Link workers, activities and target groups in social prescribing: a literature review

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Abstract
Purpose – Social prescribing is a model of integrated care, in which primary healthcare staff can link patients to the social care sector. However, social prescribing can occur in different forms. To better understand the concept of social prescribing, this literature review examines the role of the link workers, activities and target groups.

Design/methodology/approach – A literature review was conducted. Studies before May 2020 were considered. In total, 1,700 studies were identified using the databases Pubmed, PsychInfo, Cinahl, Web of Science and Cochrane Library. After eligibility checks, 16 studies were included in the final analysis.

Findings – A few studies warned of a deeper engagement of the link worker due to service dependency, but most studies encouraged an active and supportive role of the link worker. Participants engaged in social, physical and counseling activities. The majority of studies emphasized the importance of linking group activities with personal preferences and identity needs. The main target groups were composed of individuals with psychosocial needs, but some studies also included patients with physical or mental illnesses.

Originality/value – Social prescribing is widely advocated as an innovative model of integrated care. However, few studies have looked into the complex system of social prescribing. This study analyzes the linking processes, activities and target groups in extant social prescribing programs.

Keywords Social prescribing, Link worker, Social support, Patient-centered care, Integrated care

Paper type Literature review

Introduction
Social prescribing provides a promising avenue for the integration of health and social services (Erens et al., 2019). It is described as the practice of referring patients with nonclinical needs to social activities, which help them to cope with their social, mental or physical impairments (Husk et al., 2020; Pescheny et al., 2018). The need for social connectedness has become more important in the past decades, as modern societies have become more individualized and traditional social networks have become weaker (Killeen, 1998; Snell, 2017).

In this context, unsatisfied social needs or insufficient social capital is often associated with psychological and physical impairments. In fact, loneliness has shown to be an important predictor of all-cause mortality (Rico-Uribe et al., 2018). As a result, primary care...
workers are increasingly overwhelmed with the nonphysical problems of their patients (Brandling and House, 2009; Kellezi et al., 2019). To address this problem, social prescribing offers an innovative type of integrated care, creating voluntary network-like partnerships between health and social care professions. In doing so, social prescribing tackles the dominant disease-focused view and shifts it to a more holistic one, which considers biomedical, psychological and social dimensions of health (Husk et al., 2020; Valentijn et al., 2013).

Due to the novelty of the phenomenon, evidence remains inconclusive, and there is no strict definition of social prescribing (Brandling and House, 2009; Husk et al., 2020). Social prescribing schemes can vary in their intensity, ranging from simple signposting to holistic schemes involving link workers (Kimberlee, 2015). Current literature suggests that social prescribing must be regarded as a pathway with many interacting elements rather than a single intervention (Husk et al., 2020). Furthermore, recent public health reports (NHS, 2020) and studies (Bickerdike et al., 2017; Frostick and Bertotti, 2021; Tierney et al., 2020; Wildman et al., 2019a) have focused on link workers who facilitate the interactive process of social prescribing pathways. We follow these recent conceptualizations and focus on social prescribing programs that involve link workers as key agents.

Our research was guided by the following research gaps: First, evidence on how patients are linked to various activities is missing. In particular, the role of the link worker is insufficiently investigated. Second, we need more evidence on the nature of the activities in social prescribing programs. For example, which activities are provided and are they always performed in a social context? Third, we lack research on target groups, for example whether patients are targeted because of social, psychological or physical impairments.

This study addresses these research gaps using a literature review. In this process, 16 relevant studies published in peer-reviewed journal outlets were identified and analyzed. The research was guided by the following research questions: How were participants linked to activities? Which activities were participants assigned to? Which patient groups were targeted?

**Methods**

**Search strategy**

We searched for relevant journal articles in the following databases: Pubmed, PsycInfo, Cinahl, Web of Science and Cochrane Library. The following search words were used: “social prescribing”, “social prescription”, “community referral(s)”, “social referral(s)”, “linking scheme(s)” and “referral scheme(s)”. These terms were used to limit the scope of the review. Articles using less common terms for related social care programs may not be included as a consequence, which we also acknowledge in the limitation section. Other sources consulted were reference lists of already published literature reviews on social prescribing and matches on the first 10 pages on Google Scholar. The search had been performed until a point of saturation, at which no new studies could be identified.

