

Reacting to the Emergency by Opening Perspectives: Design-Driven *Knit Therapy* as an Adaptable Tool to Answer the Change

Giovanni Maria Conti ^a | Martina Motta ^{a*} | Martina Micheli ^a

^a Politecnico di Milano, Department of Design: Milan, Italy.

* Corresponding author: martina.motta@polimi.it

ABSTRACT

When the COVID-19 emergency has raised, the entire world had to stop, adapt, and face the challenge. The article reports the reaction undertaken with an ongoing project that in February 2020 was experimenting with the therapeutic effects of knitting on patients. The project, driven by scientific international studies, was bringing the intervention of designers on the topic with experimental pilot actions, designed and led by designers on-field, that were going on inside the hospital environment when the emergency changed the scenario, limited the environment, shifted the eye on a new, wider target of healthy people. Observing the new scenario and the initiatives risen on social media the designers involved in the ongoing project made knitting a tool to help individuals spending the forced time at home in meaningful ways. The project took a new perspective and evolved into a social media campaign, proposing virtual workshops for a better living in emergency times. The two projects, on-field and online, showed knitting to be a meaningful solution not only for healthcare but also for the daily life of people, and outlined how designers and a design-driven approach can act and react on the product-service creation, improvement, consolidation, and communication.

Keywords: inclusive fashion, knit therapy, knitwear design, participated workshop.

1. BACKGROUND RESEARCH. THE PILLARS OF KNITTING AS A BENEFICIAL ACTIVITY FOR PERSONAL HEALTH AND SOCIAL INNOVATION

Knitwear covers today a wide industrial sector of made in Italy, fastly growing in these recent years, and thus became a domain of interest for scientific research in industrial design. While some branches of research are strongly linked with the industrial soul of the sector, we cannot forget that knitwear has its origin as an ancient manual work, barely homemade (Affinito et al., 2017). Therefore, design research is still investigating this aspect and the evolution of knitting as a craft: from being a solitary activity at home, hand knitting has become a social activity, made in groups and in public spaces; from being considered a hobby, it is being recognised as a side-therapy for the wellbeing of people.

1.1. Why knitting

The idea of using a craft for helping people coping with diseases is more ancient than people think, and the concept of knitting as a therapeutic activity started to be structured in 2005, when the physiotherapist Betsan Corkhill started to purpose knitting as a useful activity to

answer the need, in healthcare, of a whole-person care approach (Corkhill, 2014), namely “the coordination of health, behavioural health, and social services in a patient-centred manner with the goals of improved health outcomes and more efficient and effective use of resources” (Maxwell et al., 2014). Such an approach would be a beneficial solution not just for the patients, but for the healthcare system in general, especially regarding the costs.

The first conference about therapeutic knitting was held at Bath’s Royal Scientific and Literary Instruction Institution in 2012, organized by Corkhill herself and by Professor Dieppe (Corkhill, 2012). The starting points were the idea of the healthcare systems being economically unsustainable, and the will to find side-activities to be paired with traditional medical therapies. Many other scientists have analysed the topic, reporting knitting as a practice that fosters benefits on a personal level, helping the individual to live moments alone without the perception of loneliness but with the idea of a positive solitude, but also as a tool for people to integrate (or re-integrate) into sociality in a more serene and valuable way, regaining that social identity and purpose in life that too many times can be lost throughout a lifetime.

If compared with other crafts, knitting is suitable to a wide range of environments, including clinical ones: preparation and cleaning are simple, the required equipment can be inexpensive and occupies a small amount of space, work can be unravelled and the material can be reused (Corkhill, 2014). Low space occupation also involves portability, with important implications for individuals who use this activity to manage anxiety. Lastly, knitting is largely accessible: really few medical conditions prevent people to knit, and this is also valid for any age range, any social, educational, and cultural background: an important factor when considering integration.

