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A service ecosystems perspective to explore social prescribing value co-creation for vulnerable young people in NEET situation

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Abstract

Background Social prescribing inherently embodies a co-productive nature, particularly within the ‘holistic’ model facilitated by the pivotal role of Link Workers. Most attention is focused on collecting evidence about the micro-level relationship between Link Workers and their clients. However, little is known about how this co-productive relationship influences or is influenced by value co-creation at different levels, given the involvement of multiple actors in delivering the intervention. To advance research on the operational processes underlying social prescribing, we propose a conceptual framework utilizing the Service Ecosystems perspective to investigate the application of social prescribing with young people in NEET situations in Italy.

Methods A single case study was conducted as part of the European C.O.P.E. (Capabilities, Opportunities, Places, and Engagement) initiative, examining the implementation of social prescribing targeting young NEETs (Not in Education, Employment, or Training) in Italy. Semi-structured interviews were conducted with 27 participants, including six members of the C.O.P.E. coordination team, six Link Workers, and 15 young people aged 15–34 years.

Results Findings are presented showing the ecosystem dynamics at each intervention phase: the referral process, co-production of an individualized action plan, and connection with and activation of community assets.

Discussion This research illustrates how social prescribing is not a linear path but rather a complex intervention with multiple interacting elements across ecosystem layers. The dyadic relationship between Link Workers and clients operates within broader care services, fostering continuity of care. The service ecosystem perspective offers a valuable framework for examining the dynamic interactions between actors and understanding how their resource integration processes and institutional arrangements foster the emergence of opportunities to support an invisible and hard-to-reach target group, such as young people in NEET situations.

Keywords Social prescribing, Service ecosystem, Value co-creation, Young people, NEETs

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Background

Social prescribing and its mechanisms

Social Prescribing (SP) was introduced over thirty years ago in the UK to address non-clinical needs affecting people's well-being and health [1, 2]. It is a community-based intervention aimed at supporting people with long-term needs through social solutions and community connectedness [3]. SP has gained international recognition [4] as a forefront approach to personalized and integrated care [5, 6].

Social prescribing is defined as *'a means for trusted individuals in clinical and community settings to identify that a person has non-medical, health-related social needs and subsequently connect them to non-clinical supports and services within the community by co-producing a social prescription to improve health and well-being and strengthen community connections'* ([7], p.17). Operationally, it is a holistic, person-centered, and community-based approach bridging clinical and non-clinical support and services.

The founding elements of SP include its multi-sectoral and multi-stakeholder nature, collective action, and collaborative processes across multiple levels. SP is characterized by a shared awareness and identification of non-medical, health-related social needs, expressed through non-clinical support and co-production of an action plan tailored to the individual's needs, interests, and resources. The intervention activates territorial connections and removes barriers to achieving short-term goals.

Despite its promise, SP remains a complex and heterogeneous intervention. A lack of taxonomy guiding its implementation and evaluation complicates meaningful stakeholder participation. As Fixen et al. ([8], p.1) noted: *'Pertinent questions remain concerning the operation of local social prescribing schemes, including their ability to allocate resources to those who most need them and to ensure fair and meaningful participation of all stakeholders involved in the planning process.'*

The co-productive nature of the intervention is mainly grounded in the relationship between Link Workers and their clients, which allows the social prescribing to become a pathway toward well-being. As mentioned by Thomas et al. co-production in Social Prescribing is defined as the *'mutual relationship between service providers, service users and their families and communities'* ([9], pg. 2). Co-production, in this case, is meant to encompass a wide range of activities like co-design, co-delivery and co-assessment.

The terms 'co-creation,' 'co-design,' and 'co-production' are often used as similar to refer to initiatives that involve multiple stakeholders. However, there are distinctions between them, both in context as in content

[10]. Co-creation is usually applied to the creation of value regarding complex challenges, through creative problem-solving between diverse stakeholders, while co-design is often more concrete, referring to an already specific and identified problem, that can be addressed by multiple stakeholders or only by one specific group. Co-production comes later in the workflow, referring to the implementation of a previously agreed strategy regarding a specific problem focusing on the practicalities, such as the allocation of resources and assets to achieve the desired outcomes.

Co-production in Social Prescribing is seen as an approach to engage stakeholders and promote users' agency to achieve positive wellbeing outcomes by connecting with community assets as these lead to more positive outcomes. Understanding the mechanisms that promote these co-productive relationships among all actors involved in the intervention can guide policy decision-making and the development of Social Prescribing [11]. Major focus has been placed on assessing wellbeing at the individual level but there is also growing interest in understanding how the overall community is influenced by the intervention and how Social Prescribing could enhance community wellbeing and address health inequalities [12].

Calderón-Larrañaga et al. [13] have investigated Social Prescribing in terms of complexity looking at different layers of interactions (micro, meso and macro) and how these influence service delivery through a realistic review to identify good practices. The authors focus on the three main actors involved in the delivery of SP, namely general practitioners, link workers, and the voluntary sector. They show how better outcomes are achieved when the intervention allows flexible, dynamic, and open-ended collaborations across ecosystem's levels. The study considers Social Prescribing in terms of complexity and dynamic interactions but it does not consider the current development of Social Prescribing that attempts to target non-adult populations, such as children and young people, whose participation in services implementation is generally low, that extends the boundaries of referral not exclusively in the healthcare sector and that might address broader social needs.