This review only includes evaluation studies published in English before May 2020. The review also only includes programs that interpose a link worker between the primary care staff and the referred activity. Research protocols were omitted. Both qualitative and quantitative program evaluations published in peer-reviewed articles were included. Finally, only single studies and no review articles were included.

An adapted PRISMA flowchart of the search process is depicted in Figure 1. The literature search was conducted by the first author of this study. A total of 1,700 studies were found. The titles and abstracts were screened and excluded based on the exclusion criteria outlined above. Duplicates were removed. After this process, 73 studies still appeared as relevant. Of
these, 57 articles were excluded as they either did not sufficiently describe the referral pathway or did not use a link worker as the primary referral source. Eventually, 16 relevant articles were analyzed.

**Assessment**

The 16 articles were processed and categorized according to the following variables: author and publication year; study design; program description (name and location, intervention, target group and access regulation). A summary table is available online (osf.io/rzxpa/).

Furthermore, the selected studies were analyzed in the form of a qualitative content analysis (Mayring, 2000). Following this approach, an iterative inductive process was used to systematize and categorize the material. The content of the obtained categories was then presented as a narrative review (Arksey and O'Malley, 2005). The following categories were developed: link workers, activities and target groups.

**Results**

**Overview of studies**

The literature review identified 16 peer-reviewed articles, covering a total of 14 programs. The majority of the social prescribing programs were located in the United Kingdom (n = 12;
11 in England and 1 in Scotland). One program was conducted in Australia and one in the Netherlands. The studies were published between the years 2000 and 2021. Six employed quantitative methods, including two randomized controlled trials (RCTs); seven employed qualitative methods, and three used a mix of qualitative and quantitative evaluations.

**Link workers**

*Access, supply and feedback.* Link workers match a service user with suitable activities available in the community, thus representing the linking agent between the health and social care sector. While in one program the task of the link worker seemed to be restricted to this activity (Faulkner, 2004), in most programs the link worker also created personalized action plans, set goals and provided ongoing support and communication (Aggar et al., 2021; Carnes et al., 2017; Elston et al., 2019; Grant, 2000; Grayer et al., 2008; Heijnders and Meijs, 2018; Moffatt et al., 2017; Pescheny et al., 2021; Vogelpoel and Jarrold, 2014; Woodall et al., 2018). Ongoing support was defined as providing practical and emotional support, resilience-focused coaching and advocacy (Elston et al., 2019), leveraging motivational interviewing to promote self-care and behavior change (Moffatt et al., 2017; Pescheny et al., 2021) and assessing the patients’ well-being regularly (Moffatt et al., 2017; Wildman et al., 2019b). In many cases, the link worker could also accompany the patient to their first sessions (Grayer et al., 2008; Mercer et al., 2019; Payne et al., 2020) or assign a buddy (Heijnders and Meijs, 2018).

Across the programs, service users appreciated the role of the link worker, especially in terms of empowering clients to engage in and adhere to proposed activities (Faulkner, 2004; Heijnders and Meijs, 2018; Payne et al., 2020). Service users reported that the support of link workers helped with managing anxiety, increased their self-efficacy and that intake sessions and regular follow-up sessions were important stimuli for taking action to change their situation (Heijnders and Meijs, 2018). Responsible to deliver a smooth social prescribing experience, it becomes apparent that the work of the link worker is pivotal in delivering integrated care. Their work is expected to influence the outcome and the effectiveness of social prescribing and goes beyond coordination and logistical arrangements (Carnes et al., 2017).

In contrast to routine general practitioner (GP) care, service users appreciated the holistic social prescribing service with its personal and nonformal touch (Hassan et al., 2020; Moffatt et al., 2017; Wildman et al., 2019b; Woodall et al., 2018). A trusting relationship with the link worker was developed when they had a nonjudgmental attitude, were open and flexible, empathized and provided the opportunity to discuss problems in a relaxed atmosphere without time pressure (Heijnders and Meijs, 2018; Moffatt et al., 2017; Wildman et al., 2019b). In particular, males opened up when their counterpart showed compassion and empathy, attributes which are felt to be more present in female link workers and when they do not have to live up to a gender stereotype (Faulkner, 2004; Woodall et al., 2018). In one qualitative study, participants reported they had developed such a strong relationship with the link worker that they described them in terms of friendships, which raises the question of dependency (Wildman et al., 2019b).