1.2. Health and social benefits

When analysing the health benefits of knitting, the first thing to consider is the physical activity itself, which is a “bilateral, rhythmic psychosocial intervention” (Corkhill, 2014, p. 30). On a chemical level, studies report that repetitive rhythmic movements induce the release of serotonin (Hart, 2008) and therefore knitting is proved to have soothing effects (Jacobs, Fornal, 1999) and to “elicit the relaxation response [...] a state in which heart rate and blood pressure fall, breathing slows, and levels of stress hormones drop” (Knit for Peace, 2017, p.8). In this perspective, knitting can be considered an effective side treatment to cure depression (Corkhill, 2008) and eating disorders (Clave-Brule, Mazloum, Park, Harbottle, Birmingham, 2009), to break addictions and to manage phobias, bipolar disorders or disruptive behaviours, particularly in children (Duffy, 2007). Repetitive patterns of movement are also used by physiotherapists and neurologists to treat chronic pain (Corkhill & Davidson, 2009) and brain injuries, such as strokes (Corkhill, 2008). These findings have implications also for those who suffer from memory problems, as a tool to intervene in the early stages of the illness or as a preventive method: knitting showed influence on the reduction of the onsets of cognitive impairment, dementia and Alzheimer (Geda et al., 2012). Other research shows how knitting can be used to treat Post Traumatic Stress Disorder, as Corkhill explains:

It’s believed that in PTSD troubling thoughts and memories cannot be filed away securely and, as a result, remain vivid in the sufferer’s brain causing torment and flashbacks. Knitters who suffer from PTSD tell that the act of knitting slows down these cycles and enables them to process their troubling thoughts” (2008, p.3).

The social aspect of knitting is then equally important and becomes crucial in the modern society where levels of loneliness, particularly in certain age ranges, have become so high to generate the term “chronically lonely” (Knit for Peace, 2017), and where isolation is proved to be correlated to decrease in health (Perissinotto et al., 2014), physical illnesses and cognitive decline (James et al., 2011), together with higher levels of depression, suicide (O’Connell et al., 2004) and premature death (Marmot, 2010). This is not only a problem for the population but also an urgent need for the sanitary system, which will see a constant increase in costs: loneliness was indeed defined a “major public health concern [...] devastating and costly” (Knit for Peace, 2017, p.17). Fighting loneliness is therefore a necessity for the entire healthcare system, particularly in countries, like Italy, where healthcare is public.

Spending free time doing activities like knitting represents a rewarding occupation not just to fight loneliness but also to fight the self-perception of uselessness that can strongly affect self-worth in a society where being always productive is fundamental. Moreover, knitting stimulates creative thinking, imagination, flexibility, which then are spontaneously applied in other aspects of life besides the knitting project, and positively affect self-managing, problem-solving, and goal setting. While a knitter’s mind understands to deal with the difficulties of the single knitting project, people also learn how to “respond in more resourceful, innovative ways” (Corkhill, 2008, p.8) to the inevitable complications that occur in life.

1.3. The role of design

The difficulties in the recognition of this kind of research have been mainly linked to a more qualitative than quantitative nature of the data gained from the experimentations (Bissell & Mailloux, 1981), that represented an obstacle for the validation and acceptance of the practice in the medical and scientific world. When dealing with design research, qualitative data are a valuable tool to enrich the theoretical base through meaningful stories of life, recovery, integration, regained self-identity and sociality rather than through numerical amounts. Starting from the research activity ongoing at Politecnico di Milano in the field of knitwear design, and from the interest in deepening the investigation around knitting as a therapy, the research project reported in this paper searched for an answer to the question about the role of designers when they act in a domain that lies in between quantitative scientific data and the qualitative aspects of crafts. Designers became link activators (Fagnoni, 2018) tackling the design of new processes going beyond the logic of large-scale planning, proposing more economically and socially sustainable models, experimenting with more flexible relationships with public administrations. Therefore, it was clear that intervention had to be done not only to construct a more consistent scientific theoretical base, but also on the communication level.

2. ACTION RESEARCH INSIDE THE HOSPITAL

The literature review highlighted the existence of a promising ongoing theoretical validation process, yet still not accompanied by a sufficient on-field application. Most of the concrete initiatives in promoting the whole person care approach are led by charities active in hospitals, but their work is based on volunteering and suffers from a lack of funding, research structure, skills, and resources to build long-term research projects or programs. These premises evidenced the opportunity for the field of design to give its contribution, not

in creating new medical evidence, but in understanding the opportunities of intervention in the sector with a design-oriented approach to act on side of charities association by improving the structure of the activities, their communication, the patients' involvement, and the evaluation of results.

This was the purpose behind the pilot session of knit therapy workshops in hospital Papa Giovanni XXIII in Bergamo (Italy) –in collaboration with the voluntary organizations Gomitolorosa and Associazione Oncologica Bergamasca– aimed at creating a format to be scaled and applied to other realities with a long-term prevision.