We are currently embracing this discussion by exploring innovative approaches to enhance our understanding of how SP operates, ensuring effective resource activation and stakeholder participation, including that of young people and their communities. Our approach involves leveraging the conceptual frameworks of service ecosystems, using SP as a compelling case study. Existing research on SP has predominantly focused on assessing individual health outcomes and the co-production dynamics between link workers and clients. However,

there is a gap in understanding SP from a broader ecosystem perspective beyond the micro-level interactions.

The service ecosystem perspective enables researchers to have oscillating foci where the phenomenon of interest can be examined at different levels of aggregation by zooming in and out [14]. This view has practical implications in supporting the understanding of complex interventions and identifying practices of value co-creation (and co-destruction) among actors and how they change the context. In this article, we adopt the Service Ecosystem perspective to examine social prescribing and understand practices of value co-creation and co-destruction by examining a case study of the first implementation of Social Prescribing in Italy targeting young people in a NEET situation.

Service ecosystem

As mentioned before, Social Prescribing is a complex intervention in which multiple actors interact on various levels. A growing body of literature attempts to understand, from an operational point of view, the processes and mechanisms underpinning the intervention. The Service Ecosystem perspective can be useful for understanding the contextual, processual, and systemic areas of this phenomenon [15] as it privileges looking at utilisation, processes, and relationships to co-create value [16].

The concept of Service Ecosystems is based on the Service-Dominant Logic (S-D Logic) domain in which the idea of service is tangled with the intangible exchanges that occur between actors to pursue value. A Service Ecosystem is defined as ‘*a relatively self-contained, self-adjusting system of resource-integrating actors connected by shared institutional arrangements and mutual value creation through service exchange*’ ([17] p. 10–11). At the core of this definition, there is the understanding that multiple stakeholders and actors across the service ecosystem participate in value co-creation.

The main four elements in this concept may be presented as: a) actors, referring to the stakeholders involved in the exchange of services; b) technology, as it allows to share information and creating new institutions; c) institutions, which are here considered as the social norms and practices that regulate the service exchanges and enable resource integration; and d) resource integration, encompassing operational resources, human knowledge, skills, cultural and social resources, among others that are exchanged during interactions [18].

Value co-creation more specifically in the healthcare domain is defined as “*the benefit realised from integration of resources through activities and interactions with collaborators in the customer’s service network*” ([19], p. 475). Resources are meant as “*all tangible and intangible entities actors own, or have access to, that are used by*

them for purposes of resource integration” ([20], p. 297). They acquire value depending on the context when integrated and re-adapted by the actors networked in the ecosystem. Resources integration is meant as “*a process whereby actors combine and apply resources in pursuit of value creation*” ([21], p. 175). Resources are states of becoming and are based on actors’ valuations of a sense of *resourcefulness* or utility in context [22]. Value creation occurs in a complex context depending on the actors’ cooperation and coordination. The relationship between value and its context is governed by social principles [23] and therefore actors’ interactions are guided by their set of norms and beliefs called institutions. This set of norms and beliefs has also a dynamic nature as constantly shared and arranged by actors [24] which makes service ecosystems complex and often unpredictable. This also means that service ecosystems have an emergent constitute as they need to adapt and respond to supportive and disruptive internal and external factors [25]. Emergence is entangled across layers of the ecosystem, meaning that micro-level components can result in the emergence of macro-level properties and changes at the macro-level can stimulate micro-level change [26]. Finally, in healthcare the beneficial functioning of service ecosystems has been described in terms of wellbeing, meaning ‘*the success of an ecosystem suffers when actors lack a shared worldview regarding how to achieve their common goals. For example, if the goals of each actor differ, it could lead to wasted resources across different levels of the ecosystem. The multiplicity of actors, their roles, their interactions, and their dependencies highlight how the relative involvement of specific actors varies, raising the issue of the different degrees of well-being that exist for actors and institutions within an ecosystem*’ ([24], p.2663).

The NEET phenom and the C.O.P.E. project in Italy

Italy has one of the highest rates of NEETs in Europe, with 1.7 million young people aged 15–29 in this status as of 2023 [27, 28]. NEET is considered every young person that ‘*regardless of their educational level, are disengaged from both work and education and are therefore at a higher risk of labour market and social exclusion*’ ([29], p.2). The phenomenon is generally negatively connoted. Some studies have shown that employers tend to not hire recent school leavers as they think that young people lack soft skills, work experience, and aspirations [30]. At the same time, some young people in a NEET situation are first recognised as socially vulnerable and therefore in charge of social care, or with mental frailties and therefore they are first of all mental healthcare patients. A recent study found that youths who remain in the ‘NEET trap’ are doubly disadvantaged not only in suffering socioeconomic exclusion but also in missing out on

the potential benefits of mental health early intervention [31].

