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Review Article

Role of Social Prescribing Link Workers in Supporting Adults with Physical and Mental Health Long-Term Conditions: Integrative Review

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Social prescribing link workers interventions have been widely adopted within healthcare systems, particularly in the UK, to support a range of patients' needs and to help improve condition management for those living with multiple long-term conditions. However, there is a lack of consistency in implementation and unclear guidance about how social prescribing link workers might address these needs, particularly in individuals living with physical and mental health long-term conditions who bear a greater burden of multifaceted everyday problems and health challenges. This review aimed to identify the existing ways in which link workers might support the needs of this group. Systematic literature search strategies were carried out with a systematic methodology that identified 18 eligible articles that mostly consisted of qualitative studies ($N = 10$) with the remaining studies employing a range of designs. Following a thorough process of data extraction and synthesis of findings, two principal themes and four subthemes were developed that together helped to explain the process of support and the enablers that determined how successful link workers' interventions were in supporting adults with physical and mental health long-term conditions. We found that personalised plan development and goal setting was a central collaborative task between the link worker and the patient that helped in "linking" people to beneficial and relevant sources of support. However, the catalyst for a successful change appears to be a combination of a therapeutic relationship with a link worker facilitated by a range of practical advice and "hands on" solutions that were highly desired elements of support. We have identified directives for future research and practical suggestions for enhancing the setup of link workers' interventions with this group of adults.

1. Introduction

"Long-term conditions" (LTCs), connoting illnesses that have no cure and instead require management of symptoms with medication and/or other forms of treatment, can be physical or mental health-related, such as diabetes, arthritis, cardiovascular diseases, and depression [1]. LTCs represent one of the greatest challenges for health systems worldwide [2]. Globally, 1 in 3 adults lives with multiple LTCs, and the proportion of these adults is projected to rise considerably [3], particularly for those living with 4 or more LTCs by 2035 [4]. People living with physical LTCs (PLTCs) are 2-3 times more likely to experience comorbid mental health problems than the general population, specifically depression and anxiety [5]. For example, people living with diabetes are 2-3 times more likely to have depression than the general population [5]. In this sense, at least 30% of all adults living with PLTCs also have mental health problems, which in England alone equates to approximately 4.6 million people [5, 6]. Long-term mental illnesses can contribute to the development of common

physical LTCs such as diabetes, heart diseases, and lung-related illnesses, showing there is a relationship between physical and mental health LTCs, thus emphasising the need for integrated forms of support [6, 7]. Care for those living with LTCs accounts for a large proportion of NHS costs, amounting to ~70% of total health care expenditure in England [6, 8]. Between 12-18% of all expenses on LTCs are linked to poor mental health, which is a major determinant of overall costs and typically associated with a 45–75% increase in service costs for PLTCs [6].

Living with combined physical and mental health (P + MH) LTCs has multiple complex implications, not only associated with the conditions *per se* but also with the ability to cope with and manage multifaceted everyday problems relating to psychosocial, environmental, economical, and spiritual needs. These require support from health and social care services including assistance with mobility, housing, social inclusion, and financial support, all alongside disease management [9–15]. People with P + MH LTCs are also more likely to experience care coordination problems due to fragmentation in the delivery of services and face a greater treatment burden, slow referrals, and medication duplication [5, 16].

Evidence shows that people with P + MH LTCs routinely access primary care services, such as a general practitioner (GP) or practice nurse, for social rather than health-related problems [16, 17]. This adds disproportionate demand and burden on primary care, stretches already limited resources, and causes high healthcare expenditure[16–18]. It also proves unproductive for patients, as healthcare professionals, particularly GPs, often struggle to maintain up-to-date knowledge of local support resources, and thus rarely refer patients to such initiatives [19, 20]. This complexity creates a greater treatment burden, contributes to poorer wellbeing outcomes, and leads to an unsustainable and incomplete delivery of care where the needs of the whole person are not supported [21, 22].

One potential solution for integrating health and social care to meet the complex psychosocial, physical, economic, and spiritual needs of people living with P + MH LTCs is through *social prescribing link workers* (SPLWs) [23, 24]. Link workers are responsible for linking and helping people with P + MH LTCs to support their complex social, emotional, and practical concerns, thereby supporting the needs of the whole person [25]. Link workers facilitate the assessment of individual health and social care needs and set personalised and achievable goals, then, through motivation and encouragement, further refer, signpost, or encourage self-referral to suitable community and/ or voluntary support avenues [26–29]. Examples are varied and correspond to the broad range of patient needs, including but not limited to, weight management groups, arts-based activities, an extensive range of practical and welfare information, and targeted management groups for people with specific LTCs [30–32]. This type of support encourages self-care and empowers patients to take greater control of their own health [33, 34]. Kimberlee [35] proposed that the levels of support are also variable and range from as little as merely "signposting" patients to appropriate groups to address their needs; *light support* involving prescriptions for specific programmes; *medium support* focusing on the patient's self-care; and *holistic support* addressing all patients' needs to improve

