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Alexa, How Do I Feel Today? Smart Speakers for Healthcare and Wellbeing: an Analysis About Uses and Challenges

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Abstract

One of the artificial intelligence applications with an increasing popularity is related to conversational agents. Indeed, the virtual assistants are conversational agents capable of handling a spoken dialogue with people providing information and various types of services. How can virtual assistants and smart speakers be used for healthcare purposes? The virtual assistant, understood as digital services designed to simulate human conversation and provide personalized responses based on input from the users, currently can be effectively exploited to realize self-care solutions for the people, who can use them to seek information, contact doctors, monitor their health parameters and adherence to therapies; but also, as a hands-free support for practitioners to optimize workflows in hospitals or small clinics. They can be used also to provide useful information for innovative health programs at large scale patient-centered.

This contribution contains an analysis about the use of virtual assistants in healthcare, conducted through the exploration of scientific studies and research dealing with the topic concerning the use of conversational agents in healthcare.

The analysis aims at systematizing current functionalities, through a new cataloging scheme based on contexts of use and end users.

The increasing use of virtual assistants in healthcare can impact society thanks to its strengths. At the same time, a number of critical points have emerged and still exist which provide ground for further challenges need to be addressed to ensure that the associated risks are reduced.

Keywords: *virtual assistants; smart speaker; healthcare; wellbeing; health education; adherence; social detachment.*

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1. Introduction

Artificial intelligence has many applications, one with an increasing popularity is related to conversational agents, "software programs that emulate conversation with humans through natural language" (Luxton 2020).

These agents can take different forms, the simplest and most tested being a chatbot, which usually works through a written text interface. Or, they can be embodied agents, represented by avatars with the appearance of humans or animals, in order to show themselves to their users.

More complex forms of agents are now made possible by advances in speech or voice recognition, "the technology by which sounds, words or phrases spoken by humans are converted into electrical signals, and these signals are transformed into coding patterns to which meaning has been assigned" (Adams 1990) and in natural language processing, which allows machines to process and understand complex sentences given as input by humans in their own natural language.

This is how virtual assistants are born, conversational agents capable of handling a spoken dialogue with people, providing information and various types of services (Curtis et. al. 2021).

In 2011, Apple launched Siri, the first virtual assistant with these features, integrated into its smartphones. Immediately after, it was followed by several IT giants (Microsoft, Amazon, Google, Samsung), who developed their own solutions, embedding them into other devices (computers, tablets, cars).

But the device that is achieving the most success is the smart speaker, a standalone tool, equipped with microphones and loudspeakers, connected to the Internet, which can be controlled by voice thanks to the virtual assistant that is installed inside.

The market of smart speakers and virtual assistants is thriving and expanding, also supported by external developers who have the opportunity to create additional pieces of software, which can extend the capabilities of devices, similarly to what happened with the iOS and Android marketplaces in the history of smartphones. Amazon calls them Skills, Google instead Actions, basically they are the same thing and there is one of them for almost every need, and there is also a wellness and health category.

The potential is high, conversational agents can play an important role in healthcare, supporting both patients and practitioners (Laranjo et al. 2018).

After all, as recalled by Bhatt (2020), the healthcare market is worth \$3.5 trillion in the United States alone (K@W 2019), and it is expected that in the future, a half of health care services will be offered via digital platforms (Basatneh, Najafi and Armstrong 2018), and therefore it is only a matter of time before producers realize the opportunities at stake.

In fact, while until recently the use of virtual assistants in healthcare has been relatively rare (Laranjo et al. 2018), in recent times things are rapidly changing, so much so as to require the birth of new terms like "digital wellness" to encompass all the uses of digital technologies in the health sector (Murthy and Kumar 2015), or the "medical Internet of Things" (Klonoff 2017), defined as "medical device connectivity to a health care system through an online network, such as a cloud, often involving machine to machine communication".

Virtual assistants can now be effectively exploited to realize self-care solutions for the people, who can use them to seek information, contact doctors, monitor their health parameters and adherence to therapies, improving health care and optimizing public health.

This contribution contains an analysis, also based on recent literature, about the possible uses of virtual assistants in healthcare, aiming at systematizing current functionalities and identifying strengths and problems that are still to be solved, in order to understand how this new channel of communication can impact society and help people taking care of their own health.

After this introduction, the contribution continues as follows: the Methods section describes how the analysis was conducted; the Results section focuses on the uses of virtual assistants in healthcare found in literature, proposing a new cataloging scheme based on contexts of use and end users; before the conclusions, the Discussion section analyzes the reasons that make such uses advantageous, together with several challenges that need to be faced to ensure that the associated risks are reduced.

2. Methods

The analysis was mainly conducted through the exploration of scientific studies and research dealing with the topic concerning the use of conversational agents in healthcare.

For the purposes of the contribution, the authors have chosen to focus on studies related to virtual assistants and in particular to those integrated within smart speakers, as defined in the introduction, considering less relevant research related to chatbots or embodied agents.

For this reason, and considering the launch of Apple Siri in 2011 as the starting point for modern virtual assistants, the authors have only considered studies published in the last decade. In this regard, it is noted that despite the time span considered is 10 years, the vast majority of the articles read and selected are concentrated in the years from 2018 to the present, a sign of how the sector taken into consideration is currently prevailing and in evolution.

The two authors have conducted their searches individually, in June and July 2021, on the PubMed, ACM Digital Library, IEEE and Springer databases, using agreed and combined search terms such as "conversational agents", "virtual assistants", "intelligent assistants" and "healthcare", "wellness", "wellbeing".

The articles thus identified by each author were compared to eliminate duplicates and combined together gave rise to a corpus of over 400 publications.

The authors have then cooperated to read the abstracts of these publications, excluding the non-inherent ones, bringing the total of those taken into consideration for the analysis to just over 100. By reading the remaining articles, the authors have proceeded to a final selection, from which 40 studies emerged, which are reported in the references.

The Results and Discussion sections are based on the analysis conducted by the authors on the studies identified.

3. Results

Starting from the analysis of recent literature on the subject, the authors were able to identify numerous use cases for conversational agents in health, and therefore proceeded to the categorization shown in Table 1, based on variables such as context, purpose and target users.

Support. The most widely detected use for this type of tools is as home support for chronic diseases.

In this case, the agent works as a "reinforcement" of the practitioner as much as possible, providing immediate and always available help, letting the doctor handle the more delicate issues, instead.

Analyses and diagnoses by a specialist doctor are generally expensive and difficult to plan. Virtual assistants can help patients, providing them with personalized suggestions, with the doctor's support, based on the data collected.

For example, the HealthAssistantBot is able "to identify the user's condition through a Symptom Checker; to find the best doctor for her by using a Recommender System; to support monitoring of treatments and health parameters; to increase the user's awareness about related symptoms and diseases" (Polignano et al., 2020).

A service of this type would allow patients to wait for the next consultation with the doctor having some advice already available, reducing costs for health care and increasing the chances of access to medical knowledge (Rosruen and Samanchuen 2018).

Zhang and Zheng (2021) analyzed the potential of conversational agents, discovering that thanks to them patients can discover many things about their health status and about specific diseases: "It gives suggestions about the different symptoms to help patients to make clear their condition. According to the user's reply, the chatbot would suggest the doctor who can be consulted in case of major disease".

When dealing with chronic diseases, having an assistant always ready to remember the therapies can be essential. In diabetes, for example, it is important to check blood sugar levels and take medications or insulin at certain times. Virtual assistants can act as a reminder and help patients with follow-up operations.

In this regard, Amazon, already in 2017, launched an initiative called "Alexa Diabetes Challenge", aimed at creating voice solutions to improve the lives of people with diabetes (Basatneh, Najafi and Armstrong 2018). Among 96 proposals submitted, the winner was Wellpepper's Sugarpod application.

Virtual assistants are much cheaper than medical tools, but also very powerful, thus they can deal with monitoring and support for diseases, as well as provide many useful services in other areas. According to Sunshine (2021), it is also expected that there is a marked advancement in the possibilities of these devices to classify diseases based on symptoms detected or listed by users, offering new opportunities for rapid and low-cost diagnostics.

However, in this scenario, the use that appears to be the most promising, albeit risky, as will be discussed later, is relating to mental disorders.

In recent years, digital psychological counseling solutions have multiplied (Abu Shawar 2015), starting with the evolution of the chatbots. When the text input is replaced by speech, then the system becomes more interactive, and may be able to recognize, for example, early signs of depression.

In fact, their use is gradually expanding to various areas, such as cognitive behavioral therapy (Hernandez 2018), suicide prevention, especially in war veterans (Gonzalez 2017), or for more specific situations (Daubney 2018).

Vaidyam et al. (2019) specify that the use of chatbots and virtual assistants can generally improve access to treatments for these disorders, but it is particularly useful "for those who are uncomfortable disclosing their feelings to a human being". In this regard, the

same study cites an experiment done with veterans showing they were more ready to open up to a virtual therapist than to a real person (Lucas et al. 2014).

The great advantage of virtual assistants is in the way they can manage communication with the patient.

The relationship between patient and specialist is irreplaceable, but for the first time, thanks to virtual assistants, there is a system that can replicate this face-to-face interaction, as long as it is always under control.

It turns out, therefore, that such systems can be customized according to needs (Bickmore, Giorgino, 2006), and can even improve the efficiency of certain treatments with the human specialist, who for example has resources limited by his/her physicality, which requires him/her to take care only one patient at a time, dedicating an amount of time that is sometimes not sufficient (Bickmore et al. 2018a).

Health education. Not only people affected by a pathology or who need a specialist can benefit from conversational agents, but also those who are not looking for a specific service; in fact, they can be educated to a healthy and active lifestyle.

This type of goal is pursued in particular thanks to the skills, as defined in the Introduction, where it is the main use.

Already in 2019, the Head of Alexa Health and Wellness, Rachel Jiang, invited developers to create health skills by saying: "These new skills are designed to help customers manage a variety of healthcare needs at home simply using voice" (Chen 2019).

As of July 2021, a search within the "health & fitness" skills category produced over 2000 results, almost doubled compared to what was reported by Callejas and Griol (2021), with data referring to the previous year.

The objectives of the many skills available are the most disparate, but a study conducted by Chung et al. (2018) and more recently also reported by Shin and Huh-Yoo (2020), examined over 300 among the skills of Amazon Alexa and Google Assistant, concluding that most of them are geared towards providing health education to a general audience.

Within this category of use, a specific case that has become prevalent in recent months, given the pandemic situation that the world has faced, is related to information about Covid-19 and vaccines.

The Mayo Clinic, a nonprofit American academic medical center, has developed and launched a skill to keep users informed about the developments of the pandemic, with updates also coming from the Centers for Disease Control and Prevention.

"The 'Mayo Clinic Answers on COVID-19' skill for Alexa offers the latest information on symptoms, prevention and how to cope in a hands-free way using only the voice — a fact that is especially important when we're trying to reduce the spread of a virus transmitted by physical contact", explained Sandhya Pruthi, M.D., a Mayo Clinic physician and medical director for Mayo's Health Education and Content Services (CBS Minnesota 2020).

The issue of vaccines (although not specifically Covid-related) was also used to test the validity of the answers of virtual assistants in the medical field.

The study conducted by Alagha and Helbing (2019) starts from the consideration that the vaccines topic is particularly suitable to evaluate how much virtual assistants are able to identify evidence-based sources, because a lot of inaccurate information often circulates in this regard.

The results of the comparative study show that Google and Apple's virtual assistants perform better than Amazon's, but this could be due to an implementation

choice: Siri and Assistant usually provide links to pages deemed reliable, introduced by a small voice comment, thus leaving the visual channel and the user the task of obtaining the information. "The devices primarily function as a neutral voice-initiated web search", conclude Alagha and Helbing.

Alexa, on the other hand, appears to be programmed to provide a comprehensive answer via voice, but this leads to frequent inconclusive answers. The voice-only way, even if for now grants limited results, could be a better long-term choice, given that studies on the usability of these systems show that users tend to prefer this mode (Budi and Laubheimer 2018).

A further recent study, conducted by Kocaballi et al. (2020), has extended the comparison to other virtual assistants, such as Cortana and Bixby, looking for the one that can provide the most consistent answers to health and lifestyle prompts. The results show once again that at the moment, voice-only platforms provide lower quality responses. The problem is the same: "It is possible that as conversational agents using a voice-only interface have a limited capacity to present large volumes of information, they were unable to answer lifestyle prompts, which were predominantly answered by information extracted from websites".

Active sensing. The third use is more innovative than the others and is linked to the opportunity that smart speakers become hubs, integrating other sensors and connecting to other devices.

In this way, these tools can be transformed into health control centers, able to monitor various parameters and provide help in situations of need.

Thus, it is possible to extend the already interesting capabilities of smart speakers, in order to exploit the principles of computer vision for purposes related to healthcare. For example, systems for the detection of falls can be easily integrated, but also for monitoring physical activity, as long as a camera is available.

This concept can be pushed further, by integrating sensors for biometric or environmental parameters, already used today in several monitoring systems, into the ecosystem, taking advantage of voice interaction.

Moreover, smart speakers themselves have some important potential. Since they are equipped with microphones and speakers, they can be used in numerous sonar- and radar-based active sensing modalities, with interesting healthcare applications for situations such as sleep disturbance, breathing problems or epilepsy (Sunshine 2021).

The same study also analyzed other situations in which sounds can be relevant at a diagnostic level, so much so as to suggest the possibility of using smart speakers as a classifier of disease signals: not only changes in the voice can be early symptoms of Parkinson's or dementia, but by analyzing inflection and speech it is possible to detect signs of mental disorders or depression.

The scenario described here is futuristic, of course, much development and research will still be needed to make it feasible without risk.