A major concern concerning the NEET phenomenon is the ability to design interventions and services capable of engaging young NEETs. Being inactive and socially marginalised they often experience high levels of disengagement from social systems and related services [32].

This was the background for the implementation of the C.O.P.E. project. The European Commission co-funded C.O.P.E. - Capabilities, Opportunities, Places and Engagement¹, a holistic and innovative person-centred intervention, developed to support some of the most vulnerable groups of young people, those defined NEETs.

Methodology

Aim of the paper

This paper investigates how interactions, resource aggregations, and institutional arrangements dynamically occur across ecosystem levels, using the service ecosystem perspective to explore value co-creation in social prescribing.

More specific the service ecosystem approach in this paper investigates the following questions:

- 1) How do interactions and resource aggregation processes contribute to value co-creation within the service ecosystem layers of social prescribing interventions for NEET youth?
- 2) What institutional arrangements at different ecosystem levels facilitate or hinder the implementation of social prescribing in addressing NEET youth's social and health needs?

Study context

The European Commission funded C.O.P.E. - Capabilities, Opportunities, Places and Engagement², a holistic and innovative person-centred intervention, developed to support some of the most vulnerable groups of young people, those defined (Not in Education, Employment or Training) in Italy and Portugal. The aim of the project is *'to innovate and strengthen interventions to contrast vulnerabilities of young people Not in Employment, Education or Training (NEET), requiring complex and coordinated, inter-sectoral interventions, facing the greatest barriers to social and labour market integration'*³. C.O.P.E. proposes a holistic and innovative person-centred intervention for NEETs to access support through

the concept of "relational proximity". The notion of "relational proximity" is characterised by *'an emphasis on the organisational, individual and social assets that can be activated through the concerted effort of a wide range of stakeholders and put into practice by the relationship between the link worker and the young NEET'*⁴. By promoting this intervention that has all the characteristics of Social Prescribing, including the key role of the Link Worker, the research is based on the activation of relational proximity communities. The notion of "relational proximity" is characterised by an emphasis on the organisational, individual and social assets that can be activated through the concerted effort of a wide range of stakeholders and put into practice by the relationship between the link worker and the young person in a NEET situation. The project represents an interesting evolution of Social Prescribing intervention with a targeted group of vulnerable young people with very complex and systemic needs.

Data collection and analysis

Between July and September 2023, semi-structured interviews were conducted with a total of 27 participants from the Autonomous Province of Trento in Italy. These included 6 members of the C.O.P.E. coordination team, 6 link workers, and 15 young people aged 15–34 years old. Each interview lasted between 30 and 90 minutes and was conducted in presence or online through the platform Zoom according to participants' preference. The University of East London Ethics Committee approved the research app ID ETH2122-0128. Interview guide was developed for this study and as part of the qualitative data for the evaluation of the project; quotes present in this manuscript have not been used for any other publication. We attached in the supplementary files the topic guide developed for all three type of participants involved in the study.

Interviews were then anonymised and transcribed. Thematic analysis [33] was conducted using the open-source software Taguette [34]. This helped us to develop an emerging coding scheme describing the main elements of service ecosystems: actors, interactions, resources, resource integration, institutional logics and arrangements, ecosystem wellbeing and disruptors, and value co-creation. We have then arranged the emerging themes according to the phases of Social Prescribing intervention: the referral process, the co-production of an individualised action plan (between the Link Worker and the young person), connection, and activation of community assets consistent with the Social Prescribing definition.

¹ Programme for Employment and Social Innovation (EaSI)

² Programme for Employment and Social Innovation (EaSI)

³ From the Project description

⁴ From the Project description

Results

In this section we present the main findings showing the ecosystem dynamic at each phase of the intervention: the referral process; co-production of an individualised action plan; connection and activation of community assets. To better understand we provide an initial description of the overall intervention and how it was implemented.

Intervention implementation

The C.O.P.E. intervention combined the Link Worker-holistic scheme of Social Prescribing [1] with the concept of relational proximity targeting young people in a NEET situation. In Fig. 1 we show how the service is delivered from the referral path to the relationship with Link Workers. We followed the Intervention Component Taxonomy [12] for Social Prescribing which we found useful to describe the domains of SP implementation (Fig. 1).

The holistic scheme adopted by C.O.P.E. is based on the broad definition of Social Prescribing as a systematic approach that ‘enables a range of stakeholders, often based in healthcare, to refer individuals to non-clinical interventions, such as social activities and social services, to empower individuals and improve their health and well-being’ but it has been adapted to a specific target group, meaning young people aged 15–34 years old in NEET condition. In practice, the target of young people in a

NEET situation extends the outcomes of the intervention including employment and education as necessary outcomes entangled with health and wellbeing. There is no specific and exclusive mandate from a particular sector (e.g. primary health care) to refer a young person to C.O.P.E.. Everyone sensitive enough to be receptive to a social or health need can make the young person aware of the intervention. Considering this, young people follow two routes of referral: 1) those who are followed by other services because of their condition (i.e. mental health services, substance abuse services, mental health services); 2) those who besides their level of vulnerability and social isolation are not followed by any service and are motivated mainly by parents, relatives and friends.

