Designing for informal co-production in mental healthcare: an innovative psychiatry program and the strategies from a territorial lab

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Abstract

This paper reflects on the process of co-producing mental health with informal actors, patients, health and social providers. In particular, this research examines the potential of territorial laboratories as places of experimentation for co-producing services for recovery. The Case study examined is the Brescia Recovery Co-Lab in Italy, developed with the aim to facilitate territorial experimentation of co-produced mental health and wellbeing services and initiatives with users, family members, local actors and service providers at the community level. Through a thematic analysis of the interviews, five main factors emerged that influence the co-production of mental health with informal resources: Time, Value, Participation, Co-design and Scale. The core of these factors concerns the experimentation with practices outside the traditional organisational logics typical of territorial laboratories, structures that favour dynamic co-production in mental health.

Keywords: co-production, service design, informal care, mental health

Introduction

Providing mental healthcare requires competence that is not only about knowledge and skills but also depends on the physical and mental abilities of the caregiver (Leng et al., 2019). A large slice of mental health care is often delivered informally (Martani et al., 2021) to people by a person or group with whom they have “a social relationship, such as a spouse, parent, child, other relatives, neighbour, friend, or another non-relative” (Broese van Groenou & De Boer, 2016: 271). Also, volunteers and informal organisations play a fundamental role in informal care depending on their task (Finkelstein & Brannick, 2007). The nature that drives volunteers or other informal caregivers to compensate for the lack of support at the formal level lies in a commitment to community or family values, loyalty and reciprocity, and emotional bonding (Skinner et al., 2021). Volunteers and informal caregivers can be described as fundamental co-producers in service delivery, providing commitment, time, and information (Winter et al., 2019).
Recovery and co-production (Ostrom, 1996) are emerging internationally as synergetic paradigms for mental health services. Both concepts can be traced back to a broader trend of interest in the health and social sector: patient-centred and community-based care, the personalisation of interventions, and health expenditure instruments that envisage the direct participation of users by defining service guidelines. Recovery is delineated from the experiences of mental health service users who, between the 1970s and 1980s (Chamberlin, 1988), began to share their own journey of illness to recovery. From these first narrative accounts, it was possible to study the active ingredients of personal recovery paths, understood as a rediscovery of the value of the meaning of a life experience even in the presence of symptoms or limitations due to a mental disorder (Anthony, 1993; Leamy et al., 2011).

Adopting a recovery and co-production orientation in mental health services requires a process of cultural transformation. As a large slice of mental health care is often delivered informally (Martani et al., 2021; Broese van Groenou & De Boer, 2016), complementing and compensating services that healthcare providers cannot perform (Gulati & Puranam, 2009), co-production with informal care provides an external view and new perspectives on organisational activities, helping curb operational blindness (Rimes et al., 2017). In contexts where services are organised traditionally, with decision-making roles entirely delegated to health professionals, informal care provision face barriers in integrating their contribution. Such changes can only occur through a process in which shared reflections, experiences and projects bring to maturity a series of elements that can be transferred to broader organisational levels (Boyle & Harris, 2009). The transformation of a single organisation is not enough to improve mental health care. However, it is necessary to work at the system level, rethinking how new recovery-oriented practices and principles can be built alongside new forms of governance that enable the construction of community psychiatry (Sangiorgi et al., 2021). Coordination and continuity between different actors are critical elements of integration (Janse et al. 2017). The challenge of integrating formal and informal care in a complex ecosystem lies in the need to experiment with new practices outside and in between different organisations and actors (Hengelaar et al., 2017). Which forms these practices can take and how they can facilitate these encounters and collaboration, is a fundamental design question that we are aiming to explore in this paper using mental health as a case study and territorial labs as possible strategic organisations.

The paper introduces the relationship between formal and informal care by defining their role in the community and the challenges they face. Next, an exploratory study on the Recovery Co-Lab, a community-based mental health service based on coproduction in Italy, is introduced and analysed, identifying some characterising factors of the co-production process with informal care concerning the service design and delivery phases. In conclusion, a reflection on the co-design of community-based...
Informal & Formal Care in community care