their wellbeing. Importantly, the link worker social prescribing model enables health care professionals to create formal means of referring patients with multiple LTCs to local and community-based services for improving health and wellbeing [36, 37]. Many healthcare professionals have successfully endorsed this approach, and encouraging evidence indicates a reduction in healthcare professionals' workloads [38], scope for tackling multimorbidities [39], and success in delivering an integrated person-centred care [24, 40].

The dominance of a link worker social prescribing model is particularly prominent in the UK. Endorsed by the National Health Service (NHS), it forms a key part in the NHS long term plan for delivering personalised care to tackle a variety of complex people's health and wellbeing-related needs, often as part of living with multiple long-term conditions [24, 36, 41]. Following the NHS commitment to expand the social prescribing link worker workforce [42], this initiative has been widely embraced in primary care and community settings [43, 44].

However, there is a lack of standardisation in approaches to link worker social prescribing model implementation, with pathway gaps and unclear guidance for primary care services about how to integrate this workforce to best meet the needs of people living with P + MH LTCs [31, 32, 45–48]. Existing social prescribing link worker roles are implemented variably, potentially leading to pathway uncertainty with no structured protocols on how to address the needs of people with P + MH LTCs.

The inconsistencies around the role of link workers may distort understanding and further complicate their work [49–52], and also leave some uncertainty for addressing the needs of adults with P + MH LTCs. Although "social prescribing" is a topical subject, supporting evidence is sporadic and rooted in local contexts, making it difficult to demonstrate an aggregated corpus of knowledge [47, 53].

Thus, there is a need for synthesising the literature to identify the remit of how social prescribing link workers might support the needs of this group of adults and to provide directives for future research and policy development.

1.1. Aim. The aim of this integrative review was to identify how social prescribing link workers support the complex needs of adults living with P + MH LTCs. The aim of this review has also formed the review question of "How do social prescribing link workers support the complex needs of adults living with P + MH LTCs?".

This review did not aim to synthesise evidence regarding the range of needs that these adults may have; instead, our aim was to identify the available evidence about the type of social prescribing link worker support offered to this group of adults using an integrative review approach.

2. Methods

2.1. Design. An integrative review with a systematic methodology was conducted using Whittemore and Knafl's approach [54]. An integrative review is a review method that synthesises and evaluates representative literature on a topic of interest from

diverse research paradigms and practices to generate a comprehensive understanding of the available evidence [54, 55]. This approach has the necessary methodological rigour, and although it shares techniques with other evidence synthesis practices [55], the integrative review approach succeeds in a holistic quantitative and qualitative research integration with methodologically skilled capacity to develop a robust evidence base that can guide elements in healthcare provision [56], and influence policy development [54], and offer an overview of complex concepts for clinical decision making [57]. The manuscript was prepared following the reporting checklist for "Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) [58]".

2.2. Information Sources and Searches. In this review, the concept of social prescribing has been informed by the Social Prescribing Network definition [59] together with reflections from other evidence sources such as the World Health Organisation (WHO) definition of social prescribing [60], both of which share commonalities in defining social prescribing as a means of connecting people to various non-clinical community-based services to support people's health and wellbeing. Both definitions explain that a key component in the social prescribing model is a dedicated link worker, trained to support people in identifying their needs and codesigning personalised solutions to improve health- and wellbeing-related outcomes. However, in light of recent growth in the provision of social prescribing, experts introduced conceptual and operational definitions to foster a shared understanding of the social prescribing model, including encouraging agreed terminology for achieving consensus in the field and generating a robust evidence base [61]. Whilst the conceptual framework of the Common Understanding of Social Prescribing (CUSP) [61] corresponds with the existing corpus of evidence in the field, the framework has moved beyond the existing definitions of social prescribing, and clarified who the social prescriber is, and set out conditions that explain the stages at which social prescribing occurs. We recognise the importance of this framework and support the goal of achieving a common ground for the concept of social prescribing, particularly around the role of the social prescriber. However, we recognise that the adoption of the proposed terminology such as that of the "connector" instead of a "link worker" (as proposed in the definitions of the Social Prescribing Network and the WHO), might extend inconsistency in the field, particularly given the dominance of a social prescribing link worker approach within the context of the UK. Given that the implementation of the social prescribing model is variable with alternating role titles for a social prescriber [43, 45, 47, 49], in this review we have adopted the term of a "social prescribing link worker" or "link worker" when referring to a dedicated person who works with patients to deliver social prescribing. Additional terms were included in the search process to avoid premature exclusion of studies that may not use the term of a social prescribing link worker.