The young person, or the service that follows them, gets into contact with the Link Workers Coordinator who has a clear understanding of Link Workers location, availability, skills, background and competencies allowing to match the young person with the proper Link Worker.

A total of forty-four Link Workers have been engaged during the project. Link Workers are all employees of public or third-sector organisations who have received a specific about 50 hours of training to integrate their competencies with the link worker’s skills. For every young person Link Workers have flexible sixteen hours allocated while they continue their traditional job position. Every Link Worker operates in different territories covering

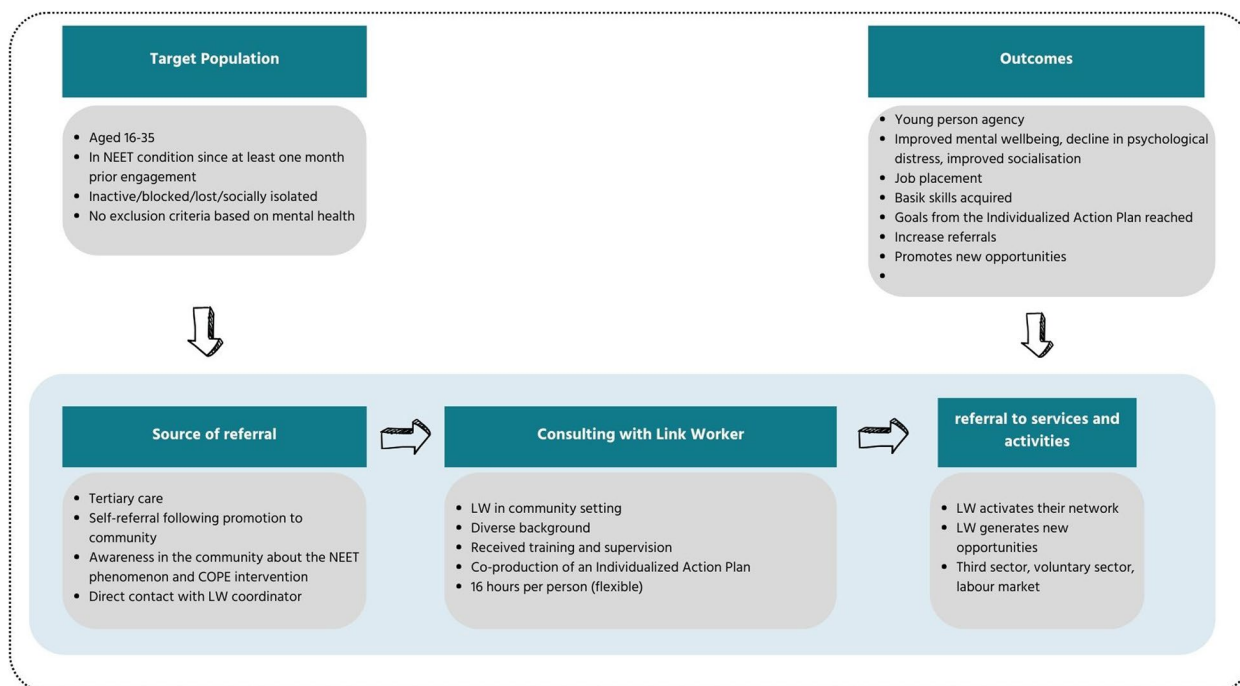


Fig. 1 Visual representation of the referral path and engagement of young people in a NEET situation with the C.O.P.E. project. (Adapted from Calderón-Larrañaga S. et al. 2021 [12])

specific areas of the Autonomy Province of Trento and meets with young people in different places according to space availability and young person preference. They support the young person to co-produce an Individualised Action Plan to identify reachable goals and structure the activities and the connections with the community.

As the C.O.P.E. intervention addresses some specific social needs experienced by young people in a NEET situation, both the young person and the Link Worker are motivated to create connections within the community that can support the young person to exit social isolation. These connections mainly address social demands such as job placement, internships, and education but they also promote the creation of a network for mental and social health. The overall value proposition of C.O.P.E. was mentioned during interviews:

Try to move the young person who is stationary from a stationary situation to help him a little bit to transit and reach whatever he may need. [...] When I tell the young people I say that it is a possibility that is given by people aged 15–34 who have not worked for a month, who will not know what to do, how to get around, and so there is nothing pathological about it. But it is something extremely great this possibility here, because one already feels less ill, even if one were.

C.O.P.E. coordination member

In the following sub-sections we will provide some examples zooming-in and out the micro-level of interactions showing how the resource integration process and institutional arrangements on one level influences other levels of the ecosystem following the main stages of the intervention.

The referral process across ecosystem layers

The referral process is usually meant as the entry point in the intervention. As mentioned before there is no specific service that has the mandate to refer the young person, but symbolic partnerships are created with multiple organisations, individuals and services that collectively define a certain community. This has been a crucial aspect of the C.O.P.E. intervention as the expected number of 300 young NEETs to engage has been hard to reach. The implementation of a referral process has shown the importance of raising awareness of the NEET phenomenon and identifying a shared understanding to recognize their social needs. The awareness campaign has been developed as a bottom-up process enabled by response from these members of the C.O.P.E. coordination team through formal and informal events in different sectors of the territory and community contexts.