Instead, an easier and currently achievable goal is to take advantage of these devices, based on the hearing channel, for hearing control.

The study conducted by Ooster et al. (2019) showed how the current systems for measuring hearing deficits can be reproduced effectively and optimizing the resources thanks to virtual assistants and conversational interfaces, compared to GUI-based systems.

Visit scenario. Smart speakers can be useful not only for the patients at home, but also for health practitioners in other contexts, like the classic medical visit, in a specialist's consulting room or in a small clinic.

Shaughnessy, Slawson and Duggan (2021) depict a scenario that at first sight seems futuristic and difficult to achieve, but on closer analysis it consists of a set of practices that can now be implemented: the doctor, before seeing the patient for the first time, can consult a lot of data on his/her state of health, coming from smart speakers and all related tools, but also from social media, from the websites visited and from the researches made. An artificial intelligence analyzes them and makes them available to the doctor, with the patient's consent.

The hypothesized scenario continues with the use of additional technologies embedded in the room used for the visit, but it is not necessary to go that further.

The amount of data collected even before the visit may be sufficient to help the doctor make a more accurate diagnosis, but also to identify certain problems before the patient realizes that something is wrong, optimizing health care results.

Actually, this kind of use is related to the support mentioned above: if this information is made available to the doctor in the context of the visit, the patient can take an active part in the collection of data by answering questions in the home environment, saving time and resources. That could be convenient above all for older adults, as they are usually homebound (Ponathil et al. 2020).

Finally, always within the visit scenario, these tools can help the doctor make a diagnosis based on symptoms and suggest similar situations based on rare cases, relying on a huge database. That suggestion is then validated by the doctor.

Hospital scenario. In medium and large hospitals, where patients are cared for by multiple practitioners, virtual assistants can prove very useful in helping physicians to keep track of patient care, complementing or replacing current reporting systems, which require a high expenditure of time resources by the doctors themselves.

Although there are still no studies analyzing the impact of these technologies in such an environment, the premises seem interesting and speech recognition could become a pillar of support to the patients (Kadariya et al. 2019).

In fact, according to Farr (2017), "doctors are spending up to two-thirds of their day on busywork, namely clicking fields in their electronic health record system".

In such a scenario, virtual assistants can translate the sentences spoken by doctors and physicians into commands and database entries, optimizing the process.

In addition to being useful to doctors, smart speakers in hospitals can also benefit patients. Cedars Sinai has conducted an experiment providing its patients with the ability to control the environment and have an always-on line of communication with the staff via Alexa (Cedars Sinai, 2019). The pilot showed that patient satisfaction with the care received improved, while staff saved a lot of time spent monitoring patients.

4. Discussion

Through the analysis conducted and thanks to the results illustrated above, the authors were able to collect the main positions in favor of the use of conversational agents in medicine, together with some doubts and challenges yet to be addressed.

Among the advantages, the most cited seem to be:

- Better adherence to therapies
- Support for self-education
- Immediate availability of information, at home

- Low cost
- Non-stigmatizing
- Usability of voice interaction

Adherence. Better adherence to therapies thanks to the use of virtual assistants is the advantage most often detected, also because it helps solving a complex and costly problem.

The theme is so important that the term adherence has earned a specific definition by the World Health Organization (WHO 2003), according to which it is the "extent to which a person's behavior - taking medication, following a diet, and / or executing lifestyle changes, corresponds with agreed recommendations from a healthcare provider".

Just to give an estimate of the value of the matter, the report by Hagan (2015) evaluates the cost faced by the health system for the United Kingdom alone at about £ 500 million per year.

According to Beaney, Kalirai and Chambers (2020), the problem of non-adherence can be divided into two categories: "intentional, where a patient decides not to follow the treatment recommendations; and unintentional, where the patient wants to follow the treatment recommendations but faces practical problems doing so".

While in the presence of an intentional choice it is necessary to act with other techniques to stimulate motivation, virtual assistants can help in cases of unintentional non-adherence, in which patients simply forget to follow the therapy, thanks to alert functions.

Support for self-education. As mentioned in the previous paragraph, virtual assistants can be an excellent health education tool and contribute to the empowerment of the patient, but also of the general audience: being able to make people learn the techniques for a healthy life-style, through specific recommendations, as made for example in the research by Gardiner et al. (2017), can be helpful to both clinical and non-clinical populations, with beneficial effects on national health systems.

Immediate availability of information, at home. Being connected to the Internet, smart speakers give immediate access to an enormous amount of information.

Not only is information readily accessible, but also many services. Thinking about mental health, for example, we can agree on what Kretzschmar et al. (2019) said, that thanks to the digital revolution, interventions become accessible to anyone with a device and a connection, solving the problem of the lack of specialists in certain areas.

But even where there is no shortage of specialists, accessing certain services from the comfort of home is an opportunity that makes the process easier and less stressful.

Low-cost. The devices on the market are sold at extremely low costs, and at the moment there are no subscription strategies, although this may change.

These tools therefore become an excellent access point to certain services. In general, as explained by McCrone et al. (2004), digital technologies are significantly less costly than face-to-face interventions. Smart speakers are even cheaper than computers or smartphones, so they can take this concept even further.

Non-stigmatizing. Virtual assistants can be used in a habitual context with no interaction with other human beings and no risk of being judged.

Such an advantage becomes even more important in situations of mental disorders, where fear of stigma can lead people to avoid seeking help, as reported by Bickmore et al. (2010) and Gulliver, Griffiths and Christensen (2010).

People, especially youngsters, may tend to feel more comfortable interacting with an artificial intelligence, rather than with a human being. This leads to a reflection on the trust people are willing to place in virtual assistants. Leaving aside for a moment the privacy issues, that will be discussed shortly, evidence shows that some people prefer to manage certain situations through online conversations (Livingstone and Bober 2004).

Usability of voice interaction. The last advantage found is due to the structure of smart speakers: tools with a vocal interface and that make use of natural language are generally considered to be easier to use than products with graphical interfaces that require learning metaphors and other dynamics.

As evidence of this, we can cite the study conducted by Qiu et al. (2021), according to which half of the people involved to test a tablet-based application called Nurse AMIE refused because they were overwhelmed by technology, a motivation that prompted researchers to create a version of the same application which can be executed by smart speakers.

As suggested by Følstad and Brandtzæg (2017), voice interaction can significantly improve the accessibility of technologies for digital non-natives.⁴⁵ Virtual assistants can be inclusive tools, helping especially people with limited hand dexterity or limited vision in the realization of tasks (Sciarretta and Alimenti 2021).

This simplicity seems to be appreciated even among the elderly population, as numbers show that people over 55 are the majority among the "first adopters" of smart speakers (NPR, 2018).

The penetration rate of these systems among the elderly population is very encouraging for their use in healthcare, where older people are the main target. Therefore, a solid base of users who learn to exploit the potential of such a tool emerges, this creates a positive impact for anyone who wants to provide for social and health services.

As for the challenges, instead, the authors were able to group what emerged into the following categories:

- Privacy & data protection
- Safety
- Over-reliance & personification
- Risks for behaviour
- (Un)constrained language
- Technical challenges

Privacy & data protection. The most relevant challenge, cited in almost every contribution on the subject, seems to be relating to how virtual assistants process personal information.

Given that the presence of Alexa-enabled devices is now found in many homes and offices, around the world, as noted by Sanchez (2020), the question of how our data is processed affects almost everyone, since it is enough to enter a room where there is a smart speaker to be intercepted.

As also mentioned by Pierantoni (2020), these devices can record, through their microphones, everything we say. In theory they are activated only when the wake-word is said, but they are always listening, and they can also mis-interpret the wake-words, causing unwanted recordings.

The issue of privacy becomes even more important when dealing with healthcare services and health data, which are sensitive.

The problem seems to be the acceptance by people, worried that their data could be used illicitly or improperly, since they end up on the servers of commercial companies.

Still, currently there is no agreement on what information to protect. Privacy, in fact, takes on different meanings depending on the person (Sunshine 2020). Would we all be willing, for example, to allow a smart speaker to monitor the sound of our breathing during the night to analyze the quality of our sleep and detect whether we snore or cough?

Undoubtedly, however, there are situations, such as those related to mental disorders (Miner, Milstein and Hancock, 2017) or medical conditions, that must be protected to prevent them from becoming stigmatizing (Bickmore et al. 2018a), and therefore it becomes essential to identify solutions and set limits.

Even if some countries are applying specific rules, like the Health Insurance Portability and Accountability Act in the United States, still there is no international regulation. Luxton (2020) suggests that this situation can lead to problems for the development of conversational agents, given that, as for the telehealth services market (WHO 2010), the laws can vary greatly from country to country.

Safety. If the purpose is to show that these tools can be useful in healthcare contexts, the first goal should be to do no harm.

Bickmore et al. (2018a) rightly believe that considerations on the risk of harm are the most important and the most difficult to address in the design of automated systems that can advise people on medical issues,²⁰ because people tend to trust them and consider them as authoritative sources.

Unfortunately, this risk is concrete, as pointed out by several studies.

Among others, Luxton (2020) found that the ability of conversational agents to make autonomous decisions can lead to safety risks, and that virtual assistants should recognize dangerous situations and suggest people to consult human professionals.

Wrong advice clearly should be avoided, but there is a more subtle risk: over-information.

As said before, there is a skill for almost any type of problem we would like to examine. But so much information available can lead to uncertainty and anxiety, when dealing with different and perhaps opposite advice. Thus, problems are overestimated and usually solved through drugs and medications (Slawson, Shaughnessy, 2019), which can cause addiction and other troubles.

“Making decisions better means discerning between the right amount of care and too much” (Shaughnessy, Slawson and Duggan 2021).

Once again, the only solution to such problems seems to be based on the awareness that in the most delicate cases people should not rely exclusively on virtual assistants for issues concerning healthcare, but it is necessary to ask a doctor for confirmation. As also said by Polignano et al. (2020), in the creation of HealthAssistantBot, “an automatic system cannot reliably replace an experienced doctor”.⁹

Over-reliance / personification. The risk that people consider conversational agents as friends and confidants, and therefore tend to over-rely on them, comes from a psychological issue, which applies also to other technologies, but it becomes more pressing with virtual assistants that can show a sort of behavior, willingness to listen and caring personalities, but without the predisposition to judgment.

It becomes too easy for people to reveal their secrets to them, risking creating an emotional dependence. In fact, several cases of statements about depression told to smart speakers, up to even suicidal intentions, have been reported (Shulevitz 2018).

Being too dependent on something, be it a human being or a technology, paves the way to a related problem, the risk of losing contact with reality (social detachment).

Since smart speakers are always available, people can think they don't need friends, with detrimental effects on the quality of their interpersonal bonds.

Finally, a reflection on the economic consequences of this over-reliance emerges. Currently the services available through smart speakers are mostly free of charge, but we do not know if this business model will be maintained later on or if it is due to the startup phase.

If services become paid, it might be convenient for producers to develop solutions that encourage over-reliance, in order to engage people more and have higher profits.

Risks for behavior. Interaction with virtual assistants risks changing our behavior, increasing impoliteness and aggressiveness (Pierantoni 2020).

In fact, there is no need to be polite when talking to a machine, since it is programmed to respond in any case.

Research shows that people don't want to be rude to smart speakers (Auxier 2019). However, avoiding too complex formulas becomes a necessity due to the current state of technology, which struggles in their presence; so being impolite and giving orders is an effective strategy in this case (Biele et al., 2019).

On the other hand, being excessively kind to smart speakers would lead to overestimating their abilities, with the same risks of personification mentioned above. The problem is therefore widely debated and arises from the peculiar modality of interaction, based on speech, with these devices. After all, none of us say thank you to their oven.

The question then has to be reversed: "we should not be polite to our voice-activated assistants for their benefit, but for ours" (Gratenberg 2017).

Aggressiveness, instead, derives from the consideration that, because of the state of technology, virtual assistants make mistakes, and these errors sometimes are apparently foolish, so much so as to irritate people, who are therefore led to exacerbate their behavior. As mentioned before, smart speakers are programmed to respond in any case, with a submissive tone, showing no reaction to such behavior, and this may encourage people.

In both cases, the problem is that such behavior can be replicated towards other human beings, as if it were normal, especially in impressionable subjects such as children.

(Un)constrained language. Several studies have focused on whether it is preferable to operate virtual assistants through unconstrained language, where the user can say what he/she wants and the assistant makes the effort to understand correctly, or instead opt for constrained language, where the assistant offers to the user some specific choices, and does not answer to other prompts.

Of course, unconstrained language is much more fascinating, as it fulfills the dream of speaking to a machine with natural language and getting proper answers.

However, research has shown that these systems are not mature enough to allow free interaction without any risk, especially in the healthcare field, where decisions with dangerous consequences can be made.

For example, the makers of HealthAssistantBot (Polignano et al. 2020) explain that "in domains such as health, where accuracy is essential, it is preferable not to leave the dialogue totally free, but to constrain it through alternative methods of interaction in order to reduce ambiguity on the input".

This greatly facilitates the recognition of intents, in order to minimize errors and to have validated and accurate data, necessary when monitoring chronic conditions.

Actually, the accuracy of smart speakers' understanding skills is constantly growing and is now comparable to that of people (Jeffs, 2018). But in healthcare contexts

nothing can be left to chance, so even the smallest mistake must be eliminated before being able to rely on automatic systems. The advice, therefore, is always to ask for further advice from a human specialist.

Bickmore et al. (2018b) ran an experiment to understand the effectiveness of systems that use unconstrained language in similar situations. The results obtained suggest that in 30% of cases the responses of smart speakers can lead to some kind of harm in people, up to death. The study also revealed that the main problem is when the system answers to an incomplete request and ends up providing partial advice.