The concept of Community-based care appeared around 1957 in the field of mental health care when the Royal Commission on the Law Relating to Mental Illness and Mental Deficiency recommended that "no patient should be kept as an in-patient in the hospital when he has reached the stage at which he might return home" (Department of Health and Social Security, 1957: 64). In 1971, other community-based services for mental well-being were implemented, such as supportive housing, day services, and community-based mental health nurses and social workers (Killaspy, 2006). For Bulmer (1987), community care includes the support by informal and formal care of the elderly, disabled, mentally ill and other dependent groups through a network of informal relationships that mobilise individual and collective responses to adversity, rather than in institutionalised settings. Community care contributes to positive clinical outcomes (Kastner et al., 2018; Reynolds et al., 2018) and social support compared to usual care (Reilly et al., 2015), and reduces the risk of hospitalisation (Tricco et al., 2014); in addition, Community Care fosters people's engagement, including self-management, patient education, improved collaboration between informal caregivers and volunteers, evaluation with follow-up care procedures and structured care processes or pathways had more significant evidence of effectiveness (Frost et al., 2020). Rebalancing care among the actors of the community is becoming a new standard for mental health patients (Bajraktarov et al., 2020).

Informal organisations working in health care are often constituted by caregivers or volunteers who have experienced distress first-hand and are driven by a desire to support people who will relieve their experience. Unlike formal care professionals, this pushes them to focus on people rather than tasks (Finkelstein & Brannick, 2007). The formal system's difficulty is framing people's needs through defined tasks and failing to offer personalised support in interacting with them. Consequently, informal organisations provide services oriented toward more human-centered aspects, such as socialisation and recreation, personal care, administrative procedures, food supply, information, group offerings and consultations, or direct support to nursing staff (Von Schnurbein et al., 2022).

Revealing and understanding this fundamental diversity of viewpoints in mental health complex systems is crucial to anticipate potential conflicts while fostering collaboration and integrated care (Sangiorgi et al. 2022). However, there can be the tendency to dichotomise voices, providing a single authority for analysis and
conclusion (Pinfold et al., 2015). The lack of dedicated approaches and tools facilitating exchange and sharing can make some users or informal care givers feel excluded. Consequently, the exchange is not the result of all participants’ needs but mainly responds to the view of those who have taken more control in the mediation (Ibid).

Furthermore, co-production in mental health requires thinking about people, power, partnerships, resources and risk in very different ways (Carr & Patel, 2016). It means balancing power dynamics among mental health service users, survivors, their organisations and communities, which has implications for services and practitioners. Co-production processes should achieve equality and parity between all involved to ensure full collaboration, as control is distributed over different actors in different time phases (Pinfold et al., 2015). The organisation of community mental health services requires a balance among continuity of care, access to services, prevention, social inclusion and citizenship rights, risk management, prevention and early detection of incident cases, health and social care integration transversal to multisector and multidisciplinary contributions (WHO, 2012). To facilitate integration, institutional bodies should set an agenda in which the role of informal resources is clarified (Skinner et al., 2021).

Recently, to address the challenges of relational inequalities, the concept of experimentation has become a key component of co-production, which is based on the active participation of users, citizens and informal organisations in co-designing, co-implementing and testing new ideas, services and products (Sorrentino et al., 2018). Territorial labs are a promising place for collaboration between public sector, private companies, research centres and citizens in the wide range of experimental co-production practices (Nesti, 2017). Co-production in territorial labs is mainly in the co-design phase of the service cycle and the co-delivery phase focuses on the experimentation of new services or products. Given the experimental nature of the labs, innovation is based on a prototype approach (Sorrentino et al., 2018).

In this paper we consider in particular the role territorial laboratories can play in facilitating collaboration across multiple stakeholders and in mediating the establishment of a community mental healthcare approach.

**Methodology**

This exploratory study was conducted as part of an interdepartmental Ph.D research between the design and management engineering departments at the Politecnico di Milano. The study was approved by the ethics committee of the organisation where it
was carried out. The research aim emerged during preliminary studies on community care and the role of informal care, which opened up the question on which organisational forms could favour the latter to better integrate with formal service providers and foster service innovation. The research was based on a literature review of the role and needs of informal care, focusing on mental health contexts and additional research on territorial labs for innovation. The Case study examined is the Brescia Recovery Co-Lab, an innovation laboratory co-designed and co-produced within a now completed Fondazione Cariplo funded project called Recovery.Net. The Recovery Co-Lab were developed with the aim to facilitate territorial experimentation of co-produced mental health and wellbeing services and initiatives with users, family members, local actors and service providers at the community level. Through desk research and interviews the research has investigated factors that seem to favour successful co-production practices between formal and informal care once the Co-Lab has been implemented, to then reflect on how to design for their replication in other contexts.

In particular this preliminary study intends to address the following RQs:

RQ1: What is the potential role of territorial labs in supporting co-production between formal and informal care?

RQ2: What can service design learn from these integration mechanisms?