**Service dependency vs transitional phase.** The involvement of the link worker varied across the programs. Some programs offered clients to have follow-up visits in their preferred setting, including home visits (Elston et al., 2019; Heijnders and Meijs, 2018; Moffatt et al., 2017), phone calls or text messaging (Moffatt et al., 2017; Wildman et al., 2019b). The majority of the programs allowed clients to contact the link worker whenever needed throughout the duration of the program, which varied from twelve weeks up to two years or more if necessary (Moffatt et al., 2017; Wildman et al., 2019b). However, some programs reported fears of service dependency, and two programs restricted access to a maximum of six sessions (Carnes et al., 2017; Woodall et al., 2018).
Other studies described that the contact with the link worker was more frequent during the initial stages and reported a natural decline throughout the program. In this transitional phase, service users established independence (Moffatt et al., 2017; Wildman et al., 2019b). In line with this, clients with complex and long-term conditions reported that a short-term approach may not be adequate (Moffatt et al., 2017). Programs that restricted access to link worker sessions indicated low adherence rates. For example, Woodall et al. (2018), Carnes et al. (2017) and Pescheny et al. (2021) reported high follow-up losses.

Activities
Ten programs described the activities that clients were referred to. After grouping them into physical, social and counseling offerings, it becomes apparent that a majority of the programs offered a mix of precisely these three dimensions (Hassan et al., 2020; Mercer et al., 2019; Pescheny et al., 2021; Woodall et al., 2018). Others offered specific topical activities, such as art groups (Aggar et al., 2021; Vogelpoel and Jarrold, 2014), counseling (Faulkner, 2004) or physical and social offerings (Carnes et al., 2017) paired with volunteering opportunities (Heijnders and Meijs, 2018; Moffatt et al., 2017; Payne et al., 2020).

The selection of activities. Several articles highlighted the importance of matching clients’ activities with their specific interests (Heijnders and Meijs, 2018; Wildman et al., 2019b). In one study, the link worker asked questions about the clients past to best gauge their interests (Heijnders and Meijs, 2018). Furthermore, Heijnders and Meijs (2018) stressed that social identities are pivotal by stating that people’s uptake and adherence likelihood will decrease when they cannot identify with the group. For example, identification with the group may depend on the group structure, such as gender and age ratios. Thus, it is important to not only match activities but also group characteristics to patients’ individual needs.

Clients were not necessarily assigned to group activities. For example, in one project, participants were given a free gym membership for 12 weeks (Pescheny et al., 2018). Other activities, such as counseling, may also be offered in individuals’ sessions (Faulkner, 2004). However, most projects offered group-based activities and highlighted the importance of social interaction as a source of enjoyment and positive feelings (Hassan et al., 2020; Payne et al., 2020). Furthermore, the chance to mingle with others and make friends was a major motivational factor in uptake and adherence (Wildman et al., 2019b).

Target groups
We identified two types of target groups: (1) individuals with psychosocial and mental health issues and (2) individuals with physical health issues.

Psychosocial and mental health issues. Seven social prescribing schemes targeted patients with psychosocial or mental issues, which arise from or affect social relations (e.g., social conflict or loneliness). Three of these studies did not specify the issues involved (Faulkner, 2004; Grant, 2000; Grayer et al., 2008). Heijnders and Meijs (2018) only targeted individuals who frequently visited a GP or other care providers due to psychosocial problems linked to a somatic cause. Identified symptoms included loneliness, chronic illnesses, a recent life event, minor psychosocial problems or a stable psychiatric condition. Other studies targeted older patients who experienced social isolation coupled with sensory impairments (Vogelpoel and Jarrold, 2014) or social isolation and frequent GP attendance (Carnes et al., 2017) and people living in deprived areas (Mercer et al., 2019). One program addressed patients with a diagnosed mental illness, more specifically individuals with mood and psychotic disorders that are likely to last six months or longer (Aggar et al., 2021).