The search strategy was performed first in the most relevant electronic databases in the health and social care field, including PubMed, Web of Science, Social Care Online (SCIE), CINAHL, and PsycInfo, peer-reviewed and grey literature was searched. Searches were performed in July 2022 and updated in May 2023. The search limits were articles published in English language (i.e., due to limited funding to cover translation services for the inclusion of other languages), adult population at the age of 18 years and over, and studies published in the last 5 years (2017–2022) and later (August 2022–May 2023). This is consistent with the growth of social prescribing schemes since 2016, following the creation of an international Social Prescribing Network [59] and the implementation of a national strategy in United Kingdom NHS healthcare systems in 2019 [24] that scaled up the number of link workers across primary care networks, with other countries implementing the approach in later years. As social prescribing comes to play an integral role in primary care and community settings in helping patients overcome various nonmedical needs, up-to-date evidence is needed following the implementation of the social prescribing link worker approach.

We recognise that the social prescribing model is rapidly evolving together with new emerging evidence. We also acknowledge that the roles of social prescribing link workers are implemented variably and that there are "pockets" of missing data; thus, no strict inclusion/exclusion criteria were set for the social prescribing link worker approach delivered through primary care referral pathways or community settings. Instead, the focus was to identify articles where support for adults with P + MH LTCs was delivered by a dedicated social prescribing link worker as reflected in our search strategy, in order to provide robust evidence on the ways that social prescribing link workers support the complex needs of adults living with P + MH LTCs.

Search terms were grouped into two topic blocks: SPLWs and LTCs (Table 1). The search strategy was first guided by familiarity with existing reviews and previous search strategies and later redefined based on commonalities in literature as our familiarisation with the literature increased. Some search techniques were adjusted/based on the different requirements of the included electronic databases and knowledge repositories such as MeSH terms, truncations, and relevant term variations together with the Boolean operators "AND" and "OR". Search strategies can be located in Supplementary Materials.

Inclusion criteria were as follows: (1) studies that focused on adults with both P + MH LTCs; and (2) studies of any methodology, including relevant "grey literature" that answered the review question.

Exclusion criteria were as follows: (1) studies that focused on family caregivers; (2) studies that focused on the end of life or palliative care; and (3) studies that only focused on the needs of adults with P + MH LTCs without answering the review question.

As our aim was to identify how social prescribing link workers support the needs of adults with P + MH LTCs, articles that included social prescribing link workers were considered if they addressed the review question and met the inclusion/exclusion criteria. In this review, the social prescribing link worker was a dedicated person who works with patients to deliver social prescribing. This rationale is in line with the

TABLE 1: Search combination of key terms.

(1) Social prescribing link workers (SPLWs)
Social prescribing link worker* OR social refer* link work* OR social prescrib* coordinator* OR community liaison OR community navigator* OR community facilitator* OR community prescriber* OR community connector* OR community wellbeing officer OR social broker* OR social coach OR social connector OR health coach OR community signpost*
AND
(2) Long-term conditions (LTCs)
Long-term condition∗ OR long-term illness* OR chronic illness* OR chronic condition* OR chronic disease* OR chronic disorder* OR multimorbidit* OR comorbidit* OR multiple health condition* OR mental health

definitions of social prescribing model set out by the Social Prescribing Network [59] and the WHO [60]. In turn, studies where the "*identifier*, usually a clinical professional, who identifies that a person has nonmedical, health-related social needs <..> refer the person to a connector" [[61], p. 8] were outside the scope of this review; the focus was on the social prescribing link workers who supported the complex needs of adults with P + MH LTCs. A snowballing technique was also used, reviewing the reference lists of the included studies to identify potential additional studies of interest and relevance.

Freely available sources of grey literature and most representative organisational repositories related to the subject were searched, including the Social Prescribing Network, National Academy for Social Prescribing, Oxford Social Prescribing Research Network, and Google Scholar with the first 100 hits in search engines for "social prescribing link worker." To ensure a thorough searching process, the PROSPERO prospective register of systematic reviews was searched for identifying any relevant planned systematic reviews and for avoiding duplication, as well as the Cochrane Library for any completed systematic reviews that may offer links to any relevant studies. This was completed by SL and validated by LA. Citations were stored in the EndNote bibliographic online service.