The interview involved three experienced users, one operator acting as an educator, and two managers of the Co-Lab. The interviews with patients and operators were informal, lasting approximately one and a half hours. This approach was agreed upon beforehand with the users to facilitate dialogue and interaction, avoiding putting too much pressure on them.

The semi-structured interviews with the Co-Lab managers instead lasted one hour and covered (i) the experience and perception of the Co-Lab, (ii) the role they played in its development, (iii) who are the formal and informal actors involved in the Co-Lab and their relationship with the system. The interviews were transcribed verbatim and analysed starting from the identification of recurring co-producing factors in the service design and service delivery phases, the framework was constructed using an inductive approach. A thematic analysis (Braun & Clarke, 2012) made it possible to include the data from the operator and patient interviews with those from the semistructured interviews.

1 Recovery.Net is the result of a shared reflection by local actors and regional decision-makers on the difficult sustainability of a system of mental health services that sees laboratories for community psychiatry as the most significant cost commitment, with a consequent weakening of the care and community assignment paths. https://www.recovery.net.it/colab-brescia
The potential role of territorial laboratories for co-production: the Recovery Co-Lab

The case examined in this study is the Recovery Co-Lab in Brescia (Italy). Located in the San Polo district, characterised by social frailty, the Recovery Co-Lab had to play different roles in the transformational process of mental healthcare toward community-based psychiatry: it should stimulate institutional change in individual service providers to adopt the Recovery and Co-production principles and service models; it should support value co-creation and innovation projects across different local actors, and lastly it should foster social inclusion for patients in their recovery journeys.

Among different kinds of laboratories experimenting with new solutions, three main typologies can be identified that address those challenges (Sangiorgi et al., 2021): innovation labs, living labs, and community hubs. Innovation Labs work primarily on service innovation and cultural change within public sector organizations or Government (Carstensen & Bason, 2012); Living labs strengthen open innovation processes by activating and emphasizing public-private-people (PPP) partnerships and focusing on users (Westerlund & Leminen, 2011). Also, they provide services around the user experience by engaging organisations, supporting lead users as entrepreneurs, and driving users in the innovation process (Almirall & Wareham, 2008). Community Hubs are multifunctional urban spaces operated with and by local communities enabling social inclusion, new welfare services and cultural activities.

Infact the Recovery Co-Lab wanted to foster the transformation of care pathways by activating and co-designing innovative activities and services co-produced by users, family caregivers, volunteers and citizens. Although carried out outside institutions, these processes aimed to stimulate cultural change with a recovery perspective. Furthermore, the Recovery Co-Lab should facilitate collaboration, dialogue and forms of partnership between health services, social services and the territory to create more integrated and customised rehabilitation processes. This operation was also intended to increase the capacity of Co-Lab participants to know how to engage territorial resources and to imagine and co-produce initiatives for awareness-raising, training, or socialisation. Finally, Recovery Co-Labs were considered also similar to community hubs, such as gathering spaces open to the community and where decision-makers meet to coordinate and support local forms of governance for the mental health community, but with a more systemic perspective.

Starting from these premises and hybrid identity, the Recovery Co-Lab had been imagined following a co-design process facilitated by a design team from Politecnico
The next part of the paper will therefore first summarise the co-design process to then introduce the actual investigation of this paper focused on the follow up stage of implementation and service delivery.

The co-design process of Recovery Co-Lab

The design of the Co-Lab followed three main phases, which involved a group of users, family members and operators. The phases included identifying the physical space, a participatory field research in the neighborhood, the co-design of visions for the development of the laboratory in the chosen area, and the selection and specification of the laboratory for its implementation. For the location of its Co-Lab, the Brescia group identified the Cimabue tower, a space located in San Polo, a peripheral area of the city. The tower is inhabited by older adults, foreign families with many children, housing managed by social services, and people with mental health situations supported by a social cooperative. Codesigning scenarios for the development of the territorial Co-Lab followed two main steps: the development of a workshop transversal to others implemented in different contexts and, on the other hand, contextual research aimed at the subsequent design starting from needs and opportunities (Sangiorgi et al., 2021).