Physical health issues. Three social prescribing schemes addressed target groups with physical health problems. The program evaluated by Moffatt et al. (2017) targeted patients with one or more long-term conditions including diabetes, obstructive pulmonary disease,
coronary heart disease, asthma, heart failure, epilepsy, osteoporosis with or without depression or anxiety. Another study used a similar target group of individuals being at risk or diagnosed with obstructive pulmonary disease, diabetes type 2 with or without mild to moderate mental or psychosocial issues (Pescheny et al., 2021). Elston et al. (2019) did not specify the criteria and included patients aged 50 years or older with complex health needs, determined as two or more long-term conditions.

**Access regulation.** Two programs did not restrict access to social prescribing schemes by any criteria (Hassan et al., 2020; Payne et al., 2020), while one scheme exclusively regulated access by age (Woodall et al., 2018). Individuals were excluded for having mental health problems (Carnes et al., 2017) or, more specifically, suffering from a psychosis (Grayer et al., 2008). Additionally, individuals were excluded if severe cognitive impairments were present (Aggar et al., 2021), including language difficulties, illiteracy or learning disabilities (Grant, 2000). Some schemes excluded individuals that were already involved in treatments, such as acute inpatient treatments (Aggar et al., 2021), specialist mental health services or who already received full counseling services (Faulkner, 2004; Grayer et al., 2008). Other exclusion criteria were acute crisis (Carnes et al., 2017; Grayer et al., 2008), uncontrolled addictions, behavioral or anger issues and being at risk to harm themselves or others, including suicidal ideation (Carnes et al., 2017; Faulkner, 2004; Grayer et al., 2008) or being housebound (Grayer et al., 2008).

**Discussion**

This review outlined how existing social prescribing studies varied in terms of the role of the link worker, involved activities and target groups. The narrative analysis lent support for the important role of the link worker who is the key agent in integrating health and social services on different levels (Valentijn et al., 2013). On the macro (i.e., system) and meso (i.e., organizational) level, the link worker establishes connections between health to social care sectors and organizations, for example by establishing formal and informal modes of cooperation. At the micro level (i.e., service), the link worker integrates services delivered to individuals by extending disease-specific services (e.g., general practitioners) to social service. In this process, the link worker considers the needs of individuals instead of looking solely at biomedical indicators.

The opportunity to engage with link workers in the program creates an empowering environment for patients involved. In fact, regular meetings with a link worker can support patients in gaining motivation, acquiring new skills and support their social connectedness (Tierney et al., 2020). In line with social cognitive theory, link workers can enhance self-efficacy in patients, which in combination with the presence of positive social role models (link workers and peers) can foster gradual behavioral changes for improved physical and mental well-being (Bertotti et al., 2018). Yet, in order to establish a therapeutic relationship with the participants (Postmes et al., 2001), the link worker needs to encompass soft skills, empathy and a welcoming personality (Ackerman and Hilsenroth, 2003).

At the same time, some studies warned of service dependency, i.e., patients become overdependent on the link worker, which would impede the true potential of peer activity. Against this viewpoint, most studies agreed that a deeper engagement of the link worker is a key to success. Setting a maximum of appointments between link workers and participants may thus undermine the perceived availability of support. Furthermore, studies have illustrated that the contact frequency with the link worker will naturally decline as the peer network becomes stronger (Moffatt et al., 2017; Wildman et al., 2019b) and groups identities become salient (Heijnders and Meijs, 2018).

It should be noted that the job of the link worker is demanding. Link workers have to deal with a wide range of complex cases and often suffer from after-work stress (Beardmore, 2019; JICA 30,5
Frostick and Bertotti, 2021). To handle this, link workers need a professional educational background. Unfortunately, educational standards are yet to be defined (Beardmore, 2019; Frostick and Bertotti, 2021; Hazeldine et al., 2021; Wildman et al., 2019a). As a consequence, link workers often face unfavorable working conditions and a lack of financing in the community sector (Alderwick et al., 2018; Erens et al., 2019; Hazeldine et al., 2021). A current survey among link workers in the UK revealed that these factors lead to high attrition levels (National Association of Link Workers, 2019).