2.3. Search Outcomes. A total of 2,483 articles were retrieved, of which 136 were duplicates (Figure 1). After screening of titles and abstracts, a total of 41 articles were selected for a full text assessment to determine eligibility. Following this exercise, 13 articles were eligible for inclusion. An additional 186 articles were identified through a grey literature search, of which 12 additional articles were included for further full text screening, resulting in 5 articles which were eligible. A final collection of 18 articles was included in the review. The process of title and abstract screening and full text assessment was led by SL and validated by LA. All citations were stored in the EndNote bibliographic online service. The updated search in May 2023 retrieved 175 articles; however, no additional articles were identified. An article by Griffith [62] was identified in October 2022 during literature reading, thus it was successfully incorporated in the review following the completion of data extraction and synthesis, as per earlier described processes.

2.4. Data Extraction and Analysis. This stage of the review involved organising, extracting, coding, and synthesising similar data from diverse methodologies into systematic categories/themes using a stated [54] framework for integrative reviews. Specifically, sources of evidence were divided into subcategories based on the type of evidence such as examining all qualitative studies, then observational studies, reviews, and lastly, experimental designs. Once sources of evidence were separated into categories based on their study designs, descriptive information was summarised into a spreadsheet to simplify and organise the data, ultimately reducing each primary source to manageable tables of information. A comprehensive data extraction form was developed to collect relevant study data and characteristics from each included study and to aid the synthesis. Data extraction and tabulation were completed by SL using Microsoft Excel spreadsheet software. Data extraction was categorised into two parts. First, data necessary for contextual understanding were extracted according to the following categories: methodological information (see supplementary materials), social prescribing link worker intervention information (see Table 2), and participant characteristics (see Table 3), all of which consisted of subcategories to help organise information systematically. Any discrepancies and/or uncertainties were discussed by two researchers (SL and LA) until consensus was reached. The second part of data extraction focused on extracting relevant raw findings about the ways that link workers have supported the needs of adults with P + MH LTCs and coding data using the principle of data comparison/categorisation to identify themes of the ways that this group was supported. Table 2 within the supplementary materials includes some original quotes and text segments from the included articles to illustrate the themes and to increase the rigour and transparency of the analytic process (full data set is available upon reasonable request). This was a lengthy task, particularly examining qualitative design studies, where large quantities of data were extracted (i.e., relevant text and quotes where applicable) and coded. Similar codes were clustered together for comparison and to start identifying meaningful themes. Data coding was completed by SL by hand and through the use of Microsoft Excel spreadsheet software. This was an iterative process and drafts prepared by SL were discussed amongst the team. The synthesised findings of the review are presented in two themes and four subthemes that outline how social prescribing link workers supported the complex needs of adults with P + MH LTCs (see Figure 2). To ensure transparent reporting of the review, the PRISMA [58] checklist was followed and is provided in supplementary materials.

2.5. Quality Assessment. Design-dependent Critical Appraisal Skills Programme (CASP) appraisal tools were used to optimise the reliability of the review, assess the methodological quality, and appraise the research process of the reviewed studies [80]. The appraisal checklists were not used to exclude studies but to aid a better understanding of the available research evidence and provide methodological foundations for future work. The assessment of the methodological quality of the included studies (see numerical
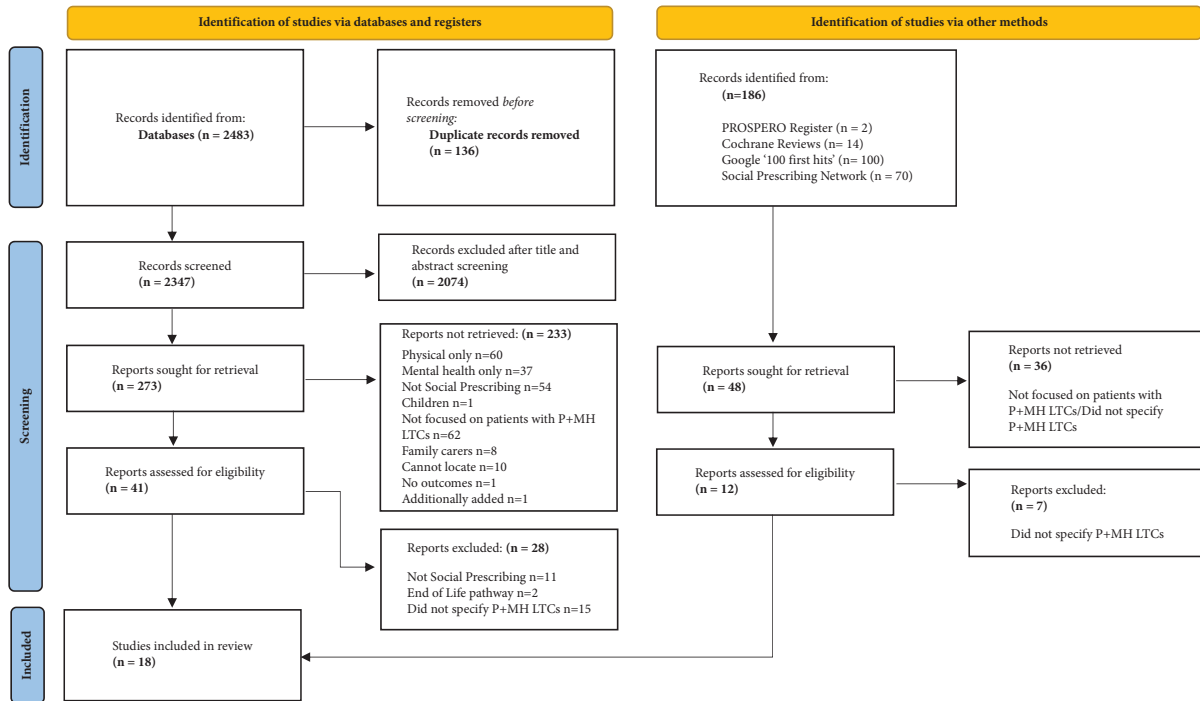
FIGURE 1: Search process.