2.1. Design and co-design: new methodologies for generating innovation

Why should design take an interest in medicine and science? The concept is linked to cross-fertilization, as:

The capability to build connections and to coordinate different multidisciplinary actors throughout the development of new products has always been a winning characteristic of the design profession. (Conti & Zanolla Mancini, 2014, p.73)

The project is also driven by co-design, an approach that “enables a wide range of people to make a creative contribution in the formulation and solution of a problem” (Chisholm). Within co-design, the role of designers becomes the one of facilitators, where they are not anymore just researchers and makers, but also teachers and moderators. The social role of culture creation is integrated in a meaningful way with the fundamental role of education. Co-design was chosen as a way to act also for its affinities with therapeutic knitting: with co-design stakeholders become co-creators during the innovation path, and this shift to a proactive condition that resembles the one found with patients in whole-person care. The holistic approach to health reflects a holistic approach to design processes, with not only ideological but also practical implications (e.g. cost reduction). The direct participation stimulates social innovation and behavioural change, translated into the fundamental pillars for social development of solidarity, empathy, tolerance: the result is a progress towards a inclusive society which can be participated by everyone.

2.2. Scenario analysis and structure of the project

The research applied the design-driven approach to on-field experimental activities, through the participation, for several months, in the charitable knitting campaign Viva Vittoria in Bergamo. The collaboration with organizations and experts enabled a direct engagement with the local community of volunteers, and allowed a critical interpretation and further re-elaboration of the ongoing practices inside the hospital.

The project, focused on the product/service creation, improvement and consolidation and on its communication for valorisation and promotion, was articulated on four levels:

1. Design and implementation of a promotional campaign (Fig. 1).
2. Knowledge (with a dissemination plan for the existing scientific evidence).
3. Design proposal (composed of a promotional campaign and three pilot events, whose results were analysed and progressively refined towards the creation of a format applicable to new scenarios).

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4. Training (where the designer trained the operators to make them autonomous on a long term prevision).



Figure 1. *Knit therapy* promotional campaign, hospital Papa Giovanni XXIII, Bergamo, February 2020.

Each of the three workshops in the design proposal phase had a first short phase of knowledge sharing, followed by the core part of the event that consisted of experimenting with knitting as a therapy with the mediation of the designer. This core part was loosely structured, to allow in-depth discussion and to vary and expand according to the participants, their interests and knowledge.

Being the research aimed at developing evidence-based contribution, the need for procedures for data gathering was identified as crucial. Due to the nature of the research – already supported by quantitative scientific data that are not an intervention ground for the designer– and of the investigated subjects, qualitative data were here privileged to elicit personal inclinations, suggestions, problems, and opinions of the interviewees. Data were gathered through two surveys, one released before the activity, to understand the level of knowledge about knit therapy and the expectations before participation, and the other at the end, to evaluate the impact. Both the surveys were filled by 100% of participants (WS1: 12 participants; WS2: 8 participants; WS3: 9 participants). The structured questionnaires with clear questions and answers were then analysed together with the records taken by the designer-researcher during the workshop sessions themselves. The audio records, that captured a big amount of other data and information spontaneously emerged with the conversations that typically arise in a knitting circle, confirmed what stated in the surveys and expanded the quality of information. The main results of the twofold analysis are briefly resumed in Figure 2.

Question	Result	Attendants' quotes
Reasons for knitting	Creativity; calmness; concentration; satisfaction in learning (particularly with easy schemes); seeing the outcome; having a goal; distracting from negative thoughts; wearing what is created; tactile sensations and colors;	<i>"I think that it makes me feel very happy, time flies"</i> <i>"I like to see how fast you can achieve results. The complicated methods become usual and very rewarding!"</i>
Reasons for participating in Knit Therapy	Curiosity on the topic; desire for amusement; captivating flyers; workshop agenda;	(Other reasons) <i>"Helping others in learning the stitches"</i>
Perceived benefits during the workshops	Relaxation/calm; reward; distraction; creativity; fun/diversion; improved memory; gratification; chit-chatting; socializing; compassionate attitude; recall of memories; freeing the mind;	<i>"Despite the presence of many people I was able to grow apart from the environment and think about my next travel"</i> <i>"I think my brain produced a lot of happy hormones when I saw the results"</i>

Figure 2. Qualitative data analysis: resume of results

2.3. Results

The qualitative data gathered confirmed what is reported in the literature, particularly regarding the benefits perceived while knitting (calm, concentration, satisfaction, having a goal, distraction), which also confirmed how knitting is not only about the product, but also about the process. Attendants affirmed never having previously encountered a similar project and this showed the innovative soul of knit therapy, at least in Bergamo hospital. Participants also declared that a fixed presence of the initiative would be positive.