The actors' capacity to recognize the social need depends on their knowledge and comprehension of the NEET problem, which goes beyond misconceptions and biases about young people's idleness.

Awareness and understanding of the NEET phenomenon beyond the stereotypes and prejudices related to young people's inactivity determines the ability of the actors to recognize the social need.

I like this project because it brings out this NEET phenomenon that even in the services is not known and many did not understand what we were talking about, which allows us to work on people's imagination and help to criticise all these things we are discussing so that we do not go on saying that they are bamboozled and that they are lazy.

C.O.P.E. coordination team member

Building a shared worldview has practical influences across the micro and the meso level in the referral process and the community linkages. This is visible when there are conflicts between expectations and different goals among actors. The role of parental pressure is an example of a risk factor in disengagement.

Those who come driven by family are the most likely to leave. Those who come through a service, those who come because they have heard about the opportunity are much more likely to continue. For the most part, those who come with their families tend to disengage.

Link Worker

The awareness regarding the intervention and the NEET phenomenon allows also to identify the lack of support existing for young people in a NEET situation and through collaboration and a shared worldview among services it creates the opportunity to fill a gap in the overall ecosystem by referring young people.

The relationships to be created are slow but interest is building because in any case what we are giving is an extremely intriguing answer for the services. After all, it covers grey areas that some in the institutional and political sphere grasp right away and therefore manage to be more intuitive and also make themselves available.

C.O.P.E. coordination member

Young people in a NEET situation are also actors involved in the referral process as they advise their peers about the intervention and participate in events where they share their stories. In the evaluation phase, they

share good suggestions in identifying strategic spaces where the intervention should be implemented, for example in schools to promote early interventions.

This project helps one to grow. We as youth now really need someone to follow us in our choices. Even at school, I didn't have a choice and even now let's say I don't. In the sense that if they ask me what job I would do in life, it's the only question I could never answer.

Young person

I would propose it directly in schools so that children also understand what they want to do afterward or how to organise themselves for after school in real life because that's what we were talking about in the real-life CO.P.E. project, we weren't talking about theories.

Young person

Co-production of an individualised action plan

The C.O.P.E. project provides a previously absent opportunity for young people in a NEET situation which starts with support work on the person and the creation of an individualised pathway. This relationship facilitates the removal of obstacles that do not allow the young person to become active and produce new networks. These obstacles might be related to the lack of self-esteem or mental vulnerabilities (i.e. high level of anxiety, fear to socialise). But also bureaucratic obstacles like financial issues, poor cv, lack of driving license, etc.

The link worker provides a space to the young person to explore what they would like to do, their interests and skills. On the contrary other structured services and roles like Public Employment Services (PES) require the young person to fit into their structure and goals without providing a personalised approach.

Certainly, the link worker helped more than the [employment] agency. [...] That is, it helped me to understand even, in quotes, myself, let's say. Whereas the employment agency, sees the experiences you have had and they offer you this or that.

Young person

But also on the fact that they listen to you, that there's extra attention, that they don't judge you more than anything else because if I go to the work agency and say, I have anxiety and panic, I can't work there, they judge you, but not because they are bad, but because their job requires it. Whereas

with C.O.P.E. there wasn't this judgment, I'm free to express all my problems without having the fear of being judged.

Young person

In the case of integration among services the project provides extra support to the young person in their well-being journey. At the same time, it can work as a protective factor of the achievements and create space for appropriate work opportunities based on the young person's skills and needs.

I wanted to understand why it was not a good period, why I could not keep a job. I had so many questions. And through the confrontation with the Link Worker, I realised that I hadn't had the right therapy, that I hadn't complied with it, and also the substance use. I would have to mature again and say no to substances. Then I would also be able to detach myself from the mental health service.

Young person

Finding a place that does not make you go back on your steps, so do not destroy what you have already created because otherwise, it would be detrimental to the person. A person like me, or in a sensitive psychological state, could find himself in a job, have personal crises or otherwise discomforts that could undo all the efforts done until now.

Young person

On the micro level there are also other interactions happening on behalf of the relationship between the young person and the Link Worker. The 44 Link Workers engaged in the intervention have a very diverse background and work within different organisations. They have their own culture and management which directly influences some of the resources (i.e. flexibility, time allocated) that the Link Worker can have when working with young people.

It's also the difficulty of having people scattered all over the place, with very different cultures and organisations. For example, I was very impressed when I was talking to a link worker who works at the Employment Agency, very motivated, very convinced of the method but unfortunately the rest of her work requires a very fixed organisation of appointments, so she makes her time very rigid and this is not necessarily compatible with the flexibility, the speed, the quickness that we need for the support that can be given.