The research by Kocaballi et al. (2020) reaches the same conclusion, that “using unconstrained natural language input is currently unsuitable for getting advice on safety-critical health topics”.

However, there are a few positions that lukewarmly encourage the use of unconstrained language, as long as certain rules are respected.

The same Bickmore et al. (2018a), for example, give a chance to the use of unconstrained language, provided that the system offers "complete information to patients regarding what it thinks the patient has said, what it understands the patient's intentions to be, and how its response addresses those intentions".

Probably it is a matter of expectations about the devices and the services. If it is made extremely clear that virtual assistants are indeed assistants, and that their answers must always be validated by a human professional, then it is also reasonable to use unconstrained language for health care support or education functions.

To this end, some measures need to be applied to avoid running into dangerous situations.

Unconstrained language can only be used in the presence of a very robust error recognition and prevention system, with recovery strategies such as explicit and implicit confirmations (Skantze 2007) for cases of mis-understanding, or re-prompting or repeating/rephrasing for cases of non-understanding.

Technical problems. Finally, the authors of the contribution have identified a significant number of challenges that can be categorized under the “technical problems” label.

Timing: providing input to the device within specific time limits is a common problem in virtual assistant applications, not just in healthcare. However, there may be situations related to this precise area that lead to further difficulties.

Shin and Huh-Yoo (2020), for example, show how numerous skills related to healthcare and wellness require users to follow step-by-step instructions (for physical activities or particular procedures).

Timing is therefore essential, but it is not always designed properly, as many users complain of not being able to complete tasks.

And the problem becomes even more complex when people with cognitive disorders or sensory disabilities use smart speakers (Sciarretta and Alimenti 2021).

Transparency: voice interaction can facilitate use by people with less technological skills; on the other hand, smart speakers that use only the voice channel have more difficulty in showing their capabilities or simply their operational status.

According to Kocaballi et al. (2020), designers should focus on improving the level of transparency of devices, working on the responses of virtual assistants. When the device fails to respond to a request, it must be clear whether it is "because of

misrecognized prompt, natural language understanding failure, inability to find a response, system failure, or a deliberate choice to not respond to a particular type of prompt".

However, numerous manufacturers have begun to release smart speakers that are also equipped with a screen on the market. In this way, the feedback provided to the user can be multi-modal (Sciarretta and Alimenti 2021) and promote transparency.

Consistency: the same prompt should generate the same response, but that's not always true. This can happen due to the context of use, the skill used, the geographical area and of course, depending on the type of device. But it may also happen that the assistant is programmed to answer the same question differently, to avoid repetition.

However, this should be avoided, so as not to confuse the mental model created by users on the functioning of a specific device.

Indeed, according to the study by Kocaballi et al. (2020), which recalls how consistency is fundamental for usability, virtual assistants should provide similar, if not the same, answers even when they work on different platforms, explaining the differences which can be due to different configurations (presence of the screen or not).

Another type of consistency that must be considered and kept is over subsequent interactions after some time.

Bickmore et al. (2018a) argue that "maintaining continuity over multiple conversations is important in such situations and in healthcare", because continuity of care has a positive impact on care (Walraven et al. 2010). To grant this type of consistency, it is necessary to equip smart speakers with a memory capable of remembering previous interactions.

Length of conversation: what is the optimal duration of a conversation with a smart speaker? In healthcare scenarios, as short as possible.

If persons with a chronic disorder want to use a virtual assistant to get help in certain situations, it's easy to imagine that during the interaction they will not be at their best, and therefore will prefer a less lasting interaction.

In addition, long conversations can be easily interrupted, forcing the user to start over.

5. Conclusions

In this paper, the authors showed that smart speakers with virtual assistants can be useful in the field of healthcare, creating a catalog of the different types of uses based on the context (home, clinic) and the end user (patient, practitioner): thanks to this, they discovered that virtual assistants can offer information to patients, in order to educate them, or support the management of chronic diseases and therapies to be followed, also thanks to connected sensors that can extend the functionality of smart speakers.

Furthermore, if entrusted to practitioners, they can be a valuable aid in collecting data about the patients and can streamline the hospital processes related to compiling health records.

The authors then analyzed the main advantages that can derive from the use of these tools, as noted in literature: in this regard, summarizing the results in a single sentence, virtual assistants can be considered as a valid support for the health self-education (Gupta et al. 2018) of people and for adherence to therapies, offering several services in a way that is immediate, simpler than other technologies (Meier et al., 2019), directly in the person's home, low cost (Davis et al. 2020) and without risk of stigmatization.

However, they also found a relevant number of problems that still exist and challenges that need to be addressed in order to ensure that the associated risks are minimized.

In particular, apart from a series of technical issues related to the maturity of current solutions (timing, transparency, consistency), the most relevant problem is related to the safety of these systems, and specifically to the risk that partial or incorrect advice may cause harm to people. In this regard, the authors found that many studies indicate the use of unconstrained language as the main cause of this risk, and suggest that only constrained language should be used for healthcare applications, at least until it is certain that error prevention and correction systems are reliable, for example by providing mechanisms for confirming the understanding of the input.

The authors agreed with this, but also added that unconstrained language can be used for low-risk situations, while focusing attention on user expectations: it is necessary to make them understand they're talking to a machine and that the advice obtained must always be validated by a human specialist.

In fact, another problem detected is the personification of these tools, which leads users to over-rely on the responses received.

Furthermore, it is also necessary to consider the interaction dynamics established between the person and the assistant, because some behaviors observed in their dialogue, such as impoliteness and aggressiveness on the part of the human, could also be reflected in the interaction with other people, in the long term.

Finally, the issue of personal data security and privacy obviously takes on great importance: in some cases, this problem is so strong that it can cause people to reject such technologies.

That would really be a huge shame, because virtual assistants and smart speakers are proving they can improve everyone's health, thanks to cost-effective and wide-reaching interventions. Furthermore, practitioners can obtain great benefits in their work thanks to these tools, limiting the risks of wrong advice thanks to their knowledge, thus being able to validate the results.

In general, however, further research is needed to find a solution to the problems highlighted and in the meantime it is necessary to remind users of healthcare services on smart speakers that the recommendations provided come from non-authoritative sources and therefore must be confirmed by professionals.

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Tables

Table 1. A new scheme for virtual assistants uses in healthcare

Context	Purpose	Users
Home	Support	Patients / Caregivers
	Education	Generic
	Active sensing	Patients / Caregivers
Visit	Pre-consultation	Doctors
Hospital	EHR	Physicians

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Blockchain in Record Management and Public Administration

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Abstract

A good comprehension of the blockchain technology is very important for stakeholders and employees in governments as it facilitates their decisions and helps in accomplishing objectives. The technology is often seen as a fault-tolerant and indestructible system that can be successfully used as the basis for digital transactions in various areas. Blockchain is a distributed database that stores information about all transactions of system participants in the form of a chain of blocks (thus the name Blockchain). All users of the blockchain have access to the registry, acting as a collective notary who confirms the truthfulness of the information in the database. Blockchain can be used for financial transactions, user identification, creation of cybersecurity technologies, etc.

Apparently, the strongest advantage of blockchain technology in public administration and record storage is the ability to store data permanently and, in a tamper-evident manner. In fact, it is extremely hard to tamper the data stored in data services based on blockchain technology due to its decentralization and cryptography.

The article aims at revealing the potential applications of the blockchain technology and highlighting the challenges and possible directions of blockchain research in the public and private sector.

Keywords: *blockchain; public administration; record management; public records; blockchain application.*

1. Introduction to Blockchain and its use Cases

At the beginning of July 2020, the consulting company Deloitte summed up the results of a global survey and concluded that blockchain is turning from an experimental technology into a strategic priority for organizations (Deloitte 2021) (See figure 1).

Nearly 1,500 senior executives across 14 countries participated in the survey, with 39% of companies already moving their blockchain pilots to production, up from just 23% in 2019. What's more, 83% of respondents in a Deloitte survey believe they will lose competitive advantage if they don't use blockchain. In 2019, only 77% of respondents thought so (Deloitte 2021).

At the end of February 2019, the Hired service, which allows job seekers to find vacancies and respond to employers' offers, reported a huge surge of interest (by 519%)

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from companies in programmers with experience in developing blockchain technologies (Hired 2020).

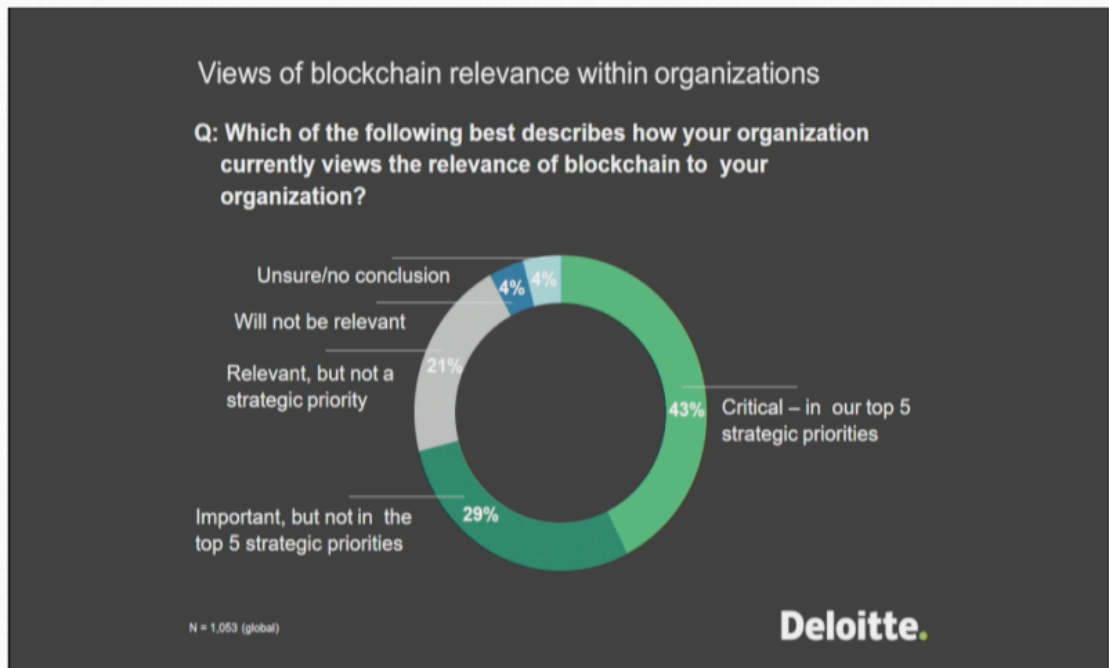


Figure 1. Blockchain relevance within organizations. Source: Deloitte Global Blockchain Survey

Blockchain is a distributed database that stores information about all transactions of system participants in the form of a chain of blocks (thus the name Blockchain). All users of the blockchain have access to the registry, acting as a collective notary who confirms the truthfulness of the information in the database. Blockchain can be used for financial transactions, user identification, creation of cybersecurity technologies, etc. (Deloitte 2021).

Apparently, the strongest advantage of blockchain technology in public administration and record storage is the ability to store data permanently and, in a tamper-evident manner. In fact, it is extremely hard to tamper the data stored in data services based on blockchain technology due to its decentralization and cryptography. Data can be fully and permanently recorded, saved and be auditable in the blockchain system. Data stored on blockchain can be submitted to a general purpose and publicly available hash function whose output serves as a “fingerprint” or “timestamp” of the document or comments’ contents at that time. The hash output can be stored on a blockchain ledger in a manner that is very difficult to remove. While hash functions are by no means dependent on the use of blockchain technology, their records on blockchain ledgers are indisputable and challenging to remove (World Economic Forum 2020).

Of course, it is possible for non-blockchain-based databases to employ cryptography, such as public-key cryptography, to also create record-keeping systems where document or record modifications would be difficult and evident. However, in such systems, it is impossible (or at least very difficult) to guarantee that a central administrator has not deleted records entirely – a function that is possible with blockchain technology

and is very relevant to public procurement process integrity and transparency. Further, compared with centralized database systems, blockchain technology also entails a very high degree of embedded public transaction transparency and censorship resistance, where transactions (e.g. a vendor's bid offer submission) are visible in real time, difficult to block, and undeniably sent to and from a specific address that can be known to be associated with particular actors (World Economic Forum 2020).

Other evident advantages of the blockchain include transparency, trust, high transaction speed, which, it would seem, meets the solution of traditional management problems (in particular, low-dynamic bureaucracy and corruption). One of the first studies on distributed ledger technologies noted the large role of a common ledger in "unifying" a shared source of reference data (government agencies across the country will work with the same reliable information), which reduces the likelihood of inconsistencies (Distributed Ledger Technologies 2017). On the other hand, in the case of the use of blockchain technology in public administration, its use may be controversial, in contrast to its use in the private sector. For example, one of the advantages of the blockchain - the immutability of records - does not always satisfy lawyers and GDPR.

Another quality of the blockchain that worries lawyers is anonymity. It is the anonymity of bitcoin transactions that underlies its long official rejection and even opposition from the state. But this fear has largely lost its relevance, because during the mass testing of the technology, it became clear that the blockchain is not as anonymous as it was commonly believed. Indeed, the blockchain system serves as a virtual record of all transactions on the network, available to all users of the blockchain. The "transparency" and public availability of the blockchain means that any user with a sufficient level of computer literacy is able to trace the digital footprints of anonymous traders. Since a complete record of all transactions is kept, including information about who added the data or transactions to the blockchain, then in the case of fraudulent data, it is possible to establish who provided this data. According to the EU Commission, a number of private firms have already emerged that specialize in deanonymizing bitcoin transactions.