In general, the workshop structure and execution were successful: the initial introduction which then continued into a friendly discussion while knitting presented effectively and reliably the benefits studied in literature. The workshop was also a moment of social bonding, and the exchange of knowledge among the participants allowed new perspectives to take shape (Fig. 3).



Figure 3. Knit therapy workshops, hospital Papa Giovanni XXIII, February 2020: (a) some attendants are already knitting/crocheting, while others are filling in the pre-activity survey (b) session with patients and visitors in the waiting room of the Oncology ward.

2.4. Future perspectives

As mentioned, the goal of the research was to intervene with a design-driven approach as a facilitator, to improve the recognition of a valuable practice also from a scientific standpoint; to add new knowledge to the existing scientific one, considering the qualitative aspects when dealing with the whole-person-care approach; to create a concrete link between these knowledge and people; to act towards the promotion of the whole-person-care approach, by designing pilot actions as a scalable format, event for a further institutionalization within the Italian healthcare system.

The first question that can arise in this perspective may regard the economic level: how could a public healthcare system dedicate resources to an activity that is still in the process of its scientific validation to be institutionally accepted? The answer lays in voluntary organizations: hospital Papa Giovanni XXIII alone counts 45 operative voluntary organizations, that during the workshops firstly attended as normal participants and soon shared their interest in making the activity a stable program. From them came the proposal to have volunteers taking charge of the project, that with their stable presence inside the hospital could become the facilitators after being trained by the designer.

Regarding the structure, the analysis of the pilot workshops validated them as a possible format to be applied in other realities with similar features. The involvement of stakeholders will be fundamental for organizational, promotional and costs reasons. Lastly, each workshop could become, through data collection and analysis, an incubator of research to furtherly test the existing theoretical evidence on the therapeutic benefits of knitting, as requested by scholars and researchers.

3. PLOT TWIST: COVID-19

During the implementation of the pilot workshops, the COVID-19 pandemic exploded, in February 2020. Italy was the first widely hit country in Europe and Bergamo hospital was in the very heart of the emergency. Being all the resources dedicated to Covid-19 and due to national regulations, the workshops in Bergamo hospital were temporarily suspended.

The emergency gave a further confirmation on the necessity, within the Italian healthcare system, of initiatives linked to the whole person care: in fact, despite knit therapy could not be inserted in the pandemic discourse as a solution, what can be observed is that the pandemic made clear how the public healthcare systems need support, particularly on the economic level, re-highlighting the whole person care approach as a valid cost-reduction strategy. A better costs management will stay as one of the main topics in the healthcare discourse also after the end of the emergency, and new solutions for cost reductions will be fundamental. Therefore, knit therapy, as other whole-person care practices, will not anymore be a possible solution, but a more and more needed free of charge side-strategy for a general better management of the costs for normal daily functioning and in preparation for possible future emergencies.

But this promising perspective had to wait. The emergency situation caused the Italian country, as many others in Europe and worldwide, to be put by governmental dispositions in almost total lockdown: people were asked to limit their movements to fundamental reasons, to prevent the infection as much as possible; hospitals became dangerous places with no admittance except for serious reasons of medical assistance necessity; homes became the places where people were spending their lives.

3.1. Scenario update: new contexts, new targets, new languages and channels

In a situation in which individuals had to stay home, new solutions immediately started to raise, particularly on the web, with the aim of helping people to live quarantine in a more serene way. Among the others, on social networks were born initiatives like virtual workouts and yoga lessons, cooking tutorials, jam sessions and many others, usually accompanied by the hashtag #IORESTOACASA (like the English #STAYHOME). On Instagram were also

created profiles properly dedicated to proposing options to spend time at home. Among the others, an account that had a good response was the profile @mysweetquarantine, created by some Italian influencers.

Observing the evolving situation on the web, and motivated also by the forced momentary stop of the pilot project in the hospital, the knitting discourse had to find its place in the newly born situation, identifying in craft a possible solution for facing situations of not only fear, anxiety, negative thoughts, sadness but also boredom, inactivity, excess of free time and all the conditions brought by lockdown times. Launching knit therapy on social media was also identified as an opportunity to analyse how this practice could have been embraced by a target which was completely different from the one of the pilot project in the hospital. In addition, the online project could also test how a discipline like knitting, which is still today strictly linked to ideas of analogical tools, would fit into the hyper-modern language of social media.