C.O.P.E. coordination member

Collaboration through a sharing of practices and goals should be guided by putting the young person in a NEET situation at the centre. However, shared decision-making processes between link workers, services, and young people are not easy to create. There might be conflictual views on which pathway is the best for the person. Link Workers foster somewhat less protected pathways which, however, better reflect the potential and abilities of the young person.

On work placements there was a bit of a clash, the idea was to do something to these guys, maybe starting with easy things. There was this one girl who had been having a hard time, but I thought why not let her try an apprenticeship for fragile people on the free market? It is clear that she then feels good about the work requirements and feels she is in a protected environment. Playing catch-up did not allow her to achieve the goals she had set for herself

Link Worker

Connection and activation of community assets

Once the Individual Action Plan is co-produced and the young person and the Link Workers have identified achievable goals, the assets of the territory are explored, to identify the ones that can support the young person. In the process of activating the territory, the C.O.P.E. model seeks to integrate networks and responses to support the wellbeing of young people and lead them to fill the gap in the labour market while trying to raise awareness of the needs of young people.

15,000 young people who are not working, are not contributing to the labour market and they are valuable because they are creative, capable people. It is not only useful for young people but also the void of young people because what we are doing is connecting different needs. One, give young people answers, make them feel good, avoid that we find them in ten years with bigger pathologies, but also find answers for all these companies that are looking for and need these people and therefore also educate these entities to be more attentive to their needs.

C.O.P.E. coordination member

The awareness campaign also stimulates a focus on the phenomenon to the point of creating potential collaborations with various community actors who offer their expertise.

A gentleman saw us when we were driving around

in the camper van and he phoned C.O.P.E., he wrote to him, I went to see him where he lives and he's a florist, he's a florist who has a great passion, he's retiring and he says but I'm thinking how I can make myself available and so now he's going to come and give a meeting to the guys and we're going to give them a taste of the world of horticulture, of flowers, like in a centre, so in itself, the florist who calls is a triviality, but one thing leads to another, they are tiles that we put and so we work a little bit in this way.

C.O.P.E. coordination team member

At the same time, the creation of as does collaboration between different actors and sectors facilitates the creation of new opportunities that would not have arisen in other paths. The networks of link workers and their insight into community resources enables this process of resource integration.

Let's say that collaborating with the social worker pays off, as does collaborate with the job centre. And then what has perhaps borne fruit in certain cases is the fact that I have a very varied job. I play different roles, in different contexts, so maybe I ferried users from one project to another. Maybe I was also following them in the other one or at least I was very close to that project, and so this allowed me to follow them maybe for a longer period and to direct them towards opportunities that were more suitable for them.

Link Worker

There is an interesting outcome to observe. Namely, that which concerns the achievement of a desired goal in frictional contexts. The young person can, thanks to the work done with the link worker, become active in the search for opportunities and make decisions autonomously, even colliding with the suggestions made by the link worker and the support network. Valuing young people's choices by setting aside their own mental models is an interesting example of value co-creation.

There was a bit of a clash on this last job too, to tell the truth, because my CSM network had offered me an internship of just a few hours and a few days a week and therefore a reduced salary and I still made this choice, I listened to all the link worker's advice up to that point, but on this job I did it all myself, I decided it. Because I was ready.

Young person

Discussion

Social Prescribing is a co-produced pathway centred on ‘activating’ the person and in doing so overcoming their personal barriers and community obstacles with the final aim of achieving wellbeing and social inclusion. A major focus has been placed upon the interactions happening in the dyadic relationship between Link Workers and their clients collecting individual evidence of how wellbeing is achieved or changed. But Social Prescribing needs to be understood as a complex and layered system where multiple actors interact with each other to influence service delivery [11]. Therefore we built on previous studies that attempt to understand the mechanisms of Social Prescribing in primary care settings and combine these with the acquired knowledge derived from the qualitative data collected through the evaluation of C.O.P.E. intervention in Italy with young people in a NEET situation. We followed a service ecosystem perspective to unpack how the interactions, resource aggregations and institutional arrangements dynamically happening at different levels of the ecosystem allow or enable young people in a NEET situation activation and value co-creation.

The intervention is embedded in multiple larger service ecosystems (i.e. healthcare sector, social work sector, public employment services, etc...) forming different levels of aggregation [13, 35, 36]. It is important to remember that there is a dynamic oscillation across levels. Figure 2 shows the actors mapped across the Social Prescribing ecosystem and the interactions among layers:

- Micro-level: the interactions happening within the intervention between specific actors like the young people in a NEET situation, their closest network of people and link workers
- Meso-level: the aggregates of actors and their interactions within the community setting
- Macro-level: the highest levels of aggregation levels between public administration and policy

The C.O.P.E. intervention is based on the concept of relational proximity which extends the range of stakeholders participating in the referral process beyond a single the healthcare sector.

The different stakeholders, such as employers, social workers and practitioners embody beliefs, norms and regulations that constitute their sectors.

Therefore, strategies for creating a community network and assembling a shared platform for engagement of people and action are needed.

Relational proximity leads to what Marocchi defines as ‘a response based on the active engagement of those who express the need and who are therefore not mere users of a

service or provision, but also, at least in part, producers of the same’ [28].

