for people addicted to drugs and alcohol who require intensive and specialized psychotherapy assistance.

The founding principle of the community is to accompany patients towards an awareness that facilitates their emancipation from drug addiction, satisfactory integration into the world of work and social inclusion. The institution is experiencing difficulties in the budget for the therapies, the distance that has arisen due to the Covid-19 between client and educator and between the educators themselves.

FABER/ISRAA – Brogo Mazzini/Centro Specialistico Demenze

To get even more perspectives on the healthcare system interviews were held with the international organization FABER, which is a part of the ISRAA (Institute for Hospitalization Services and Assistance to the Elderly). Faber is a place where innovative projects are being made and set up regarding the aging population. Their goal is to assist the aging population in their needs but also to focus on preventive ways to reduce the healthcare demand and with it, the pressure on the healthcare system.

Amazing initiatives are for example the Borgo Mazzini smart co-housing organization. This organization provides an innovative way of senior living in Treviso. At the moment, the cohousing

project offers 44 apartments to elderly people aged 65+, and they are still growing in apartments. The principle of cohousing is to offer a safe environment in which the autonomy of the resident is preserved. The first aspect that is taken into account when creating an apartment is the furnishing and architecture, it must be accessible to everyone. Attention is therefore paid to the safety of the resident in the apartment and whether it is ergonomically correct for someone in a wheelchair, for example.

In addition, the social and autonomy aspects are included. The organization is based on the wishes and needs of the residents, for example there is a walking group that residents but also elderly people from the area can sign up for. A garden has also been created where the entire community can come together. These ideas and activities have emerged from meetings with the focus group, which includes a number of residents of the cohousing apartments, but also people from the surrounding area.

In this way, the elderly increase their contacts and remain involved in society in the city. During the pandemic it was difficult to keep these contacts, but this was solved by having a lot of contact over the phone. Due to the covid situation, the residents were able to see how important it was to have those contacts, for example, with the neighbors.

Another initiative from ISRAA is the Centro specialistico Demenze. This is a centre and a nursing home that specializes in dementia. They focus on the different stages of dementia and the needs and wishes of the patients. The nursing home provides special wandering gardens, sensory rooms and a lot of walking and wandering space for the patients, while still making it feel like a home for the patients. In an interview with a psychotherapist that works here and works on a lot of projects, the following was learned.

Care for caregivers

The Alzheimer Network organizes a path with a number of appointments at home with the caregivers, the person with dementia, psychologists, etc. to guide the person with dementia. The psychologist talks to those involved and does an assessment, what are the main needs of the family, cognitive help, assistance with mobility, social activities, speech therapy. This all happens at home. For example, the thickening of drinks is explained to family so that they can do this for the patient themselves.

200 families a year are helped by this organization. In this way, families are prepared for the follow-up in the nursing home, they know exactly what kind of care will be provided and in this way they are also more involved with the care giving in the nursing homes.

Services in small groups

Cognitive stimulation groups, for people with early stages of dementia. There are 14 meetings, twice a week for 2 hours.

Alzheimer café

Created in the Netherlands in 1997. This was set up to change the stigma people have about dementia. Here caregivers can speak freely, with psychologists, psychiatrists, nurses, etc.

A project they also want to set up is to test brain functions for people who do not have dementia but who are over a certain age. This way people know where they stand and professionals can prepare for possible patients etc.

Problem definition

A short conclusion of all the information gathered is that, covid 19 shook up the care system and because of the shortage of staff, not all people will be able to get the help and care they need, mostly elderly people. All of this makes the accessibility to healthcare a lot more difficult.

There are not enough healthcare professionals to cope with the increase in healthcare demands. Due to the aging population, i.e. the increasingly older elderly and the reduced influx of healthcare students, there is more demand than supply.

In the past, little thought was given to the future increase in healthcare demands, as a result of which little or no investment was made in healthcare training/schools.

Now especially after Covid 19, but also before that, the consequences are being experienced. Staff shortages in care homes, hospitals and other institutions lead to long waiting times, which leads to delays in care, which leads to poor access to care for vulnerable people.

Actions to further investigate the paradox:
- Literature research
- Research on creating a platform (practical)
- First set up of the platform and test it
- Process feedback
- Look into why fewer and fewer students choose healthcare studies
- What is the difference in salary
- Which diplomas correspond nationally

Question/objective

At the end of the project we will have set up a platform where multiple countries can work together to reduce staff shortages. But not only to reduce shortages but also a place where international professionals can come together to share experiences and ask questions. Supply and demand can be matched to each other and new experiences gained.

Research method

Because the problem is quite complex, it will be worked in an innovative and entrepreneurial way. Design Thinking offers a different way of thinking looking at complex wicked problems.

This design-oriented research is thus shaped by means of the Design thinking method. "Design thinking emphasizes the short-cycle testing of prototypes in order to sharpen both the problem and the solution for users" (Smit, 2018). Design thinking focuses on people, i.e. the stakeholders. In this case, it will be employers and employees. Ultimately, the goal is that the vulnerable people such as

the elderly benefit from this, because there is more supply for the increase in health related questions.