3.2. Structure of the project: translating physical activities into online proposals

In line with the mentioned #IORESTOACASA campaign, the #IOLAVOROAMAGLIA campaign was launched, with people invited to post on social media pictures of themselves knitting, with the hashtags #iorestoacasa and #iolavoroamaglia.

The campaign was not only addressed to those who were already used to knit, but also to new possible crafters, who therefore were invited to take up the new hobby. A tutorial for beginners was posted together with the campaign, to guide people that were willing to try but still not able to knit. Even if a large number of tutorials can be found on the web, a new one was designed ad-hoc, to give an image of reliability, to engage the public and to build a stronger connection with the designer through learning by looking at her knitting rather than observing some unknown hands self-searched on the web.

After a first initial positive response, the project went on with the creation of knit therapy virtual workshops, made through the tool Instagram Live Video. The idea of proposing live workshops was a consistent link to the workshops in Bergamo hospital and allowed an additional analysis on how a face to face in-presence proposal could transform, forced by unchangeable external factors, into an online live event. Once again, the adaptability of knitting to different environments, situations, and targets reported by the literature could be tested. The workshops were scheduled on a weekly appointment and lasted for the entire period of lockdown in Italy, from March to May 2020.

The live virtual workshops evolved the structure of the workshops in the hospital:

1. Online promotional campaign on Instagram and Facebook (Fig. 4a)
2. Introduction: the designer explained what the knit therapy is about, its benefits and why it could be a meaningful solution for spending time during lockdown.
3. Hands-on activity: the author showed how to knit, with new small projects every time (Figs. 4b and 4c)
4. Empowerment: some profiles of artists and activists who use knitting in innovative ways were suggested to participants, to further deepen their knowledge about the

craft and at the same time to help them to overcome traditional stereotypes linked to the commonly perceived image of knitting.

5. Feedback collection: the participants were asked to express their opinion and post or privately send pictures of the work they had done.

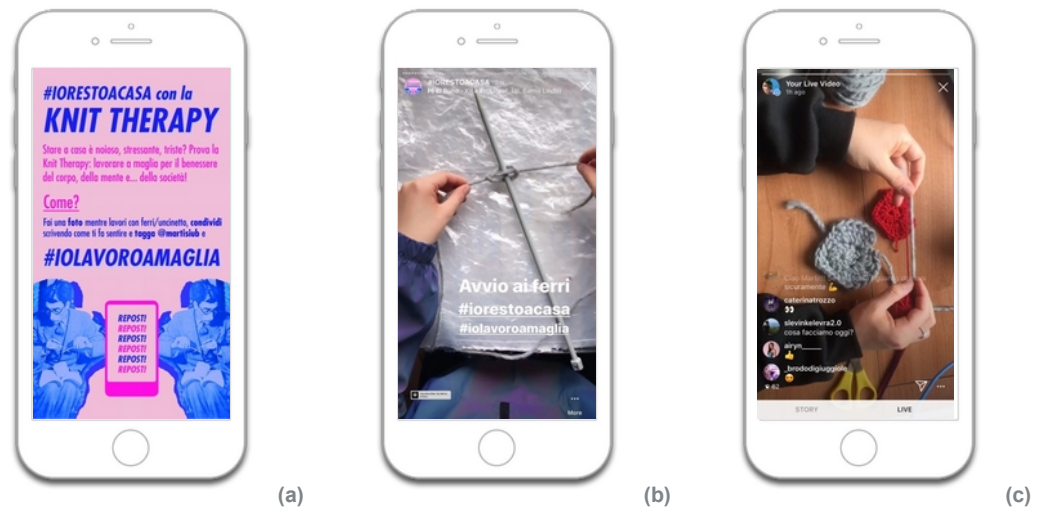


Figure 4. #IOLAVOROAMAGLIA social media campaign: (a) online flyer (b) screenshot from beginners tutorial (c) screenshot from *knit therapy* live virtual workshops.

3.3. Results: new digital perspectives for therapeutic knitting

The users' reaction to #IOLAVOROAMAGLIA campaign was immediately positive, not only in the number of posts and reposts but also in the interactions and topics of discussion that it fostered. Users posted pictures of them knitting with the hashtags #iorestoacasa, and #iolavoroamaglia, and reposted the campaign on their profiles, and shared the initiative with their followers. Some people wrote to the author to share their feelings and the benefits they perceived while knitting. Some others asked for more information about knit therapy, while some wanted to know where they could buy the material. Some respondents were people known by the author and already part of her followers, while others (particularly in a second moment) were not among the initial followers and got informed about the campaign through the mentioned reposts or through other users.