To alleviate these burdens, the establishment of contact rules and sufficient support from clinical staff seems to be vital. Contact rules could be provided on a leaflet and should be handed out as early as possible in the prescription process. This may also prevent false expectations on the side of the patient (Faulkner, 2004). To foster sustainable recruiting, labor conditions for the link workers must be improved and financing secured.

The present review also revealed that the majority of the programs provided a mix of physical, social and counseling activities. Interestingly, no study conducted a thorough investigation of the group context and the group dynamics throughout the program. However, it has been argued that it is precisely this social factor that is of utmost importance for long-term success (Haslam, 2018; McGurk, 2005; McGurk et al., 2010). Groups provide the opportunity to initially get into contact with people who have similar problems and goals (Haslam, 2018). However, it is not the group per se which provides beneficial effects. It is salient social identities that are associated with lower levels of depression symptoms, increased life satisfaction and access to psychological resources (Greenaway et al., 2016; Haslam, 2018). Hence, future studies may focus on the development of salient group identities (Santini et al., 2017).

Furthermore, it is important that participants engage in meaningful activities. Participants should be asked about their interests (Heijnders and Meijs, 2018) and a variety of activities need to be offered. These activities should go beyond individualized approaches such as counseling (e.g., Faulkner, 2004). Maladaptive beliefs, which are frequently observed in depressive patients, can be best challenged by a social experience that directly contradicts such beliefs, and not only through extensive self-examination therapy (Haslam, 2018). Offering volunteer opportunities, as done by Heijnders and Meijs (2018), Moffatt et al. (2017) and Payne et al. (2020), demonstrates positive effects on group identification and well-being. This is because providing rather than receiving support is associated with strong group identities and well-being effects (Harris and Thoresen, 2005; Väänänen et al., 2005).

Finally, the present review has also shown that most social prescribing programs were offered to people with psychosocial needs, and a few were also targeted toward patients with physical and mental health problems. Especially when it comes to patients with mental illnesses (e.g., long-term psychosis), there is little consensus whom to include in social prescribing programs. Even though such patients are often affected by loneliness and social isolation (Morgan et al., 2014), eligibility may be judged case by case. The same might be true for individuals with mere physical impairments. In many cases, long-term physical impairments go hand in hand with psychosocial issues, which in turn may intensify physical symptoms (e.g., physical inactivity in diabetes patients). However, the question whether such patients can benefit from social nudges may also be evaluated on an individual basis.

To manage the complex needs of patients with physical and psychosocial impairments as well as mental health issues, link workers need a professional educational background. However, they also need to effectively collaborate with clinical staff to make educated decisions (Hazeldine et al., 2021). Challenges can arise in bridging the social and healthcare sectors. For example, White et al. (2017) find that power imbalances can occur when matching them. However, effective strategic collaboration is essential for social prescribing, and
therefore, the researchers argue to foster mutual understanding, connection and trust. Further research needs to examine the relationship of the link worker with clinical teams.

**Limitations**
Some limitations should be noted. Twelve of the fourteen investigated programs were conducted in the UK. More research needs to be conducted outside the UK to better understand how social prescribing works across cultural contexts. Second, the study selection was conducted by one reviewer (first author) who, however, regularly consulted with the second author about inclusion and exclusion of articles. The search strategy did not involve less common terms for link workers, such as “community connector” or “social prescriber”. It must be acknowledged that projects that use these terms only may not be covered. Also, this literature review focused on single studies only. Future research may focus on meta-reviews (i.e., review of reviews) as more literature reviews on social prescribing are being published. Finally, we did not evaluate differences in terms of health outcomes. Considering the overall heterogeneity of social prescribing projects, this is a very difficult endeavor. However, it also creates a rich avenue for future research.

**Conclusion**
This review has shown that the link worker plays a key role in integrating health and social services. To fulfill this role, link workers need to devote a considerable amount of resources in order to assign patients to suitable activities and motivate adherence. In fact, a wide range of activities and group settings need to be offered, which speak to patients interests and identity needs. The eligibility of target groups needs to be judged case by case. To this end, existing challenges, such as cultural clashes between medical and nonmedical professionals (White et al., 2017) and financial constraints (Alderwick et al., 2018; Erens et al., 2019), need to be addressed.

**References (*included in the review)**


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