indication) can be found with methodological information in supplementary materials, and for a detailed quality review by question, information is available upon reasonable request. The quality assessment was completed by SL, and any discrepancies were resolved through a discussion between the two authors (SL and LA).

3. Findings

3.1. Methodological Characteristics of Included Studies. Eighteen articles were eligible for inclusion in the review. Four types of studies were identified: qualitative studies ($n = 10$), observational studies ($n = 3$), literature reviews ($n = 3$), and experimental studies ($n = 2$). Of the 10 identified qualitative studies, 7 studies were completed as part of larger social prescribing interventions with a link worker [62, 64–67, 69, 70], namely, "Ways to Wellness" (WtW) and "Deep End Links Worker programme," while the remaining three studies consisted of diverse social prescribing interventions with a link worker [63, 68, 71]. Two of these articles reported ethnography studies [62, 64], while the remaining articles consisted of interviews and/or focus group-based studies (for full description, please refer to supplementary materials). Of the three identified observational studies, two utilised mixed methods (i.e., interviews, focus groups with a range of questionnaires) [73, 74], and a study [72] used questionnaires for before and after evaluation of the service. All three studies reported prepost outcomes, with follow-up measures completed at 3 months [73], 12 months [72], and 18 months [74]. Of the two experimental studies, one [76] carried out a quasi-experimental cluster-randomized controlled trial, while the other [75] performed an uncontrolled pilot trial collecting mixed-methods data. A study by [76] was a trial of "the Glasgow Deep End Links

Worker Programme (LWP)" carried out with patients across 7 practices, while a pilot trial by [75] was built on the principles of Glasgow's LWP intervention carried out in a single practice in Ireland. Of the three literature reviews, all [77–79] included a variety of methodologies ranging from qualitative studies, scoping reviews, and different types of trials to map literature on social prescribing and SPLWs.

The majority of articles, primary data, and reviews were published in 2019 ($n = 8$), and nearly all reported studies that were carried out in the UK ($n = 17$), except for one that was carried out in Ireland [75]. Most of the social prescribing interventions were designed for adults aged between 40–74 years, with some that supported adults aged around 50 years or older. Participants had a range of multiple physical LTCs and details around mental health varied (see Table 3). Some participants reported severe or extreme anxiety and/or depression, while others reported variable information, including variable details around social needs.

Collective observations using the CASP quality assessment tool showed that there were methodological gaps, such as limited details regarding follow-up stages, limited information about confounding factors, inconsistent use of standardised measuring tools, and inconsistent sample sizes with no clear power calculations. We also observed that most qualitative studies did not provide adequate information about how researchers' unique experiences shape the interpretation of research. There were also discrepancies between terminology and definitions around SP activities and link workers, and largely missing sociodemographic and background information about social prescribing link workers. Where possible, we have pulled out information about social prescribing link workers; however, due to largely unreported details from the original articles, we are unable to present rigorous evidence on this matter.

TABLE 2: Social prescribing link worker intervention information in included studies.