The #IOLAVOROAMAGLIA campaign was a successful initiative for the Instagram platform, with a solid response through reposts (154 reposts), interactions (over 4000), and participation in the live workshops (average of 40 participants per workshop). Another interesting evidence is that, despite knitting is usually perceived as an old-fashioned craft for elderly people, it instead emerged as suitable and adaptable to digital media, social media and to their targets and trends. This aspect is not new, since knitting websites and blogs have been existing for years, but what emerges here as an innovative observation is the fact that this adaptation, to be truly successful, should be done by also renewing and improving the visual and communicational language knitting has, under a design-driven perspective.

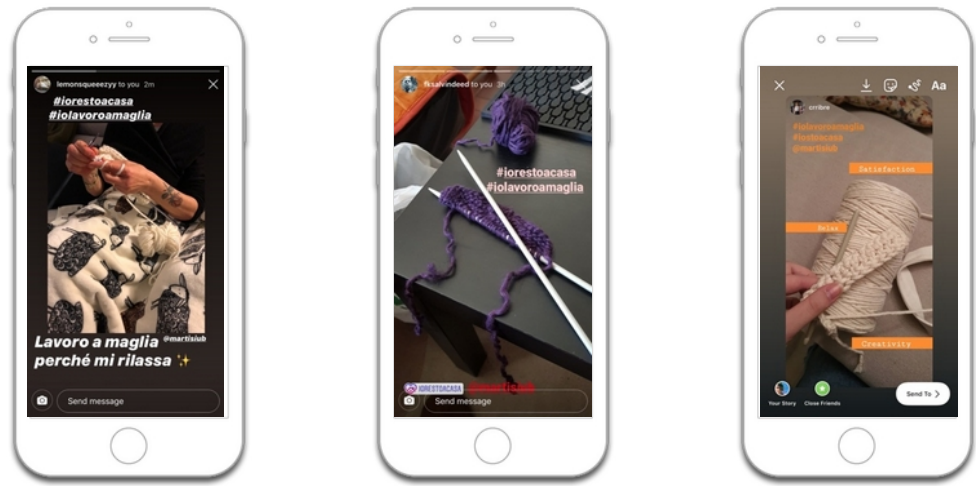


Figure 5. Users' reposts for #OLAVOROAMAGLIA social media campaign.

4. CONCLUSIONS

The first aspect that emerged from the project and from the plot twist made necessary due to the Covid-19 pandemic is that emergency transforms the contexts: the places where people used to take care of their health were not accessible anymore, while homes changed from being the place of spare time to the place of everything, and healthcare became something that can be done at home. Moreover, the emergency transforms the target: being limited in everyday life has consequences to people, and knitting, which has always been something delegated to certain moments of life and to certain age/gender categories, now comes as a cure for social isolation and mental health accessible from a wide public.

In this perspective, the role of designers becomes fundamental, not anymore only as researchers side to side with scientists and doctors, but also as creators of a design-driven strategy which is able to innovate both on the service and on the communication level. As it was done in this project, design and co-design can in fact be new methodologies for generating innovation, in a holistic approach to design processes which is able to reflect the holistic approach to health carried on by whole-person care. In this process, the designer must become a directly involved actor, where closeness, contiguity and engagement are fulfilled through daily shared experiences with the other figures involved, whether physically or digitally. The co-design of a format of knit therapy events in the hospital revealed the importance of these conditions, but design was also necessary for the creation of ad-hoc information and visual language, which become fundamental both for a better conveyance of the scientific theoretical evidence, aimed at a higher validation within the scientific discourse, and also as a way to a wider audience and target by exploring the potential knitting has if applied on social media, not only as an amusing proposal, but again also as a physical and psychological beneficial support, both in emergency situations and in normal life conditions (Fig. 6).

	Need	Target	Channel	Communication strategy	Main role of designer
ON FIELD (hospital/normal conditions)	Whole person care for patients, visitors and workers	Middle-aged women/men (core part of hospital users)	Knit Therapy physical workshops in presence	Promotional campaign inside the structure, scientific knowledge sharing during workshops	Product/service creation, improvement, consolidation
ONLINE (emergency conditions)	Whole person care for everyone in lockdown	Adolescents, young adults, middle-aged women/men (core part of social network users)	#OLAVOROAMAGLIA campaign and Knit Therapy live virtual workshops on social media	Posts, reposts, live videos, online tutorials, personal interactions via direct messages	Product/service communication for valorization and promotion

Figure 6. Comparisons between project on-field and project online.

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