A very important finding from the research is that the increase of awareness regarding the NEET phenomenon in the overall community is a crucial aspect that directly influences access and engagement in the intervention. This requires building a shared knowledge and worldview that can enhance the community’s capability to recognize young people’s social needs and overcome stereotypes.

The C.O.P.E. intervention expands the boundaries of referral buy-in not limited to the primary health care sector and fosters partnership among local actors by increasing their sensitivity toward young people’s inactivity. It works on multiple layers through the collaboration among services that compose the network of support (potential or existing) around young people. It can therefore provide continuity of care and bridge domains that are usually fragmented like mental and social care with the labour market. As shown by the previous examples, institutional arrangements are happening on behalf of actors in the nested layers of the ecosystem. Social Prescribing shifts the focus on the construction of an individualised action plan to position the young person needs at the centre overcoming the barriers that enable activation. It provides an architecture of participation, facilitating participation when there are shared worldviews among all actors involved [24].

Another important element that emerges from the research is related to the issue of resources being identified as such and integrated by actors as a fundamental antecedent to value creation. In Social Prescribing resource integration processes are important drivers for the realisation of the Individual Action Plan and the young person’s goals. The clinical and social care sectors are valuable resources as they have the potential ability to read and identify social needs and to reduce bureaucratic barriers, allowing young people to access opportunities. In those cases of young people who lack support, these collaborations provide suitable care. Individuals’ resources are also emerging as skills and competencies that young people have but do not recognize as valuable. Pre-existing support networks, like friends, families and more formal support are also fostered. Generally, community assets are defined as ‘the collective resources which individuals and communities have at their disposal, which protect against negative health outcomes and promote health status’ [13]. These can be non-clinical interventions, services, recreational activities, volunteering, job and training opportunities. The role of the Link Worker is based on the identification of goals that emerge from the person him/herself and that are not established a priori by the intervention. Resourcefulness can therefore be understood as a process guided by the emergence