Generally, blockchain technology has become famous with the appearance of Bitcoin, created by a person (or group of people) with the alias of Satoshi Nakamoto. Nowadays, blockchain can be applied beyond financial transactions, for example, the Ethereum platform, which uses Blockchain, allows for a secure ledger to enable decentralized and generalized transactions (Wood, 2014). In this concept, various types of transactions can be executed, from the creation of tokens or currencies for each venture to making smart contracts, more complex transactions secured by Blockchain properties.

2. Cases of blockchain application in public and record administration

Some states are either already using blockchain in their governmental structures or seriously considering doing so. As an example, at the beginning of September 2020, the Danish Ministry for Development Cooperation published a report acknowledging blockchain as an effective tool in the fight against corruption, especially in refugee camps. Blockchain provides increased oversight of businesses, governments, and stakeholders, thereby cutting off many corrupt ties.

The report identifies blockchain technology as one of four ways to fight corruption. One of its main consequences is considered to be "corrosion of trust", and the Danish ministry believes that the blockchain will help restore the public's trust in government. Secure and transparent data recording is actively used in Denmark to entitle

refugees to aid, land and cash benefits, and to prevent fraud. The benefits of using blockchain include the low cost of money transfers, the reduction or even elimination of intermediaries such as banks, and the possibility of electronic identification.

However, linking identity to data raises privacy concerns and "right to be forgotten" concerns. The European General Data Protection Regulation (GDPR) provides an individual with the right to have their data deleted. However, the very nature of blockchain technology does not allow changing or erasing the entered data. Ministry officials said in the report that they understand this problem and are already studying how to solve it.

On February 27, 2019, the consulting company Booz Allen Hamilton presented an overview of possible ways to solve bureaucratic problems in government agencies using blockchain technologies.

Booz Allen Hamilton experts argue that blockchain can bring undeniable benefits to the government. Thanks to a transparent and decentralized system, data verification can be carried out by any participant, which will strengthen the relationship of trust between government agencies and citizens. In addition, the use of blockchain for some services will allow independent verification of complaints. Another potential benefit is the protection of sensitive data such as social security numbers, dates of birth, addresses, and driver's license numbers. According to analysts, civil servants are the main targets of hackers. But cyberattacks can be mitigated or prevented with blockchain technology deployments.

Government agencies are certainly interested in the prospect of using blockchain. The diversity of government functions provides an incredibly wide field for blockchain technology and keeps interest and investment flowing. Examples of blockchain use cases in government include voting, automated data entry, record keeping, transactions and account reconciliation, social and humanitarian assistance, asset markets, and giving individuals control over their sensitive data and medical records.

According to analysts, blockchain can increase the efficiency of decentralized processes. For example, the use of blockchain technologies can speed up the collection of documentation from several government agencies that do not have common systems or close organizational relationships. Such use can solve the problem of dispersed processes such as permits and registrations.

Sharing information between government agencies and the private sector about emergency assistance, insurance claims, medical claims, and other multilateral transactions can improve the alignment of these entities and greatly improve citizen attitudes.

Once the data is saved to the blockchain, it cannot be changed or deleted. This allows blockchain to be used as documentary evidence or confirmation of the transfer of digital assets (bitcoins or other digital currency). With the same success, it can be used to store information about the owner of the actual property - in 2017, the effectiveness of such a technique is being evaluated by the National Land Survey of Sweden. With the help of an experimental blockchain-based system, it is planned to digitize the processes in the field of buying and selling real estate. Immutability also allows blockchain to be used as a method of proving the compliance of processes with regulatory requirements - a record of all actions and results obtained in the block chain can serve as an audit trail for regulators.

In addition, the latter can access the internal blockchain of a financial organization almost in real time to view information. This innovation will allow regulators to play a more active role in exercising control and bring them closer to the status of participants in the process. And this, in turn, can significantly reduce the time and effort required by financial institutions to create regulatory reporting. That is, at a lower cost, the blockchain will provide higher quality, accuracy, and reliability of the process.

However, there is a gap between pilot testing and commercial launch that is not only technical - because the business has not yet fully understood the technology, which is still at an early stage of its development.

"Blockchain is 80% business. And I would venture to say that technological problems will be solved much earlier than non-technical problems" (Ledger Insights 2020).

Non-technical issues, for example, include government regulation. In turn, the analysts attribute integration with enterprise resource planning systems and the need for companies to find ways to interact with several blockchain platforms, the number of which is steadily growing, to technical problems (Ibid).

3. The Blockchain and National Security

At the end of August 2020, the consulting company PriceWaterhouseCoopers (PWC) published a report on the benefits of using blockchain in the complex supply chain of spare parts needed for defense production. The document focuses on three reasons why the use of blockchain in this industry is extremely important: increasing transparency, verifying suppliers, and improving security in cyberspace.

As an example that best illustrates the intricacies of the supply chain, PWC presented the F-35 fighter jet. Each aircraft is made up of around 300,000 components from over 1,900 suppliers. Some individual parts require components from multiple suppliers. The more layers in a supply chain, the more prone it is to disruption and cyberattacks. Consequently, PWC recommends that more attention be paid to supplier risk management.

According to PWC, blockchain performs very well at verifying every stage of the components' life cycle. The capabilities of the innovative solution allow you to control all levels of the supplier network, and do not manage to manage only one part. Blockchain also allows for the identification and qualification of individuals involved in the supply chain, which is especially useful when those involved in the process are those who are responsible for certain elements of the armed systems.

The US Department of Defense clearly recognizes the potential of blockchain, having awarded several contracts with blockchain companies over the past year. For example, the US Navy awarded blockchain company SIMBA Chain a \$9.5 million contract to deploy a messaging and enforcement platform.

4. Conclusions

Blockchain can provide reliability and quality in the management of government data, as well as agility in the execution of public administration contracts, helping to inhibit bid fraud, and tampering with documents, payment notes, among others. In addition, it would enable an efficient mechanism for decentralized electoral processes, corroborating a more participatory model in public policy decisions, with agility and

anonymity. It would be also an important tool for logistics control of products that require state regulation. Even with results from Blockchain's government-led studies still being mostly at pilot and experimental levels, the expectation remains to deepen knowledge to identify solutions to problems that undermine democracy, such as corruption, bureaucratization and inefficiency.

Despite the demonstrated positive applications and impacts on the use of Blockchain in public administration, it should be noted that technology does not transform reality by itself but offers a new tool at the service of society. Blockchain, by providing data security, can improve efficiency in public administration services and strengthen the exercise of democratic participation. Such technology enables horizontality, transparency and reliability in information management, as long as its instrumentation is done in a way that serves social interests, becoming a means of achieving the development of constructive and participatory actions.

Blockchain may well represent a revolutionary technology that will continue to evolve in this decade due to mass digitalization, not least due to the COVID-19 pandemic. However, blockchain has some problems that have yet to be solved. The technology although already successfully used in many spheres of business and public administration is still relatively young and requires more widespread adoption both in private businesses and government institutions to make a truly significant difference.

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New pedagogical dimensions of the person - training and educational reconversion in the social communities of help

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Abstract

The intention of this intervention is to discuss the types of social aid organizations and identify the most suitable educational style for the development and implementation of a healthy and humanized internal government. The social organizational contexts of help are considered in the light of the contemporary political and social emergency. They are interpreted as possible spaces of educability that are transformed into training sites capable of forging subjectivity cognitively and emotionally capable of facing changes. The argument follows a reading and an exposition of pedagogical inspiration to best express the characteristics of the social community as a condensed theory and practice of human behavior. The educational function expressed examines the different ontological paradigms from care, to otherness and listening as essential educational factors of the social organization of help. For this reason, the meaning of these elements is also deepened by linking them to the importance of a solid organizational culture that aims at the integral growth of the person.

Keywords: *Pedagogical dimensions; training; educational reconversion; social communities of help; persons.*

1. Introduction

Social organizations at the service of others, also called helping communities, insist on very articulated and complex socio-economic and cultural contexts. These helping communities are committed to linking the development of professional skills focused on personal care, attention to the values of the individual and respect for others. Social organizations make themselves available to the weakest, they also undertake to plan a more complex process that could be defined as a new humanization for all those who are part of it. The work carried out by the aid communities is calibrated to the eventual social situation in which they are immersed and based on the political and social emergencies of the time. The different contextual conditions, in fact, are often an important variable that has a decisive influence on the dimension of training. One of the first critical issues that can be recorded in aid contexts is the urgency of having to reconvert many adults according to new behavioral and educational logics. These reconversion and revision processes such as upskilling and reskilling go through complex steps that only a help training experience can program. All this also implies a modern approach to the methods and behavioral-educational strategies of those who work there. For this reason, the focus is on a sort of pedagogization of social operating places that leads to re-thinking the very

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experience of the teaching-learning process in an agile and holistic way. For these reasons, the importance and usefulness of continuing education throughout life is contemplated in this hypothesized programming. In the same way, even within companies intended as profit-making places there is a need for educational actions intended as the promotion of social responsibility. The sense of educational action within any type of organization is inspired by the internal culture, that is, the fundamental principles that guide the daily conduct of the system itself. However, there is a difference in identity membership depending on the type and purpose of the company. In profit organizations, in fact, there is a hidden and tacit alliance between the components and they agree on the basis of a common interest based on the company's objective. In social organizations, on the other hand, one digs more intimately, to the point of forging a sort of nucleus of hopes and expectations on the part of the members of the system. A kind of "loyalty pact to a common project" (Cfr. D. Callini 2020: p. 62) is thus generated in the aid society.

This special form of mutual trust serves to cement the union between the parts of the organization and provides motivation and perseverance to continue working together. The educational path, therefore, which aims to develop motivation and membership in aid organizations is almost autopoietic and naturally occurs within the community. Therefore, the intervention of a pedagogy expressly aimed at personal care enters fully into the planning of the development of a good training practice aimed at educational-social agencies. Within this learning-pedagogical dimension, however, other specific training courses must be hypothesized, achievable through the adoption of welfare measures. In this educational schedule it is functional to foresee the concept of the humanization of work. This special part of the formative journey determines the quality of the individual's existential condition within any organized context. The relationship between organization and training in thinking built on the basis of pedagogical models is useful and functional in all organized social systems (Nicola Malizia, Gianmarco Cifaldi, Ionut Serban and Adrian-Dan Nicolae 2021) that aim at the human and relational development of the person. Especially in this era in which uncertainty is ordinary, there is a need for polycentric training that emphasizes the dignity of the person and the enhancement of talents through the acquisition of skills that can be spent outside the context. Training and educational reconversion are the great pedagogical cultural needs of this historical moment in which it is good to reset the operational environments, making them real places of continuous learning, passing from the logic of control to that of mediation and trust. Organizations at the service of others prepare themselves for confrontation and face passions, pains and perplexities trying to change the restlessness of their actors into courage. These organisms thus find a renewed system capable of interpreting the experience of each member and at the same time reconciling the collective interest. This is a new pedagogical approach that is offered to all those who participate in the organized life of the structure. Such education is measured in thinking and invites greater mental flexibility. This education promotes conscious learning that supports the individual not to be trapped in rigid patterns of the mind, rather to extend their cognition to have a greater vision of things. It also serves to establish the principles of sustainability useful for promoting personal development. The pedagogical path hypothesized for social structures is thus able to transform the individual into a "reciprocal" being ready for reflection and to welcome new points of view. The collective narratives carried out by the members of the community are valid in designing the path of critical and value reflexivity of each one. The narrative trait follows a pace that does not confuse the stories, rather places them in contiguity, contributing to the development of the sense of respect for individuals and the sharing of experiences. The

increase of mutual awareness helps to spread knowledge and to emphasize the strong link between individual, mutual and organizational learning. The same pedagogical path provides for the hermeneutical approach which is furthermore facilitated by what is practically carried out within the communities, thus starting a new pedagogical outline that sees the person as a promoter of their own formation.

2. The social communities of help places of humanization and education to think

In an era in which uncertainty has become ordinary, the world of social aid organizations restarts from the answers that man is able to provide thanks to his skills, needs, expectations and his ability to think. In a society full of new forms of fear and barbarism, the task of the helping communities is to design an alternative training aimed at a context whose social actors are even weaker and less fortunate. The need to rediscover the ethical principles for which we define ourselves as human is pursued. We think of a new human culture that is more attentive to the collective good and points to an education of thought aimed at a critical and value-based vision based on reciprocity and solidarity (Cfr. L. Bruni, 2006). A new idea of social organization is born that goes beyond the utilitarian requirement that fueled the economic dimension and reflects on nourishing the cultural and social civil one. The helping communities referred to are thinkable as those described by Charles Taylor (Cfr. C.Taylor 1993) and Alasdair MacIntyre (Cfr. A.MacIntyre 2007). Generally speaking, the concept of community is considered as an educational space characterized by special educational properties and as training places for moral virtues. And reference is made to communities of various ranges, from educational to professional, from religious to economic members. In other words, community is meant to be any social educational space for sowing processes of humanization. Environments that, as Charles Taylor says, can be protected from the possible and fearful contagion of external instrumental logic and from the destructive individual interest. The pedagogical hypothesis of "educating to think" those who live in social communities of help aims to spread a mental habitus that predisposes to the use of an ontological logic of otherness and solidarity. The creation, in fact, of new social communities that have a human and sustainable setting presupposes people equipped with moral abilities that must be continuously nourished through an action of education of thought. Training to think involves programming based on sound models and good examples. It is essential to exercise the development of ancient Aristotelian virtues trained in the life of the Greek polis and which brings the concept of *paideia* closer to it. An education of ancient inspiration that ensures one's own growth and that of others. It is therefore necessary to rewrite the educational relationship between the organization of social communities and education itself so that a truly human contamination is achieved.