Reference information: author, year, and country	Length of intervention/programme	Follow-up	Number of meetings/sessions	Means of delivery
Qualitative studies				
(1) Frostick and Bertotti, 2021, UK [63]	Not specified	Not specified	Not specified	Not specified
(2) Gibson et al., 2022, UK [64]	Some clients remaining with the intervention for up to 4 years	Not specified	Not specified	Synchronised with people's needs
(3) Griffith et al., 2023, UK [62]	The overall engagement with ways to wellness can be up to two years	6 monthly up to 24 months	All contacts vary in duration and frequency in accordance with individual client need	The ways to wellness intervention is highly personalised involving face-to-face contacts in community settings and, where necessary, domiciliary visits
(4) Hanlon et al., 2021, UK [65]	Not specified	Not specified	The number of meetings with the community links practitioners (CLP) was not prespecified and was tailored to individual patient. Some patients had a single meeting linking them to wider resources, while others met with the CLP on numerous occasions over a period of several months	Not specified
(5) Moffatt et al., 2017, UK [66]	Patient engagement varied in terms of intensity and duration from 4 months to 14 months	Every six months	Frequency of contact with the link worker is mutually agreed, varies between and within patients depending on current need and circumstances	Can be face to face, via telephone, e-mail, and/or text message
(6) Morris et al., 2022, UK [67]	Client participants were those taking part in an 18 month ethnographic study but could engage for up to approximately 3.5 years	Not specified	Not specified	Link workers communicated with clients by telephone appointments whilst working from home
(7) Rhodes and Bell, 2021, UK [68]	Interventions were limited to 6 weeks, 6–8 weeks, or 12 weeks	Not specified	Some specified that appointments with a social prescriber were weekly, while others did not specify	Delivered in patients home, GP practice, or organization's office
(8) Wildman et al., 2019, UK [69]	Service users remain with the intervention for up to two years or, with link worker discretion, longer if required	Every six months	Meeting duration frequency increases or decreases according to need	Over the course of a patient's engagement with Ways to Wellness (WtW), face-to-face contact is also supplemented by telephone, e-mail or text contact
(9). Wildman et al., 2019, UK [70]	Clients remain with the service for up to 2 years or, with link worker discretion, longer if needed	Progress and goals reviewed every 6 months thereafter for the duration of a client's engagement with the service	Meeting duration frequency decreasing or increasing depending on the need	Over the course of clients' engagement with WtW, face-to-face contact is also supplemented by telephone, e-mail or text

TABLE 2: Continued.

Reference information: author, year, and country	Length of intervention/programme	Follow-up	Number of meetings/sessions	Means of delivery
(10) Wood et al., 2021, UK [71]	Clients can access different services at different times in whatever order meets their needs	Unclear	The service has no time limit	Depending on client's needs, home visits can be offered
Observational studies				
(11) Elston et al., 2019, UK [72]	12 week intervention	12 months evaluation	Several meetings	Mostly clients homes
(12) Polley et al., 2019, UK [73]	Not specified	3 months follow-up	Not specified	Not specified
(13) Woodal et al., 2018, UK [74]	Most clients receiving appointments exit the service within 16 weeks, with the mean length of time being 10 weeks	Prepost questionnaires at the exit (usually after 6 sessions)	To avoid dependency on the social prescribing service, individuals are encouraged to "exit" the service or are referred to other health and social care providers after 6 sessions	Not specified
Experimental studies				
(14) Kiely et al., 2021, Ireland [75]	6 weeks	After 6 weeks participation	Six patients had three or more follow-up contacts with the link worker	The intensity of the support offered was tailored to the individual needs of the patient, and this varied from a simple follow-up phone call to accompanying the person to community activities All contacts were one-to-one and usually face-to-face, although some telephone contacts could occur. CLP contacts with patients were usually in the practice, although some home visits could occur, and the CLPs could accompany patients to support their contact with a community organization
(15) Mercer et al., 2019, UK [76]	9 months	9 months follow-up	CLPs and patients could meet as many times, and when, they thought necessary	
Literature reviews				
(16) Bertotti et al., 2019 [77]	Not specified	Not specified	Most sessions of support provided "in-depth" support (42%) (4 sessions or over), 38% provided mid-level support (2-3 sessions), and 21% light-touch signposting (1 session only)	Face-to-face and various levels of support were offered depending on the need of the service users
(17) Pescheny et al., 2019 [78]	Not specified	Not specified	Not specified	Variable but no clear details
(18) Public Health England, 2019 [79]	Variable	Varied considerably across studies; ranging from between 3 and 6 months, 8 months, 9 months, or as long 12 months	Variable but no clear details	Variable but no clear details

TABLE 3: Participant characteristics in included studies.