The first co-design workshop involved service providers and patients, project partners, and key players in the territory, such as volunteers and informal organisations. This event aimed to imagine possible scenarios for future territorial workshops starting from what emerged from the research on the three types of territorial labs introduced earlier. Furthermore, participants started to imagine a model for the Co-Lab responding to the project's needs to be developed in the subsequent phases of the process. After a reflection on some international case studies and the definition of key values, the workshop's core was to interpret the case studies in the local context to generate four scenarios for the future Co-Lab and visualise them through a storyboard.
Once the spaces on the ground floor of the Cimabue tower had been identified for Brescia, the Co-Lab team undertook two-month contextual research in the neighbourhood to identify opportunity challenges to be included in the co-design phases. The field research included interviews with key local actors and a contextual observation combined with a collection of photographs of the neighbourhood. A twoday training programme to introduce participants to typical design methodology and research and analysis methods was necessary to facilitate the group's engagement in the co-design process. Starting from sharing the salient points of the field research of the first workshop, the second involved clinicians, service operators, patients, experienced patients and local actors, primarily volunteers and informal organisations. They reinterpreted the four scenarios that emerged from the first workshop with a focus on the needs and resources of the neighbourhood. The scenarios were then contextualise into the Brescia territory, defining the values, actors involved, key activities, and ways this scenario could support mental health services. The four scenarios that emerged during the second workshop were visualised and shared to obtain feedback from the various community actors and to define a unified scenario. The results were presented during some activities in the Co-Lab space.
Ongoing dialogue with local institutions and providers led to a round table discussion with local informal organisations and the definition of a proposal addressed to the city council to request access to the future management of the Co-Lab space. In the third workshop, a reflection was initiated, focusing on defining how activities could meet mental health needs concerning the space. This workshop thus provided the project team with the necessary material to draw up a summary document to imagine some spatial and furniture configurations.

Figure 2. Second workshop on defining how activities could respond to mental health needs regarding space, photo by Sangiorgi, 2020

Considering its degraded condition, access to the tower was constrained by the timing of bureaucratic procedures for securing, sanitizing and renovating the spaces. Parallel to the design of the physical space, the last phases have also seen the consolidation of the governance model by integrating the representatives of the various key players involved in the project.
From the Recovery Co-Lab to Torre Cimabue Co-Lab: analysis of the implemented co-production model

At the end of the Recovery Co-Lab design experience, users, informal organisations and operators shared their interest with local institutions in continuing the project. The health provider then recognised the potential of the laboratory and decided to continue the activities. The Recovery Co-Lab, therefore, changed its name to CoLab Torre Cimabue and started a process of reintegration into the services. It has been recognised by the regional government (Regione Lombardia) as an innovative psychiatry programme. It is implemented by the Department of Mental Health and Addiction of the local health provider ASST Spedali Civili of Brescia by the Psychiatry Operating Unit no. 23.

In transitioning from Recovery Co-Lab to Torre Cimabue CoLab, the project has maintained the original features such as being an open place, welcoming and enhancing local resources. In service delivery, some activities have become ordinary, e.g., co-designing the space with the patients has become a programming phase. Some projects are still in the initial stages and require more effort. For example, the group in charge of mapping local resources has great potential for services. The mapping activity enhances the users' participation and protagonism in identifying valuable resources with the operators and family members to meet the desires of individual patients, to implement their sense of belonging to a non-institutional place or group, and to build relationships outside the psychiatric and healthcare sphere. However, it is currently more focused on internal work within Co-Lab rather than integrating with the other services provided by the health provider. The transition between the two projects took time to adapt the organisation to comply with bureaucratic regulations, given that the organisation chart of the health provider did not include a particular structure such as that of Co-Lab.

From the analysis of the interviews reporting on the experience of the Torre Cimabue CoLab, five main factors influencing the co-production of mental healthcare with informal resources emerged: Time; Value; Participation, Co-design and Scale.

Time is relative

Given the experimental nature of the living and innovation labs in neutral environments, the timing adapts to the users' needs and not vice versa. Consequently, the actors involved in the activities create expectations regarding the timeframe for developing the activities outside the Co-Lab. In particular, the integration of Co-Lab activities with hospital services is slowed down due to tight health protocols, generating impatience in the users. However, the time lag of the
Co-Lab is not necessarily a critical factor. It allows operators to avoid time-consuming administrative processes and users to remain in a creative and less institutional perspective.

"Co-Lab time follows a different speed. The users are enthusiastic about the activities and are eager to see the services of the Co-Lab implemented with those of the hospital, which instead requires long protocols" (operator 1)

Dynamic value proposition

The creation of relations occurs informally and is tied to the proactivity of the individual in involving new actors. In addition, the engagement of local resources (such as local organisation, committees, cooperatives, etc.) remain one of Co-Lab's primary actions, as its identity for many in the community is still unclear. Some local organisations feel their activities are unrelated to mental health issues, so the potential value of the relationship with Co-Lab is not perceived. For this reason, CoLab promotes informal meetings with local actors to make them understand that its offer is constantly changing and involves not only mental health services but is open to all.