The first step to start these paths is the one that sees the restart of man's most intimate needs and his existential anthropology (Cfr. N. Luhmann 1990). This construct is based on pedagogical models, rather than only on organizational ones, and in any case pays attention to human development from the socio-relational point of view. Within this learning-pedagogical dimension (Ilie Goga and Serban 2018), however, other specific educational paths for the humanization of work are highlighted. For these constitutive points of a modern educational path suitable for the contemporary historical-social phase, it is of great urgency to complete this pedagogical approach according to an education to think, in terms that can be developed with a critical and value thinking. This education takes into account how profiles and tasks within organizations have changed and

understand the way in which each person interprets reality and the meaning of their actions (Cfr. Libro Bianco del Sistema formativo: p.5). This educational dialectic is useful for social aid organizations and can nevertheless be assumed, in some ways, by profit organizations. Specifically, when referring to social organizations, it is important to overturn pedagogical thinking and learn to understand the meaning of adherence to values, fidelity and loyalty. Education to think, as it has been represented, in fact, if placed by profit organizations, can be used in an instrumental way in order to support the development of us. Indeed, it is true that enthusiasm is a valid and useful behavior in all organizations, including corporate ones. The participatory aspect on the part of whoever is the aid organizations has a more robust significance than other organizations and is revealed through the care of the other and solidarity. The need for humanization arises from the latest economic labor crises, from social disintegration and the loss of identity of individuals. This need has shifted attention to the paradigm of complexity and the need to regain the composure of cultures. For this reason, in both types of systems, education to think is useful and passes through reflective exercise. In fact, reflexivity allows everyone to learn and decode the light and imperceptible signals present in the complexity of the social community system. Here, a training aimed at describing the individual specific techniques of the processes is no longer useful, but an education capable of making people understand both the needs of the person and the needs of the organizational system itself is necessary. The social community of help that has developed certain principles through a quality educational path constantly seeks the balance between the reflective competence of its experiences and the empathic and communicative style of its members. Thus, the community, which has become aware and critical, is able to make its members, actors and observers perceive the meaning of their own action, thus triggering a circle of virtuous relationship behaviors. For this reason, social communities that adopt an education in thinking enjoy the beneficial effects of a heuristic and at the same time emotional-cognitive perspective. Social aid organizations, therefore, are the fertile ground on which to sow an education of thought that naturally generates humanization. This cultivation takes place through the carrying out of actions that characterize these organizations. It is precisely the ontological ideas of care and listening. And it is on these constructs of care and listening that the moral activity of social communities must be oriented in order to direct it towards a perspective of democratic and ethical regeneration. Whenever a social community acts in this direction, it hints at its own educational resonance and integrates anthropological reflection with moral reflection. For this reason, the educational programs of social communities follow an experiential modeling of good educational practice aimed at the functional humanization of the complex contemporary society which, paradoxically, is on the contrary "rejecting the human" (Cfr. N. Luhmann 1990).

In conclusion, a social community is also an educating community that welcomes and integrates all the dialoguing voices and vocations present within a physical, structured and systematized dimension.

3. The social help and learning community

The conscious and mature reappropriation of an emotional and relational culture is the basis of a relational welfare that can be carried out and implemented in the helping social communities. Conceiving this new cultural formula in today's turbulent society serves to integrate not only people and stories, but rather helps to change the very evolutionary paradigm of the concept of human. Through an education that trains the person to think in an inter-relational way, a being is shaped that does not exist only for

himself, but also feels and lives for and with others. Education breathed in these terms, within a community of help, manages to make each member feel a potential actor and at the same time a beneficiary of the well-done (Cfr. L. Bruni 2004). In helping communities there is a dialectic that takes place between strategic-communicative intentionality and organizational practice, that is, it moves transversally to a game of parts that aims to bring the institutional rules of the structure into agreement with the actual logics of real situations. Often, the same organizations find themselves resolving urgent practical situations that force them to sacrifice the principles of sense prefixed and the value path required by the structure itself. Added to this state of affairs is the lack of public resources allocated to the structures which puts both the intention and the actual work of the organizations in serious difficulty. This condition makes it clear that the correct reading of any systemic social organization must consider these relational factors and implement an education capable of being functional in the places of help. And it is in this contradictory framework that the theme of the management of educational communication becomes salvific. In social work, in fact, the educational and relational dimension is fundamental for the evolution of the structure itself as the content of the service coincides with the process and therefore with the essence and substance. This procedure is carried out both for the professionals who work there and for those who are inside as guests of the organization. In this way, a virtuous circle of attention is created as an element of nourishment for the person. At the base of a specific pedagogical project for the helping communities there should be educational and didactic learning practices of a cooperative type. These practices are those that guarantee the enhancement of shared and distributed thinking. In itself, the social help structure always learns and understands something and does it in a distributed way. This learning is enhanced through specific forms of teaching practices ranging from dialogue to observation, from listening to reflection. Every form of learning in the community as it occurs in a social institution brings with it languages, symbols, history and culture. Each community, therefore, based on its sensitivity to open itself to listening and caring for others, also knows how to be welcoming and knows how to recognize the diversity and styles of each one. Listening and care are in fact the essential factors for generating quality interrelationships and guaranteeing the well-being of the community. In these terms, therefore, feelings of trust, gratitude, belonging, empathy and solidarity are realized. All these elements, which merge into an overall construct that translates into "we". The true essence of community, therefore, is concretized in the dynamic relationship between people and the environment and gradually evolves and grows by interpreting the value assumptions that the same people bring within the community. Therefore, the community is a yard of inspirations, feelings and knowledge and is at the same time, as the philosopher Pareyson believes - a place of action in which it expresses the signs produced by making him (Cfr., L. Pareyson 1991). In social communities, each actor shrinks to create space for the other. And it is in this action that, through the weaving of collective dialogic plots, the construct of us is represented by defining itself as the realization of otherness. And it is for this reason that every social community has within itself an educational value that with naturalness and spontaneity allows it to carry out relational and ethical practices that it communicates through doing itself. In today's society where the complexity and transformation of languages has increased dramatically, all organized profit communities must not listen to and intercept the sounds and voices of the soul of each member in order to compare everything to the experiences of each and transforming critical issues and errors into learning opportunities. The social community is a place where you can breathe a soul as Hillman suggests and where a special and human climate

is established (J.Hillman 2004). It is a space in which care is recognized for each member who expresses their identity by projecting it towards otherness and brings with them the story of her own baggage that become part of the community itself (Cfr., D.Callini 2014).

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A study on domestic gender crimes and the protection of orphans: the experience of social services in Italy

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Abstract

The orphans of domestic crime constitute the hidden face of human and family violence. Indirect violence on children in a family unit affects their imagination, their certainties, their emotional, affective and psychic world, their present and their future. From this emerges the need to ensure preventive interventions to support fragile parenting and in situations where educational competences are most at risk. To the pain of loss are added other difficulties of a different nature: material, emotional, social and judicial. The dramatic condition experienced by orphans for domestic crimes, of which gender-based homicides are often the main cause, calls for specific attention, which requires the deployment of adequate and efficient tools, capable of providing a rapid response to their multiple needs, also with reference to the new family context. This study aims to identify the real needs and requirements of the orphans of such crimes, good practices and critical points in the system, and this in response to both the demands of Article 19 of the 1989 UN Convention on the Rights of the Child and Adolescent, which provides for the use of all legislative, administrative social and educational measures to protect children against all forms of violence, to prevent them from being orphaned three times over, due to the loss of both parents and the indifference of the state, and to other more recent European recommendations to prevent and combat violence against children, with particular reference to the family environment.

Keywords: *Orphans; crime; family; social services; gender violence; gender homicide.*

1. Introduction

When the situation of violence has already occurred, the duty of a state that bases its reason for existence on the protection of fundamental rights is transformed into a duty of timely intervention, also aimed at repairing the damage. In general, according to Aizer (2010), the murder of one parent by the other causes children to experience a trauma aggravated by the simultaneous loss of two fundamental reference figures (the victim parent and the perpetrator parent, who is either imprisoned or suicidal). This is a complex phenomenon whose true extent is unknown and which the State has a duty to counter at the cultural, regulatory and judicial levels, adopting, as provided for in Article 19 of the 1989 UN Convention on the Rights of the Child and Adolescents, 'every legislative,

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administrative, social and educational measure to protect the child against all forms of violence', to prevent these children from being orphaned three times over, through the loss of both parents and the indifference of the state (Felice 2019). There is a need for a general intervention strategy to prevent and combat violence against persons under the age of 18, also in the wake of the recommendations of the UN Committee on the Rights of the Child and Adolescent contained in the concluding observations to Italy's Fifth and Sixth Periodic Reports of 1 February 2019 (CRC/C/ITA/CO/5-6). Actions are needed to listen to and support children and adolescents, as well as material and psychological support to foster families. In Italy, the protection system has recently been strengthened with Law No. 4 of 11 January 2018, which contains a series of provisions to protect economically non-self-sufficient minor and adult children orphaned as a result of a domestic crime, born from any type of union, including non-marital (Muscialini and De Maglie 2017). In 2019, again in Italy, a special group of experts was set up to deal with the delicate issue of the protection of orphans for domestic crimes, with precise directives aimed at surveying (a) of the procedural instruments capable of safeguarding and protecting the orphan child, with particular reference to cases of forfeiture of parental responsibility, the methods of fostering to third parties and any relations between the minor and the parent responsible for the murder of the other; (b) of the means activated to provide support to orphans for domestic crimes and foster carers (training courses for foster carers of minor victims of domestic violence), and also with the task of: 1) to examine the regional rules and municipal regulations that have intervened on the subject, in order to identify good practices and disseminate them; 2) to carry out a qualitative analysis of the phenomenon through interviews with the children directly concerned, foster carers and associations, in order to understand their needs; 3) to verify how the provisions of Law no. 4 of 2018, with reference to minors orphaned by a parent as a result of a homicide committed by the spouse, even if legally separated or divorced, or by the person who is, or was, bound by a loving relationship and stable cohabitation (Bruno 2022). The survey on the measures issued by the Juvenile Courts in favour of orphans for domestic crimes was conducted on the basis of a list of women who were victims of domestic crimes in Italy in the years 2018-2019-2020, potentially mothers of minor children. The examination of the measures revealed and compared the following aspects: - the characteristics of the crime (type, relations between the offender and the minor(s)); the socio-demographic data of the minors and of the family unit as a whole; the methods of reporting to the Juvenile Court; the presence of the minor at the time of the murder; the procedures adopted (ex art. 333 Italian Civil Code/adoption); the procedures for representing and listening to the minor; the summoning of the offender, other family members or other persons involved; the presence of psycho-social investigations; the acquisition of the criminal investigation files the parental responsibility interventions, if any, in the interim decree; the characteristics of the interim placement; the regulation of relations between the juvenile and the offender and between the juvenile and the offender's family members; the characteristics of the definitive placement of the juvenile(s); the application of the measures provided for in Law no. 4 of 2018; the support interventions in favour of the juvenile and foster carers (typology and subjects in charge); the interventions on parental responsibility in the final decree; the possible opening of administrative proceedings for the continuation until the age of 21 (Ammirati 2020).

2. The International Legal Framework

In the international context, there are no provisions specifically regulating the status of orphans for domestic crimes or providing for intervention measures against them. However, in the UN Convention on the Rights of the Child and Adolescent and in the Istanbul Convention, there are principled norms, of general scope, which protect victims of violence and therefore also apply to orphans for domestic crimes (Baldry 2018). Specifically, the UN Convention, in Article 19 provides that States must take all legislative, administrative, social and educational measures to protect children and young people from all forms of violence, physical or mental outrage or brutality, abandonment or neglect, maltreatment or exploitation, including sexual violence (protection and prevention are the first mandate for institutional actors); in Article 20 it provides that every child temporarily or permanently deprived of his or her family environment is entitled to special protection and aid from the State. States shall provide substitute protection for these persons in accordance with their national legislation. "Such substitute protection may in particular take the form of a family. In making a choice between these solutions, due consideration shall be given to the need for continuity in the child's upbringing, as well as to the child's ethnic, religious, cultural and linguistic background. Article 39 of the Convention states that States (parties to the UN) shall take all measures to facilitate the physical and psychological readjustment and social reintegration of any child who has been the victim of any form of neglect, exploitation or abuse. Such readjustment and reintegration must take place in conditions that promote the health, self-respect and dignity of the child (Cucchiara 2015; Ilie Goga 2015). The Istanbul Convention on preventing and combating violence against women (including minors) and domestic violence, ratified and made enforceable in Italy by Law no. 77, explicitly requires states to "collect at regular intervals relevant disaggregated statistical data on matters relating to any form of violence falling within the scope of the Convention and to support research on these specific forms of violence, in order to study their root causes and effects, the frequency and rates of convictions, as well as the effectiveness of measures taken for the purposes of implementing the Convention itself". In particular, the Istanbul Convention in Article 26 (Protection of and support for children who witness violence) provides that States shall adopt such legislative and other measures as may be necessary to ensure that the rights and needs of children who witness all forms of violence falling within the scope of the Convention are taken into account in protection and victim support services. The measures taken include psychosocial counselling appropriate to the age of the child witnesses of all forms of violence within the scope of the Convention and take due account of the best interests of the child. Article 46 (Aggravating circumstances) also provides that States shall adopt such legislative and other measures as may be necessary to ensure that the following circumstances may be considered as aggravating circumstances in determining the punishment for offences established in accordance with the Convention. Aggravating circumstances include the fact that the offence was committed on a child or in the presence of a child (Gadd and Jefferson 2016).