Reference information: author, year, and country	Information on social prescribing link workers					Information about people living with P + MH LTCs		
	Sample size	Characteristics (i.e., age and gender)	Period in position	Title of the role	Purpose of the role	Sample size	Characteristics (i.e., age and gender)	Conditions (P + MH LTCs)
Qualitative studies								
(1) Frostick and Bertotti, 2021, UK [63]	$N = 13$	Not specified	Link workers who were currently working on a social prescribing scheme and had been there for six months or more	Link workers	Not specified	N/A	Diversity of service users located in areas with very diverse communities representing a wide range of age, ethnicity and referral criteria	Service users had a wide range of issues, both practical and health related (i.e., physical and/or mental health concerns were mentioned in qualitative data when referring to service users)
(2) Gibson et al., 2022, [64] UK	Not specified	Not specified	Not specified	Link workers	Not specified	$N = 19$	Aged between 40 and 74 No information on gender	Had at least one of eight LTCs (diabetes type 1 and 2, chronic obstructive pulmonary disease, asthma, coronary heart disease, heart failure, epilepsy and osteoporosis with or without anxiety and/or depression)
(3) Griffith et al., 2023, UK [62]	$N = 20$	16 females and 4 males	Not specified	Link workers	Link-workers use behaviour change techniques including motivational interviewing, goal-setting and feedback to promote the aims of ways to wellness	N/A	Service users aged 40–74	Service users had COPD or asthma; diabetes (type 1 or type 2); heart disease; epilepsy; osteoporosis; any of these with depression and/or anxiety
(4) Hanlon et al., 2021, UK [65]	Not specified	Not specified	Not specified	Community links practitioner (CLP)	CLP worked one-to-one with patients to signpost, recommend, refer, and support the use of community-based services	$N = 12$	Age ranged from 26 to 64 years $M = 46.5$ years. Gender: 6 females and 6 males	4 patients referred with physical and psychological problems, the remaining patients had psychological and social problems
(5) Moffatt et al., 2017, UK [66]	Not specified	Not specified	Not specified	Link workers	Not specified	$N = 30$	Aged 40–74 years $M = 62$ years. Gender: 14 females and 16 males	Based on self-reported health conditions, only one participant had a single long-term condition. Most participants had more than one "referral" long-term condition, had other health problems and associated mental health issues, low confidence and social isolation. With the exception of the diagnosed long-term conditions that triggered a referral to ways to wellness (i.e., diabetes (types 1 and 2), chronic obstructive pulmonary disease, asthma, coronary heart disease, heart failure, epilepsy, osteoporosis) other physical and mental health problems were self-reported at interview

Table 3: Continued.

Reference information: author, year, and country	Information on social prescribing link workers					Information about people living with P + MH LTCs		
	Sample size	Characteristics (i.e., age and gender)	Period in position	Title of the role	Purpose of the role	Sample size	Characteristics (i.e., age and gender)	Conditions (P + MH LTCs)
(6) Morris et al., 2022, UK [67]	N = 5 SPLWs N = 8 managerial staff	Demographic data were not collected for service providers because of the risk of identifying individuals	Not specified	Link workers	Not specified	N = 44	Age: 40–49 n = 6 50–59 n = 11 60–69 n = 17 70+ n = 10 Gender: 25 females and 19 males	Nine clients reported having a single LTC. The remaining 35 had multiple conditions, which most commonly comprised T2DM, hypertension, asthma, chronic obstructive pulmonary disorder (COPD), fibromyalgia, depression, and anxiety
(7) Rhodes and Bell, 2021, UK [68]	N = 9	Age: Not specified. Gender: 7 females and 2 males	Time in role: 10 months–1 participant 1.5 years–2 2 years–5 2.5 years -1	Social prescriber, social prescribing link worker, locality navigator, community navigator and stroke care advisor	Not specified	N/A	N/A	Some had a more complex mix of LTCs including multiple sclerosis, vascular disease, heart failure, epilepsy, and cancers SPs supported clients with various physical and/or mental LTCs. Specifically, three SPs worked with clients aged 65+ with complex physical needs, the remaining six SPs worked with clients of all ages and needs in mixed levels of deprivation areas
(8) Wildman et al., 2019, UK [69]	Not specified	Not specified	Not specified	Not specified	Service users are supported by their link worker to access appropriate services and community groups (e.g. weight-management groups, welfare rights advice and arts-based activities), and to return to work or engage in volunteering opportunities (as appropriate)	N = 24	Age: Ranged from 40 to 74 years Gender: 11 females and 13 males	16 participants reported yes to mental health category that included low mood, anxiety, depression, loneliness, and social isolation based on self-report at interview where participants described or reported these conditions or feelings Levels of multimorbidity were high, with all-but-one participant reported multiple LTCs: 1 LTC–6 participants 2 LTCs–14 participants 3 LTCs–4 participants
(9) Wildman et al., 2019, UK [70]	N = 15	Phase 1: 12 females and 3 males. Ages 20–59 years, with most in 30–39 category Phase 2: 13 females and 2 males. Ages 20–59 years, with most in 20–29 category	Link workers had been in-post for between 2 and 4 months when data was collected (phase 1) By phase 2, ranged between 1 and 16 months	Link workers	Arrange an initial appointment, complete a "wellbeing star" tool and identify target areas for improvement across eight domains	N/A	Adults aged 40–74	Adult participants had COPD or asthma; diabetes (type 1 or type 2); heart disease; epilepsy; osteoporosis; any of these with depression and/or anxiety

TABLE 3: Continued.