To further develop the prototype, the opinions and experiences of employees, educators, psychologists, directors will be constantly taken into account throughout the design process. In design thinking, there are 5 different phases that distinguish themselves during the design cycle, which helps with the traceability of the process (Dekker, 2020)

Phase 1: Empathize

During this phase, the analysis of the client's question and the problems of the stakeholders, begins. The stakeholders of this project are vulnerable people, employers in the healthcare system and healthcare professionals. In order to collect the opinions and experiences, interviews were conducted with various stakeholders as written above. In addition, surveys were distributed among care recipients in a hospital and an addiction clinic for young adults. In order to analyze the information, the interviews and surveys have been summarized. During this phase different tools from the design thinking method were used to further empathize. Appendix: Problem Paradox, watchtower, mindmap.

Phase 2: Define

From above's exploratory phase, a problem analysis, objective and question have been formulated therefore defining the problem.

Phase 3: Ideate

During this phase there will have been enough information gathered to start thinking about ideas and solutions.
During this phase several tools will be used from the design thinking method to create innovative and creative ideas. Brainstorm sessions and the decision matrix will be used during this phase Thinking in solutions is central at this point.
Contact has been made with the international organization FABER, this is a place where innovative projects are being made and set up regarding the aging population.

Phase 4: Prototype

During this phase the first prototype will be made.

Phase 5: Test

During this phase interviews will be held with healthcare professionals and students from different countries, their opinions and experiences will be analyzed of the prototype and use this information to further adjust the prototype.

End report

Important results and Goal

The research showed that here is a need for an easier way to work together with other countries to overcome the problem and rise above it. There was a need for a place where healthcare workers can share concerns and questions, a place where they can help each other to better the healthcare system piece by piece.

The idea was to set up a platform where multiple countries can work together to reduce staff shortages. But not only to reduce shortages, also a place where international professionals and students can come together to share experiences and ask questions. It's important, especially in this day of age after covid, that we as people help and support each other so we can provide the best healthcare to people. The idea was to create a space where supply and demand in healthcare settings can be matched to each other, innovative projects by the younger and older generations can

be set up and new experiences can be gained. All on one easy platform, and without the risk of catching covid.

First prototype – conclusion

With the research in the veneto region, there are a lot of new principles and ways that are done differently in Italy by healthcare professionals compared to the Netherlands. For example, the different departments for different levels of dementia in the dementia center in Treviso, where there is a better response to the autonomy of the residents. Or the many activities that educators devise and carry out with the residents of the addiction clinic.

Those different perspectives and ways can break old habits of care homes, for example, and bring new perspectives to light. By exchanging this kind of information, healthcare institutions in other countries get an interesting opportunity to develop further and look at the future differently. It also emerged from the interviews with the stakeholders, that this contact with other professionals was considered important. Especially after the covid 19 period, it has been shown that exchanging information can help develop and improve care.

The platform contributes to the shortage of healthcare professionals in several countries in Europe. It was important to make the platform available for multiple interests, so that it can meet as many different needs and wishes as possible. In this way, the platform is more accessible to more people.

This means that you can find a forum on it where healthcare professionals from different countries can work together on issues. There is also a section with project proposals and a section with vacancies for internships. The platform is accessible to companies and organizations, as well as to healthcare professionals and students. With this platform we hope to be able to support international professionals and students in finding a suitable job/project/internship/goal.

An investigation was carried out into whether a comparable service already exists. Similar websites are already available, but not specifically for healthcare professionals together with the possibility of the forum and the different directions (projects/vacancy/internships).

What sets this platform apart from other platforms is that it deals with healthcare and healthcare professionals in Europe. There are not only vacancies for full-time jobs, but also internships and proposals for innovative projects. Furthermore, comparable sites such as "work the world" and "Velocity Global's International PEO (Professional Employer Organization") do not yet put you in contact with potential employers and other healthcare professionals, only general information is given about working abroad. Healthbeyondborders.com is a place where supply and demand can emerge, new innovative collaborations can be established and experiences and stories can be shared.

This platform won't solve the overall lack of healthcare workers but it will help with filling up some places where people are needed. Also this will make life much easier for (future) healthcare professionals who are interested in studying or working abroad and it will create more unity between the participating countries.

Discussion

The design, the main outlines and the needs of the stakeholders have already been taken into account in this first design of the platform. Of course there are always points for improvement and ways to further develop this product/service in order to get the best results out of it. Points that were not yet able to be executed because of the timeframe.

The first thing that is important to continue with in the future is to broaden it. This means involving more organizations, for example the EFN, institutions and possibly schools in more countries in Europe. Furthermore, the site must be promoted by means of social media, among other things, in order to reach the target group, so that there is more interest about the platform.

Finally, our advice for the future of this platform would be to allow more students who do a technical or communication course to get started with the platform.

Attachments

Attachment 1: Design Thinking Tools used

Watchtower

Problem paradox

Ageing population

Because:	**Is this what is happening:**
Italy is dealing with ageing population	There are more elderly that require care.
Because: The ageing population wasn't taken in consideration enough and the COVID-19 pandemic + the number of healthstudents going down	**Is this what is happening:** there is a shortage of healthcare staff and the required care isn't always there.
Because: There is a shortage of healthcare staff and the required care isn't always available	**Is this what is happening:** The workload is increasing and the accessibility of the healthcare is therefore not improving
Because: The workload is increasing and there is an increase shortage of healthcare staff	**Is this what is happening:** There is being looked into solutions on a national and international level to decrease the shortage of staff

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