3. The Italian regulatory context

According to Roia (2018), the national regulatory system of protection has been strengthened by Law No. 4 of 11 January 2018, which contains a series of provisions aimed at the minor and economically non-self-sufficient adult children of the victim of a homicide committed by the spouse (even if separated or divorced), by the partner in a civil union (even if terminated) or by a person who is or has been bound by an affective

relationship and stable cohabitation. It should be noted that the text equates spousal homicide with homicide committed by a civil union partner and a cohabiting partner, thus protecting children born of any type of union, including non-marital ones. It should also be noted that the law does not give a gender connotation to victims and perpetrators, so it does not refer only to 'femicide' (gender-based homicide), even though this phenomenon is the most widespread case. The main new elements contained in Law No. 4 of 11 January 2018 are: 1) legal aid: Article 1 of the law amends the Consolidated Law on Legal Expenses (Presidential Decree No. 115 of 2002), allowing also minor or adult children who are not economically self-sufficient - such as orphans for domestic crimes - to access legal aid regardless of income limits. The State bears the costs in both criminal and civil proceedings; 2) the equalization of marital relationships with cohabiting relationships: Article 2 eliminates the unequal treatment between spouses and cohabiting relationships, by intervening on the text of Article 577, paragraph 2, of the penal code, which provided for the application of the aggravating circumstance only in the presence of marital relationships; 3) attachment: Article 3 provides for the obligation of the Public Prosecutor to verify the presence of children (minors or non-self-sufficient adults) and to request, at any stage and level of the proceedings, the precautionary seizure of the suspect's property to guarantee the right to compensation for civil damages suffered by the victim's children; 4) the provisional measure Article 4 provides that "the Judge, having ascertained the presence of minor or adult children who are economically non self-sufficient, who have joined the proceedings as civil plaintiffs, shall provide, also ex officio, for the allocation of a provisional provision in their favour, in an amount not less than 50% of the presumable damage"; 5) the unworthiness to inherit Article 5 establishes indignity to succession for a person who is under investigation for voluntary or attempted murder against the other spouse, even if legally separated, or against the other party to the civil partnership. The suspect is suspended from the succession until the decree of dismissal or final acquittal. In the event of conviction, he shall be excluded from the succession, as he is unworthy of inheritance pursuant to Article 463 of the Civil Code; 6) the survivor's pension: article 7 has provided for the suspension of the survivor's pension or the one-off allowance of the spouse for whom an application has been made for trial for voluntary manslaughter against the other spouse, even if legally separated or divorced, or of the other party to the civil partnership, even if the civil partnership has ceased, until the final judgment. During this period the pension, with no obligation of restitution, will be received by the victim's children; 7) the right of access to assistance services: the State, the regions and the local autonomies are called upon to promote and organise forms of assistance to victims, information, assistance and counselling services, as well as measures to support study and work placement for orphans of domestic crimes; 8) medical-psychological assistance in favour of orphaned children, the law ensures free medical-psychological assistance, by the national health service, for as long as is necessary for the full recovery of their psychological balance, with exemption from health and pharmaceutical expenses; 9) fostering: the law provides for the enhancement by the Judge, in the procedure of custody orders, of the continuity of the affective relations established between the minor and relatives not beyond the third degree, also with reference to the presence of brothers or sisters; 10) the solidarity revolving fund: the fund, initially provided only for the victims of mafia-type crimes, extortion demands, usury and violent intentional crimes, has been extended also to orphans for domestic crimes. As of 2017, the fund's endowment has been increased by two million euros per year (70 per cent for minors and 30 per cent for adults who are not economically self-sufficient), for the

provision of scholarships for orphans for domestic crimes and the financing of orientation, training and support initiatives for their inclusion in the work circuit; 11) forfeiture of public housing: Article 12 of the law states that 'the convicted person assigned public housing shall forfeit the relevant assignment. In such a case, the other cohabiting persons do not lose the right to housing and take over the ownership of the contract'; 12) the change of surname: Article 13 provides for the possibility for the children of the victim of the crime to change their surname where it coincides with that of the parent convicted of the murder; 13) recruitment in the world of work: the law provides for the allocation of the right to the reserve quota in recruitment pursuant to Article 18, paragraph 2, of Law No. 68 of 12 March 1999. To conclude, On 9 August 2019, Law No. 69 of 19 July 2019 on 'Amendments to the Criminal Code, the Code of Criminal Procedure and other provisions on the protection of victims of domestic and gender-based violence, called Code Red' came into force.

4. The conditions of orphans following domestic crimes

According to the most established scientific literature, children and young people orphaned by domestic crimes show post-traumatic stress disorders: for them, the traumatic event is experienced as a watershed between 'before' and 'after' (Lovrin 1999). Symptoms and consequences in domestic crime orphans can manifest themselves on several levels and in different areas. In some cases, they can develop into psychopathological forms typical of disorders related to traumatic and stressful events (Prandi 2020). The lives of children and foster families are no longer the same: all those involved develop a kind of hypersensitivity to potential danger signals, so much so that they constantly live in a state of alertness and tension that conditions everyday life. In very young orphans, there is significant emotional and psychological distress: many of them relate in words or drawings some of the tragic events that occurred (Alisic et al. 2014). Significant emotional and psychological suffering is found in all orphans, which can result, if left untreated, in chronic anxiety and depressive disorders. Many of them report verbally, or, especially the youngest, with drawings, some of the tragic events that occurred (Holland et al. 2020). There are clear signs of distress, worry and fear. The pain will still have to be processed, but the internal suffering after such events will be permanent. At every developmental stage, the memory, grief and anger over the events experienced will be present. If not attended to in a timely manner, orphans may manifest a strong sense of guilt for not having protected their mother and, therefore, a sense of responsibility for what happened (Giusio and Quattrocchio 2014). Many orphaned children 'protect' themselves through processes of dissociation, slipping into a parallel world (Fraud 2021). Others may develop obsessive disorders by which they try to control a world perceived as fearful and threatening. After the death of the mother there follows a very delicate phase of existence that requires caution and attention in order to accompany children through the long and painful, but necessary, grieving process, with maximum respect for individual times, without anticipating or forcing the pace (Cohen and Mannarino 2022). All children need a serene and reassuring environment that allows for a life marked by regularity and predictability (Romito and Melato 2017). For traumatised children, these elements really become indispensable. For these reasons, it is necessary to activate concrete aid to support foster carers, who sometimes already have their own children, who also need to understand what has happened and to be reassured. These facts show how it is necessary to build a solid affective and relational network to support the foster family and the children in their growth. The trauma suffered as a result of the loss of the mother

frequently entails a possible estrangement on the part of the minor, who will tend to take refuge in a "world of his own" that apparently makes him feel safer. In spite of this phase, it is necessary to intervene by expanding the relationships, in order to build a socio-relational experience that is as functional as possible to the minor's overcoming of the trauma (Buccoliero and Soavi 2018). The foster family and the children need to know that whenever they need help, an expert professional will be at their disposal to overcome the consequences of the painful trauma they have suffered. Their condition, which is not comparable in its characteristics to other conditions of psychic suffering, must be addressed by taking into account a number of critical damage-specific issues. These include, in particular, the lack of timely disclosure of the mother's death (Herman 2005). The need to mask the violent death and protect orphans from further harm often results in a strategy that tends to maintain silence rather than inform. It should be remembered that the elaboration of grief cannot disregard the awareness of one's mother's death and, instead, this process is neglected and postponed (Foschino Barbaro and Pellegrini 2015). The reasons behind these choices are mainly linked to the following factors: 1) in cases where the minor was present, the event is neglected because it is erroneously believed that this evocation of memories can cause further and gratuitous pain, not recognising the value of narration as the cathartic experience necessary to overcome the trauma suffered (Lanius 2012); 2) inability and unpreparedness of the caregivers to deal with the subject, not knowing which words to use and how to choose the moment (Grazzani 2014). It is therefore important to guarantee specific support from the socio-health services in charge with the help of local associations and to create a mapping of local associations that can be referred to. Helpers should also act according to emergency-emergency protocols, as required by guidelines for other traumatic events. Post-traumatic stress disorders, which are particularly recognisable in children who have been eyewitnesses to the murder, but not only, should be taken care of quickly and preferably within 48 hours of the incident (Lieberman et al. 2007). This is not just a sudden bereavement, but a form of loss that occurs at the hands of one of the two figures who should have been caring for the child. It is essential to help all those involved to overcome grief but, above all, to grieve, i.e. to accompany them in a process that includes, among its main stages, that of accepting the reality of the facts and the irreversibility of death. Generally speaking and in continuity with what previous studies have already shown, what emerges from the narratives is the need for orphans and their foster families to be able to count on a network of professionals. Teachers, lawyers, law enforcement agencies, social workers, psychologists and psychotherapists who, with adequate theoretical and practical training and with relational and empathic skills, can intervene on this complex problem, both in the short and long term (De Carli and Pignataro 2021).

5. The experience of Italian social services on domestic crimes and orphan protection: tools and limits

In Italy, social services are periodically consulted through a request to answer a questionnaire drawn up by the National Council of Associations and Organisations for the Promotion and Protection of the Rights of Children and Adolescents (Balducci and Tre Re 2016). The questionnaire is forwarded to some social services with a note signed by the Supervisory Authority for Children and Adolescents (Franzoni and Anconelli 2021). The last survey covered the three-year period 2018-2020. The practice is for the questionnaire to be divided into two sections: one addressed to social service managers (Tab.1) and the other to social workers, orphans and orphan caregivers, also with interviews (Tab. 2),

inviting the categories (managers and social workers) to fill in the online questionnaire directly, in the case of experiences of taking care of orphans for domestic crimes.

Tab. 1 (Thematic areas of the survey submitted to social services managers)
(Source: Authority for Childhood and Adolescence - Italy)

Thematic areas	Persons involved in the survey	Survey instruments
Established practices for the care of orphaned minors for domestic crimes.	Managers of social services	Questionnaire
The training of social service workers on gender-based violence and Law No. 4 of 2018.	Managers of social services	Questionnaire
Network protocols in interventions aimed at orphans for domestic crimes; collaborations with local actors.	Managers of social services	Questionnaire
Servizi di supporto ai minorenni orfani e agli affidatari.	Managers of social services	Questionnaire

Tab. 2 (Thematic areas of the survey submitted to social workers, orphans, orphans' caregivers)
(Source: Guarantor Authority for Childhood and Adolescence - Italy)

Thematic areas	Persons involved in the survey	Survey instruments
Medical/psychological care/support services from which the orphan has benefited.	Social workers	Questionnaire
Referral to specialist medical services and possible hospitalisation of the orphan.	Social workers	Questionnaire
Neuropsychiatric and psychotherapeutic support services for foster carers.	Social workers	Questionnaire
Financial support services for orphans and/or foster carers.	Social workers	Questionnaire
Foster care practices (foster carers, timing of foster care, confirmation of foster care over time, motivations for out-of-family foster care).	Social workers	Questionnaire
Characterisation of intra-familial relations (between the family of the victim of femicide and that of the murderer) and orphan-father relations in case the latter is the murderer.	Orphans (adult) and orphan foster parents	Interviews
Application of the tools provided by Law No. 4 of 2018 (change of	Social workers	Questionnaire

surname, legal aid, obtaining a provision in criminal proceedings, communications to Inps for law enforcement purposes).		
Socio-demographic information on the orphan (compatible with the protection of anonymity).	Social workers - Foster carers of orphans	Questionnaire/Interviews
Reflections of femicide on the orphan's school career.	Social workers - Orphans and foster carers	Questionnaire/Interviews
Activation of individualised plans/projects	Social workers	Questionnaire

6. Discussion of the study results

As far as the results are concerned, since this survey was carried out in parallel with the one involving the Juvenile Courts, the focus is on information that is complementary to that which can be acquired from the aforementioned measures. The thematic areas of the questionnaire are inspired by the project "Who, where, what. Supporting witness children orphans from femicide in Europe - Switch-off". This led to the definition of a number of key topics around which the survey instruments were constructed. With reference to the questionnaire addressed to social workers, the council chose to focus the survey on certain characteristics concerning the interventions provided by the social services in favour of orphans and, at the same time, to collect information on the condition of orphans themselves. The sample of interviewees was identified with the cooperation of associations operating in Italy to support orphans. Despite the diversity of the survey instruments used, the homogeneity of the topics dealt with made it possible to compare the voices of the various actors involved and of the orphans themselves with respect to the procedures for taking charge, protection and support that have been set up. On the contrary, the outline of topics in the questionnaire addressed to social service managers maintained its own specificity. In this case, in fact, the Council chose to focus on aspects that are more pertinent with respect to the level of service coordination. These include: the existence of consolidated practices for taking charge of minors orphaned by domestic crimes, the provision of targeted staff training on the subject, and the activation of territorial network protocols. The picture that emerges shows a fragile system, in difficulty, in which different actions are found, both because of the peculiarities of each case and because of the lack of consolidated experiences and of unitary and clear indications on the interventions to be implemented. It emerged that the taking in charge of the orphan usually takes place between one and three months after the mother's murder. In addition to this, the placement of some orphaned children took place between the third month and one year after the fact. These two events indicate particularly serious facts of a system that took an excessive amount of time before it was activated. In the majority of cases there are no network protocols for intervention to support orphans for domestic crimes: this means that the orphan and his or her family are alone and do not receive the intervention and support they need (Authority for Children and Adolescents). This fact is reinforced by the fact that only a few social workers stated that there is collaboration with associations in the area. Another order of reflections concerns the applicability of Law No. 4 of 2018. In this regard, the findings of the survey show that the targeted training of social workers on the contents of the aforementioned law is still too little widespread practice. This fact calls with great urgency for the preparation of training programmes to implement the specific skills of operators in this field. At the same time, taking into

account that some cases of orphan assistance may have occurred prior to the approval of Law No. 4 of 2018, it is necessary to disseminate information on the rights recognised by the law, so that the opportunity to benefit from it is also guaranteed in these cases. As far as psychophysical support measures for orphans are concerned, the survey conducted reveals that practices of early initiation of psychotherapeutic courses are significantly widespread. At the same time, it is noted that the preparation of individualised plans/projects, which would allow continuous monitoring over time of the orphan's environmental situation and psychophysical state, is mainly, and not always, an initiative of the social services and the Juvenile Courts. Rarely does this type of monitoring programming involve the local health authorities and, in general, the health services. The data of the exploratory survey conducted point, in this direction, to the need for a systemisation of the interventions implemented by the different institutional subjects called to respond to the support needs of orphans for domestic crimes. With particular reference to the support measures for the orphans' foster carers, then, although the survey conducted with the managers of the social services shows that in most cases support measures are provided for the orphans' foster carers, the survey with the social workers shows that only in two thirds of the cases the foster carers benefited from neuropsychiatric and/or psychotherapeutic support interventions. This datum acquires further relevance if we consider that in the sample surveyed, the orphan's foster carers are mainly relatives of the murdered mother, who will therefore have to face the emotions linked to the killing of a person usually very close to them, and that the inter-familial relationships with the family of the murdered parent are often characterised by conflict. In this sense, it seems opportune to recall the need to guarantee dedicated support measures that accompany the foster family in the phases following the trauma of the loss and facilitate the role it will play with the orphan. A final aspect concerns the activation of territorial networks to take charge of orphans for domestic crimes and their foster families. The data reported by the managers of the social services with respect to the cooperation of their service with associations in the territory show that in most of the cases considered there was no involvement of associations. Although the sample of the survey does not allow for generalisations, it seems appropriate to recall that Law No. 4 of 2018 provides that the State, the regions and the local autonomies favour "the activity of voluntary organisations, coordinating it with that of the public services" (art. 8). This reference can be understood as an implicit recognition of the experience gained in the sector by local associations and anti-violence centres, as well as the opportunity that these entities, with their work, can offer in terms of creating a social fabric to support orphans for domestic crimes.