"Some local resources express astonishment when they are contacted by us. They think they have nothing to do with mental health, but then they change their mind. Some others only transit from this place: they propose their event or course and then you never see them again" (operator 2)

Natural selection of participants

The Co-Lab model is shaped on the context and the characteristics of the involved actors. A guideline cannot define the value of relationships and how they are created. Given the centrality of relationships, the creation of new Co-Labs for mental health presupposes the personal predisposition of the actors to interact, create new relationships and participate in sharing proactively. Co-Lab in Brescia was born from the evolution of a project on recovery, which led to the natural selection of a group of users and operators who were more motivated than others. This selection favoured the subsequent transformation into an experimentation laboratory and was necessary to test the real motivation of the founding actors.

"We generally do the engagement by inviting local resource representatives here for an informal meeting. We call it "the coffee". [...] I use informal channels for communication: I pick up the phone and call or send a message on Whatsapp" (operator 2 and 3)
Integrating co-design practices

Co-design practices raised awareness in the service design phases to facilitate sharing and valorising the various actors' competences. Activities such as the codesign of spaces were extraordinary and functional in achieving the objective. Once the objectives were achieved, these practices were integrated into the service coproduction processes with users and operators. For instance, the scheduling of courses for Co-Lab users follows the practices assimilated during service design and has become the practice for co-designing.

"In the beginning, it was an extraordinary approach to set up the Co-Lab, its spaces and initial activities. Now it has become an ordinary approach to planning activities with users and operators" (operator 2)

Scalability of relations

While it is possible to define the users' needs in a specific context and design tools to facilitate the co-design of solutions to assess them, it is challenging to define guidelines for building new relationships. This depends solely on the individual's natural inclination and motivation to involve new actors. Team and community building could enhance motivation in users and operators since those interviewed emphasised that feeling part of this community is fundamental within co-design activities.

"We are here because we believe in it. It was like a natural selection. You couldn't involve other people if you didn't believe in the project. [...] I want other people to understand they can start taking control of their life, and not too late like I did" (operator 2 and user)

Discussion

The following table compares the characteristics of the identified factors as manifesting in the implementation and delivery of the Co-Lab service, with what instead have qualified the service design process of the previous stage.
The core of these factors concerns the experimentation of practices outside the traditional organisational logics typical of territorial labs, structures that favour a dynamic coproduction in mental healthcare. The Co-Lab's experience in the design and delivery phases highlights some limitations of integrating informal co-production as a more formalised practice, even in environments with actors motivated to create it. The value of informal relationships determines the greater effectiveness of interventions, but at the same time, it is challenging to apply in other contexts. From the health provider’s perspective, the organisational set-up, workforce, and task management would need to readjust to a dynamic environment with weak regulative infrastructures. Nevertheless, a service design approach can be integrated into the engagement and co-creation process. In doing so, an informal approach combined with a service design approach may provide "organisational functions relating to communication, maintenance of cohesion, and safeguarding individuals against the dehumanising aspects of formal organisations" (Wu et al., 2021: 2).

To support the development of services within Co-Labs, service design should be more dynamic through an approach that captures contextual needs, encourages exchange, and facilitates new relationships.
Conclusion

The development process of Co-Lab in Brescia adopted a service design approach in co-designing activities with the variety of actors. In particular, the transition from designing single-care pathways to working towards a more systemic change of the mental health care model required creating a participatory and inclusive approach that could act at different levels. This involved different actors in both the local and institutional context and considered the dynamics of social exclusion and stigma embedded in society. Given the complexity of the process of transformation orientation of the mental health ecosystem, the project was conceived as a multilevel process operating simultaneously at the micro-level of the co-production of individual treatment pathways, at the meso-level in the innovation of organisations' practices and at the macro-level in the stimulation of cultural and social change and policy development. However, the factors that emerged in the service delivery highlight how the meso and the macro levels remain less affected by the mental healthcare transformation keeping the Co-Lab a reality isolated from the rest of the system.

Even in the micro dimension, not all pathways are linear toward improvement. In fact, in some clinical cases, operators struggle to co-produce the pathway with patients because they require a strong capacity for emotional detachment. Furthermore, it requires further research and experimentation on a macro dimension, such as how to help develop a bridge between experimental laboratories and contexts defined by health system regulations. In this setting, the factors of time, value, participation, co-design, and scale represent topics of interest, as they are variable by cultural, social and regulatory context.

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