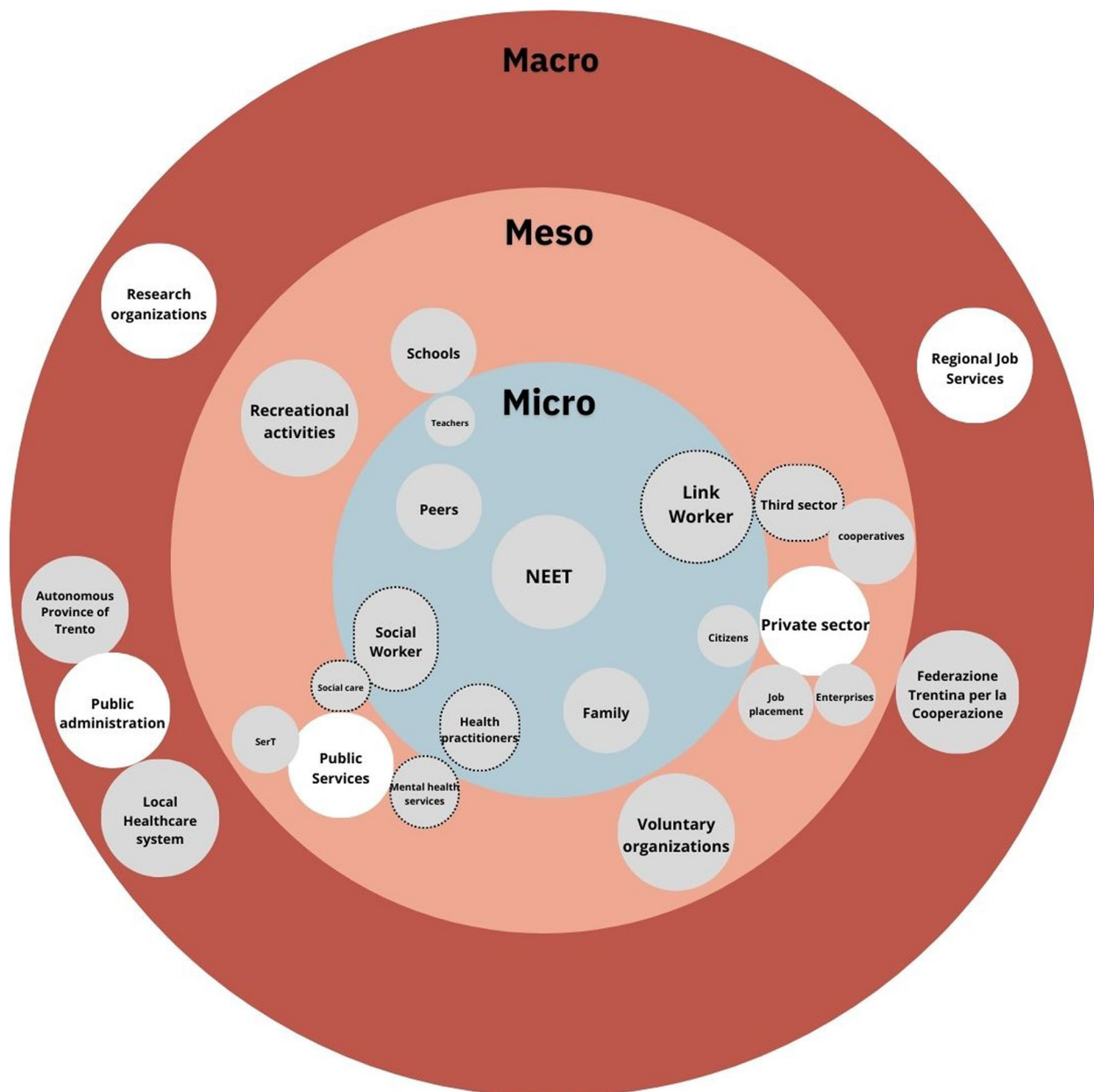


Fig. 2 Actors mapping and ecosystem boundaries of C.O.P.E. intervention

of young people’s needs and goals. Building an architecture of participation that includes young people means creating the platform for resource identification and activation. For example, we could consider young people in a NEET situation as an inactive and invisible resource for society. The participatory architecture, through institutional arrangements, reconfigures the hierarchy of objectives for young people’s wellbeing.

The Link Worker not only facilitates the integration of services and the views of young people but also the

creation of new opportunities. From a service ecosystem perspective this is an important indicator of the ecosystem wellbeing as co-creative practices have led to the increase of resources within the ecosystem [24]. In practice this extends the capabilities of the intervention to develop and enhance community assets, through the aggregation of existing resources and the collaborative capacity of different actors [37]. This is a relevant aspect that deserves further investigation with respect to how working at the micro level with the individual

stimulates wellbeing at the meso level on the whole community.

Several tensions appear along the intervention mainly based on contrasting goals between actors and the difficulty in integrating young people's views and needs into the broader ecosystem of care. The main tensions consist in different worldviews on how to better support young people. Logics from the social care or the health-care sector might have a top-down approach that is not driven by young people's goals and needs. The C.O.P.E. project shows the potential benefit that occur when an architecture of participation is built in favour of value co-creation that involves the young person. It is important to consider that it takes time for institutional arrangements especially the influence from the micro to the macro-level.

All in all, this paper contributes to the understanding of Social Prescribing in its complexity zooming in and out different layers of interactions to understand the adjustments and changes that the intervention requires and brings to the overall ecosystem of care of young people in NEET condition. The general description of Social Prescribing models refers to a linear pathway toward people's activation but it is also well known that multiple tensions might influence the mechanisms and the processes [12]. The dyadic relationship between Link Workers and their clients is not an isolated process and Social Prescribing works along care services to support continuity of care. The service ecosystem perspective is a valuable frame to investigate the dynamic interactions between actors and how their resource integrating process and institutional arrangements foster the emergence of opportunities previously unrecognised to support an invisible and hard to reach target group as the young people in a NEET situation.

Limitations and further research

Although multiple perspectives were captured through this research study, not all stakeholders were interviewed. For instance, representatives of mental health organisations who may be referring young people and, on the other hand, delivery organisations delivering support were not interviewed.

The research study has been mainly effective in determining interactions between the micro and the meso level where the intervention has a direct implication. The macro level that we defined as the highest levels of aggregation levels between public administration and policy requires time to be observed. A follow-up study looking to the implementation of the pilot study on a policy level could identify important insights regarding the interactions with the macro-level of the ecosystem.

Following these considerations further research should:

- Consider integrating other relevant stakeholders to capture more in depth the variety of views and interactions among the ecosystem e.g. families, referrers.
- Investigate other diverse contexts and social prescribing models to provide new insights on how value is co-created
- Further explore Link Workers as 'boundary spanners' as enablers of collaboration across the different levels of the ecosystem [38, 39]
- Explore further service ecosystem related perspective, for example the novel contribution from service ecosystem design [40] as a means to enhance the ecosystem and the emergence of desired value co-creation forms
- As Social Prescribing is considered an innovative intervention that brings person-centred approach in fragmented care ecosystems it could be interesting to further explore service innovation through the lenses of service ecosystems [41, 42].

Supplementary Information

The online version contains supplementary material available at <https://doi.org/10.1186/s12913-024-12182-7>.

Supplementary Material 1.
Supplementary Material 2.
Supplementary Material 3.

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Authors' contributions

I.F. wrote the main manuscript with the supervision and major revision of D.S. C.M. and M.B. The rest of the authors reviewed the manuscript

Data availability

The data that support the findings of this study are available from University of East London (UEL), but restrictions apply to the availability of these data, which were used under licence for the current study and so are not publicly available. The data are, however, available from the authors upon reasonable request and with the permission of University of East London (UEL).

Declarations

Ethics approval and consent to participate

The University of East London Ethics Committee approved the research app ID ETH2122-0128. All participants provided written informed consent prior to enrolment in the study.

Consent for publication

All participants provided written informed consent for publication prior to enrolment in the study.

Competing interests

The following authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article: Farina I., Sangiorgi D., Masella C., Bertotti M.

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