7. Recommendation

The survey carried out by the National Council of Associations and Organisations for the Promotion and Protection of the Rights of Children and Adolescents offered the opportunity to trace some trend lines of the interventions and practices of the social services with reference to the care of orphans for domestic crimes and their caregivers. The picture that emerges shows a fragile system, in difficulty, in which different actions are found, both because of the peculiarities of each case and because of the lack of consolidated experiences and of unitary and clear indications on the interventions to be implemented:

1. The data on the presence of an individualised project/plan show the fragility and weakness of the system; in addition, there are delays in the placement of the orphan(s) after a period of between three months and a year from the mother's homicide. In the

majority of cases, there are no network protocols for intervention to support orphans for domestic crimes: this means that the orphan and his/her host family are alone and do not receive the intervention and support they need;

2. Another order of reflections concerns the applicability of Italian Law No. 4 of 2018. In this regard, the findings of the survey show that the targeted training of social workers on the contents of the aforementioned law is still too little widespread. This fact calls urgently for the preparation of training programmes to implement the specific skills of operators in this field;

3. As far as psychophysical support measures for orphans are concerned, it is noted that the practice of early initiation of psychotherapeutic courses is significantly widespread. At the same time, it is noted that the preparation of individualised plans/projects is mainly, and not always, an initiative of the social services and the Juvenile Courts. Rarely does this type of monitoring programming involve the territorial Asl and, in general, the health services;

4. With particular reference to the support measures for the orphans' foster carers, the survey with social workers shows that in only two thirds of the cases did the foster carers benefit from neuropsychiatric and/or psychotherapeutic support interventions;

5. The orphan's foster carers are mostly relatives of the murdered mother - who will therefore have to deal with the emotions linked to the killing of a person usually very close to them - and, as we have seen, inter-family relations with the family of the murdered parent are often characterised by conflict. In this sense, it seems opportune to recall the need to guarantee dedicated support measures that accompany the foster family in the phases following the trauma of the loss and facilitate the role it will play with the orphan. Although the circumscribed sample intercepted by the survey does not allow generalisations, it seems appropriate to recall that Law No. 4 of 2018 provides that the State, the regions and the local autonomies favour "the activity of voluntary organisations, coordinating it with that of the public services" (art. 8). This reference can be understood as an implicit recognition of the experience gained in the sector by local associations and anti-violence centres, as well as the opportunity that these entities, with their work, can offer in terms of creating a social fabric to support orphans for domestic crimes.

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Societal security. New challenges for the world in fighting two invisible but deathly aggressors

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Abstract

Societal security as a neo security concept can refer to actions, from juridical to political, meant to assure population the needed security. It can be linked to any kind of threats, from terrorism to healthcare, from economical threats to education, from energy to discrimination and food, all the threats that doesn't allow people to live their daily life in normal, free and democratic way. All threats to peoples daily life, anything that interferers with their opportunities to choose how and where to live, where to work, how to travel, what kind of healthcare to choose and benefit from, can be considered a threat to their societal security. Any kind of induced fear to a population can be also considered a societal security matter and governments and legislators are summoned to intervene and take political and legislative actions in order to mitigate the consequences and to prevent it from happening in the future.

Keywords: *Societal security; terrorism; CO-VID19; juridical actions; fear; political actions; society.*

1. Introduction

Societal security as a neo security concept can refer to actions, from juridical to political, meant to assure population the needed security. It can be linked to any kind of threats, from terrorism to healthcare, from economical threats to education, from energy to discrimination and food, all the threats that doesn't allow people to live their daily life in normal, free and democratic way. All threats to peoples daily life, anything that interferers with their opportunities to choose how and where to live, where to work, how to travel, what kind of healthcare to choose and benefit from, can be considered a threat to their societal security. Any kind of induced fear to a population can be also considered a societal security matter and governments and legislators are summoned to intervene and take political and legislative actions in order to mitigate the consequences and to prevent it from happening in the future.

One of the latest threats to the societal security has been, and maybe still is, the COVID19 pandemic (Nicola Malizia, Gianmarco Cifaldi, Ionut Serban and Adrian-Dan Nicolae), that had modified the way of daily life of people on global scale. For more than 2 years now, the pandemic had interfered with people's life, inducing fear, threatening their living, and changing the way they work, the way they travel, the way they interact, basically changing everything they were used to, or familiar to their way of living, and that was globally.

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The fact is that this threat has determined governments and legislators, all over the world, to take actions and modify fast the legislation regarding the societal security. Almost all countries instituted the “state of emergency” that gave governments extra power to deal with the pandemic threat. Suddenly people’s life, as they knew it, was over. Restrictions took over freedom and liberties and people felt as being trapped in their own homes, not being able to visit family and friends, enjoy spectacles or holidays, basically, everything familiar until then was changed. People started to protest against restrictive measures, against being “forced” to vaccinate, against a “green pass” that allowed people to work and travel or even to shop or leave their homes.

2. International framework

There are some unofficial voices that assimilated the new Covid19 pandemic with a terrorist attack on humanity. These voices are few, but they really exist, and we cannot think that the geopolitical and strategic reasons are putting a hold on the decision maker’s stands.

The reality is that even if we do not know for sure at this moment if the virus was leaked from a lab or not, intentionally or not, the fact that some people think that this may have happened, especially as the WHO has not given yet a pertinent answer, give them reason of suspicion.

Lately, more and more people are asking repetitively the same questions: was Covid19 intentionality released from a lab? Is it an artificial or a natural virus? Was it an act of terrorism in order to make an artificial selection for the human race that is overpopulating this planet? Where there economic and strategic reasons? Has the world changed forever? Will we be able to ever return to normal? and so on.

The first Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19) released in February 2020 states on the origin of the virus: “on 30 December 2019, three bronchoalveolar lavage samples were collected from a patient with pneumonia of unknown etiology –a surveillance definition established following the SARS outbreak of 2002-2003 –in Wuhan Jinyintan Hospital. Real-time PCR(RT-PCR) assays on these samples were positive for pan-Betacoronavirus. Using Illumina and nanopore sequencing, the whole genome sequences of the virus were acquired. Bioinformatic analyses indicated that the virus had features typical of the coronavirus family and belonged to the Betacoronavirus 2B lineage. Alignment of the full-length genome sequence of the COVID-19 virus and other available genomes of Betacoronavirus showed the closest relationship was with the bat SARS-like coronavirus strain BatCov RaTG13, identity 96%” (WHO 2020).

The outbreak of the disease war incredible fast: “as of 20 February 2020, a cumulative total of 75,465 COVID-19 cases were reported in China. Reported cases are based on the National Reporting System (NRS) between the National and Provincial Health Commissions. The NRS issues daily reports of newly recorded confirmed cases, deaths, suspected cases, and contacts. A daily report is provided by each province at 0300 hr in which they report cases from the previous day” (WHO 2020).

At first, the unknown was immense and tremendous. From scientist to governments and simple people the fear started to implement. At the beginning everybody was looking to their countries political deciders who were took by surprise and were totally unprepared. Many, also believed, and still believe that was/is a manipulation, fake news etc., refused to take the necessary precautions and what was at first categorized as a virus, a disease and epidemic, turned into a pandemic in a blink of an eye. Everybody than

turned their attention on the World Health Organizations, which was also unprepared and very slow on important decisions, not to mention very wrong on many aspects of the entire affair, from the precautions that needed to be taken until the origin, the real danger of the infection etc. Many may argue that it is still the case.

Here is some data containing the reality of infections in Wuhan and other provinces in China, released by the WHO more than a year later after the outbreak of the pandemic.

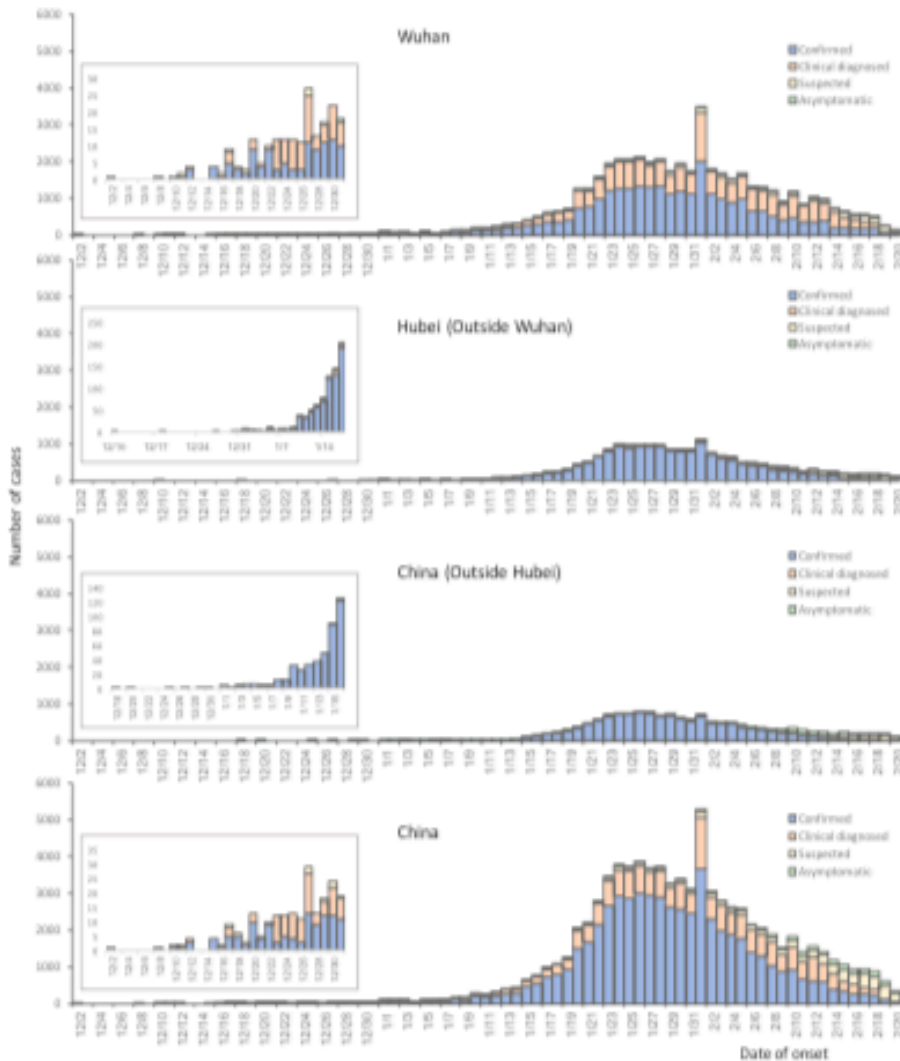


Figure 2 Epidemiologic curve of COVID-19 laboratory confirmed cases, by date of onset of illness, reported in China, as of 20 February 2020

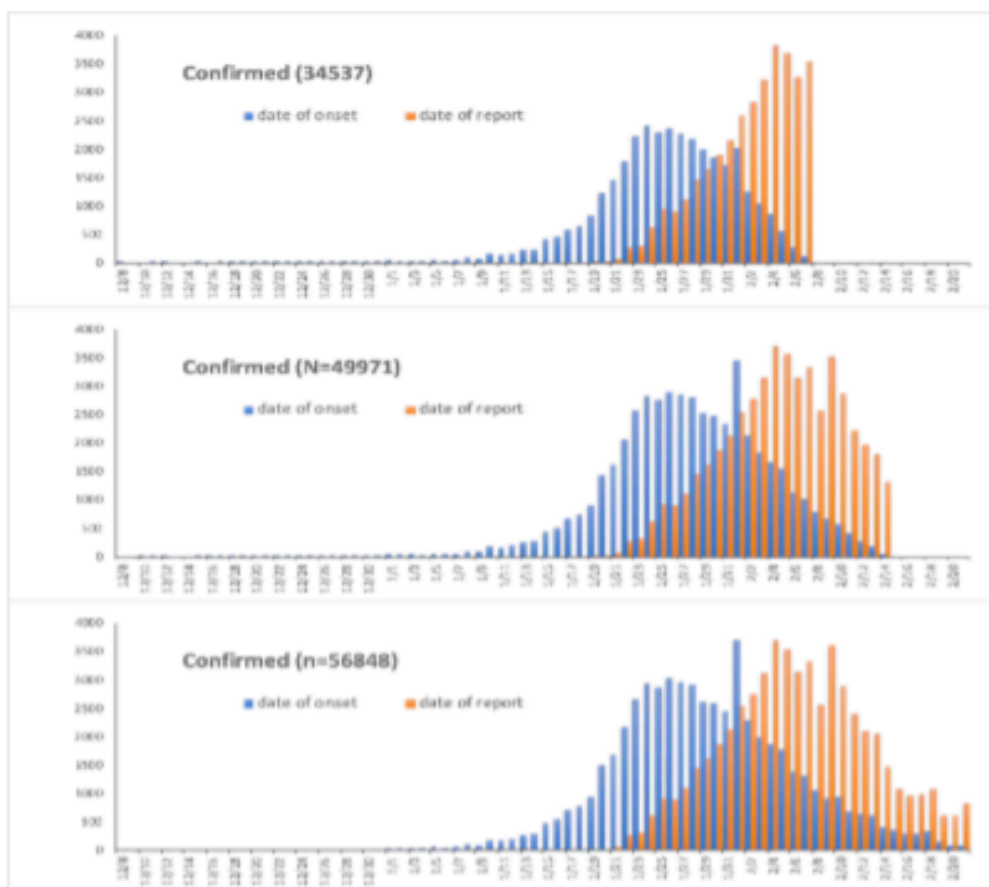


Figure 3. Epidemic curves by symptom onset and date of report as of 5 February (top panel), 12 February (middle panel) and 20 February 2020 (lower panel) for laboratory confirmed COVID-19 cases for all of China

All data in fig. 2 and 3 are from the WHO report from February 2020 (WHO 2020)

The fact is that even today, the real origin of the SARS-CoV-2 is still unknown to the people and as it's seems even to the WHO experts: "WHO calls for further studies, data on origin of SARS-CoV-2 virus, reiterates that all hypotheses remain open" (WHO 2021).

Another question on everybody's lips is: was this pandemic a terrorist attack on humanity?

The fact that this pandemic and this virus act like a terrorist it is almost indubitable. They may not have the same background but they have the same ways of acting and more over the same results: to induce fear, chaos and panic into the people's lives. More over, the impact of the economic and health lives of people are even greater.

Another similarity between the two is the global reaction. As many countries in the past had declared war against the terrorism, these days the entire planet had declared war on the pandemic and the virus.

The reality is that both, the virus and terrorist, act the same, are invisible and choose their victims randomly. Usually people, as part of the human race, adapt, in order

to survive, but this pandemic is maybe the hardest situation yet, witch they have to deal with.

3. The research methodology on how the media associated the pandemic with terrorism and the results

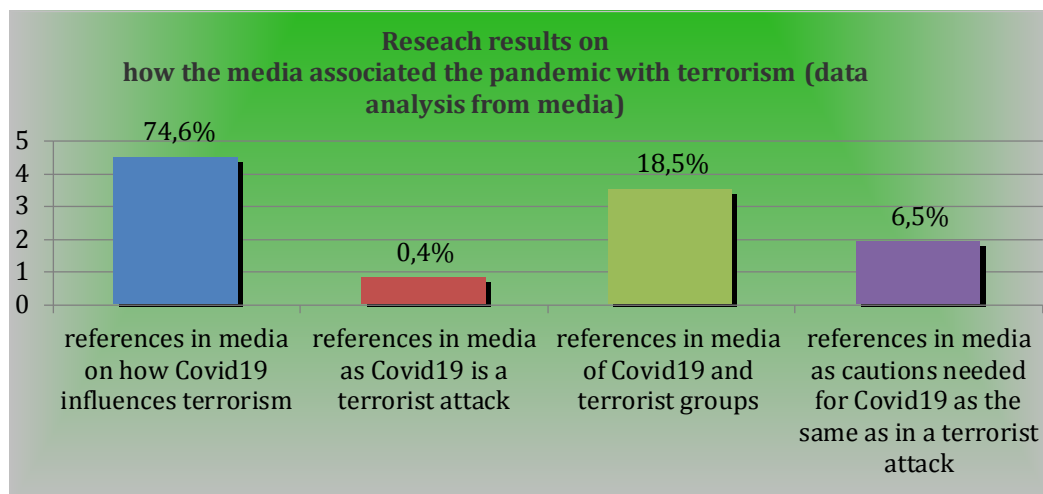
The research methodology resided in research, analysis, classification and comparison of levels and trends of online on how the people associated the pandemic with the terrorist attack in the media and especially in social media in the EU countries. The research covers the period between March 2020-March 2022. Various relevant public resources already produced in the participating countries are used, such as: media monitoring reports, media content analysis surveys etc., as well as a specially developed tool - an automatic data search algorithm (using certain key words such as: terrorism, Covid19, pandemic etc.), the application of which it is combined with local media monitoring. The reseach was conduced in the specialized Jurnalism and Statistic lab from the University of Craiova, Romania.

As we can observe from the fig.1., there are only a few references (0.4%) linking the pandemic to a terrorist attack, mostly when it's referred to it as an intentional or non intentional leak from a lab.

The most references (74.6%) are related to how the terrorists or terrorist groups (18.5%) take advantage of the pandemic and their intentions on how to act in these times.

Regarding the measures (cautions) to be taken, there are some references (6.5%) that are claiming these special times need special measures going all the way saying that should be the same as used in a terrorist attack. The only problem is seen by the general people that have had enough of the restrictive measures and also, with time, getting used to the virus, they do not manifest anymore the same fear and caution as they were in the beginning.

Figure no 1.



Regarding the measures (cautions) to be taken, there are some references in the media, 6.5% that are claiming these special times need special measures going all the way

saying that should be the same as used in a terrorist attack. The only problem is seen by the general people that have had enough of the restrictive measures and also, with time, getting used to the virus, they do not manifest anymore the same fear and caution as they were in the beginning.

And as we have seen even in the Capitol Hill “attacks”, manifestations against the restrictive measures around the globe are taken place on daily basis, people that do not believe in the virus or in taking the necessary precautions are freely expressing their thoughts, free of all the cautions and thus contributing to a wider and faster spread of the virus.

In these unfortunate circumstances, governments and decision makers around the world are put in a difficult situation. On one hand they have to try to protect the population from the consequences of the pandemic, but on the other hand they also have to allow them to freely express their mind and also overview that the negative outcomes of the restrictive measures do not exceed the positive ones.

4. Discussion of the study results

Regarding the press, of course the serious one, thru official channels has never published something as “daring”, but especially on social media and some unofficial channels this hypothesis has come up in the form of the 0.4 % of all the references made in media over the course of a year.

The reality is that nevertheless, the pandemic has affected people’s life in the same manner as would have a terrorist attack, even more. The toll of deaths have been grater, the induced fear, the same, and the changes induced in people’s every day lives are tremendous, to not talk about the duration of this modifications that could spread over some continuous years.

In stead, the most references (74.6%) are related to how the terrorists or terrorist groups (18.5%) take advantage of the pandemic and their intentions on how to act in these times and even if the press coverage has not been the same on the phenomenon, this does not mean the terrorists have taken a break. Far from it. Actually they have benefited form the fact that everybody’s attention has been diverted on to the pandemic and so they have been left with a wide range of movement.

5. Recommendation

Overall, the 21st century has brought many difficult challenges upon the mankind starting with globalization, wars, terrorism, economic crises, hunger, overpopulating and over polluting the planet, at a certain point that many have started to search the possibility to continue live on other planets, and lately many diseases between witch the latest one, Covid19, one of the most disastrous of all.

It only depends on the humane race to overcome all these great obstacles in order to survive and continue its journey on this planet. It will take a lot of work, a great solidarity and the strength that it many times proved to have in times of challenge. I am sure that it will give its best and will emerge triumphant.

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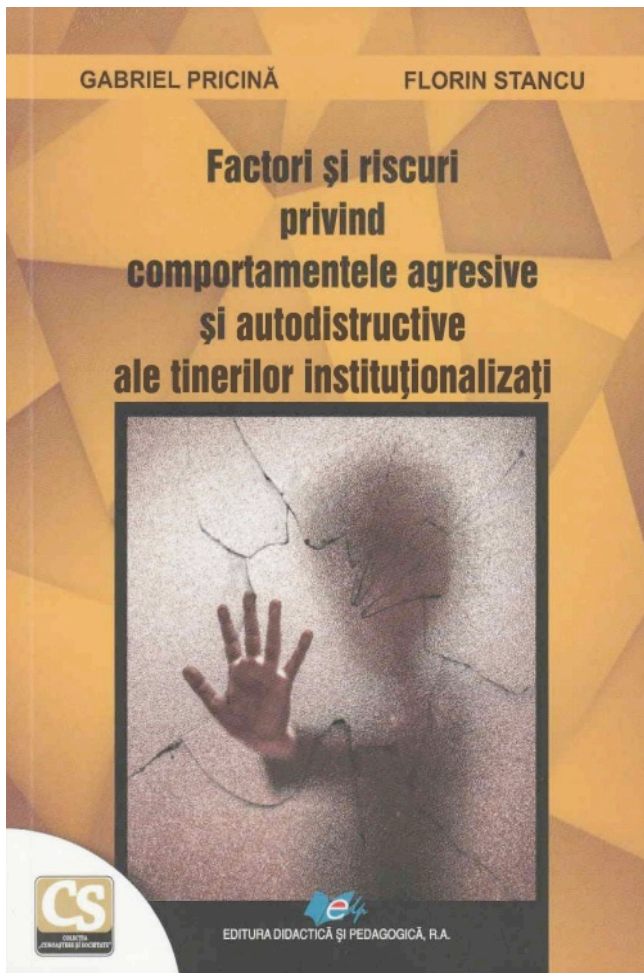
Received 12 February 2022, accepted 07 May 2022

Book review:

**Gabriel Pricină and Florin Stancu,
Factori și riscuri privind comportamentele agresive și
autodistructive ale tinerilor instituționalizați [Factors
and risks regarding the aggressive and self-destructive
behaviors of institutionalized young people]
Bucharest, Editura Didactică și Pedagogică, 2017, 167
pp., ISBN: 978-606-31-0346-9**

Cristina Ilie^{*a}

^a University of Craiova, Craiova, Romania



The book "Factors and risks regarding the aggressive and self-destructive behaviors of institutionalized young people" published in 2017, at Editura Didactică și Pedagogică publishing house in Bucharest, is written by Gabriel Pricină and Florin Stancu.

The book presents the results of a research conducted in 2016 within the General Directorate of Social Assistance and Child Protection Dolj. The target group consisted of children and adolescents in the care of the General Directorate of Social Assistance and Child Protection Dolj. The study focuses on their problems, the individual and social dimensions that affect them, how they project their future and the risks they are exposed to in the current context of life. In this research, the authors looked for evolutionary factors

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that, if not corrected in time, will determine the amplification of antisocial behaviors and will lead to the adoption of delinquent behaviors. In the evolutionary process of aggressive behaviors the authors identified, in accordance with the literature, two trends: the first trend leading to aggression directed against other people and the second trend directed at one's own person in extreme situations. In both cases there is a desire to persuade and impose one's will on others by force or blackmail.

This sociological survey sought to identify the extent to which social and individual factors contribute to increasing the aggressive behaviors of young people and identify how the social context is formed that affects or traumatizes young people and causes them to adopt aggressive behaviors as forms of relationships with others.

It was also wanted to identify how social value systems develop, that include aggression among institutionalized youth and what institutional needs exist to control this type of behavior.

The social problems that were the subject of this research are limited to the Risk Factors Paradigm. The elaborated questionnaire included 81 closed or open questions that cover the dimensions that create the social context of the young people in the care of the Department of Social Work and Child Protection in Dolj County. The group of respondents consisted of 212 institutionalized young people aged 15-26.

The objectives of the study and the related methodology were limited to the need to know the current reality, the difficulties encountered by those responsible for the destinies of these young people and to identify the needs of the public system to succeed as much as possible to provide real and necessary support to future citizens who are going through a difficult period in a delicate period of life.

The analysis was made on individual factors (demographics, aggression, beliefs, attitudes, behaviors) and on social factors (family, education, community).

Following the interpretation of the data, risk situations of young people in the care of public social work institutions were identified.

For example, analyzing the data collected by this survey, it was found that the risk factors that lead to violence in confrontations with friends are: Education through physical punishment (44.67%); Conflicts with unknown persons (23.37%); School conflicts (21.25%).

It was found that the experience of aggression during childhood is a significant predictor of later behavior of young people. The therapy of these young people becomes important in reducing the risks of future aggressive behaviors or association in committing criminal acts.

Another example would be the three factors identified as contributing to the appearance of aggressive and self-aggressive behaviors: Unjust physical punishments suffered in childhood (36.70%); Places where they were involved in conflicts with friends (35.64%); Places where they were involved in conflicts with strangers (19.64%).

Finally, the authors made a series of proposals and recommendations for public institutions caring for young institutionalized people, such as: Organizing activities involving small groups of people; Development of tolerance for otherness; Programs that support the culture of dialogue and compromise; Vocational counseling; Advice on labor market opportunities; Education through culture: participation in theater performances, philharmonic, etc.

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