Reference information: author, year, and country	Information on social prescribing link workers					Information about people living with P + MH LTCs		
	Sample size	Characteristics (i.e., age and gender)	Period in position	Title of the role	Purpose of the role	Sample size	Characteristics (i.e., age and gender)	Conditions (P + MH LTCs)
(10) Wood et al., 2021, UK [71]	Staff ($n = 13$) and referrers ($n = 7$) involved in SP	Not specified	Not specified	Paid health trainers, health activity workers and advocacy workers (primarily giving benefits and housing advice) and unpaid volunteers	Any of the paid workers could be a link worker, this would be decided based on client goals. Clients with predominantly healthy goals would have a health trainer as a link worker. Once these goals were met, the client may be referred to other colleagues if needed, for example for benefits advice. The person acting as link worker would change	$N = 15$	Age: Adults over 18+ years. Gender: 5 males, 9 females, 1 preferred not to say	Participants had both physical and mental health issues (i.e., depression and/or anxiety, multimorbid chronic physical health conditions, complex social issues, and isolation)
Observational studies								
(11) Elston et al., 2019, UK [72]	Not specified	Not specified	Not specified	Well-being coordinators and/or "holistic" link-workers	Not specified	All referrals $n = 1046$. Outcomes data $n = 82$	Age: 50–59 (5) 60–69 (10) 70–79 (23) 80–89 (38) 90+ (9). Gender: 63 females and 23 males	2 or more multiple long-term conditions
(12) Polley and et al., 2019, UK [73]	$N = 15$ of 15 staff members, 2 link workers	Age: not specified. Gender: 2 females	Not specified	Link workers	Not specified	Qualitative $n = 10$. Quantitative $n = 105$ (at follow-up)	*Interviews.* Age not specified. Gender: 6 females and 4 males *At follow-up:* age $M = 62$ years. Gender: 48 males and 57 females	Individuals who met any of the social prescribing service eligibility criteria (loneliness, mental health issues, and long-term conditions) as well as adults on a CVD Qrisk2 score of 10% or more, or prediabetes risk
(13) Woodal et al., 2018, UK [74]	$N = 15$	Not specified	Not specified	Wellbeing coordinators	The service operates through "wellbeing coordinators" who offer support to individuals and to provide advice on local groups and services in their local community—the activities individuals can be referred into range from mental health and counselling advice; physical fitness classes; support for physical or emotional difficulties; finance and debt advice; and creative groups	$n = 26$ interviews $n = 342$ questionnaire	*Questionnaire.* age $M = 53$ years. Gender: 63.9% of participants were females and 36.1% males *Interviews.* age $M = 53$ years. Gender: 14 males and 12 females	At baseline, 40% reported being either "severely" (23.4%) or "extremely" anxious or depressed (16.6%) Participants rated their health on a scale of 0 to 100, where 0 was the "worst health you can image"; the average health rating at baseline was 43.27 compared to 52.83 at the poststage
Experimental studies								
(14) Kiely et al., 2021, Ireland [75]	Not specified	Not specified	Not specified	Link workers	Not specified	$N = 12$	Age: $M = 63$ years Gender: 70% females	Number of self-reported health conditions: 2.6 The most common self-reported health issues to the link worker were either mental health (50%) or musculoskeletal problems (63%), high blood pressure (28%), diabetes (18%), and kidney disease (18%)

TABLE 3: Continued.

| Reference information: author, year, and country	Information on social prescribing link workers					Information about people living with P + MH LTCs		
	Sample size	Characteristics (i.e., age and gender)	Period in position	Title of the role	Purpose of the role	Sample size	Characteristics (i.e., age and gender)	Conditions (P + MH LTCs)
(15) Mercer et al., 2019, UK [76]	Not specified	Not specified	Not specified	Community-links practitioner	CLPs established links between the practice and local community organizations, helped by the practice development fund used to "buy out" practice staff time to spend improving systems and building relationships. Seen patients who were thought to benefit from this type of support	Data were collected on 288 and 214 (74.3%) patients in the intervention practices at baseline and follow-up, respectively, and on 612 and 561 (92%) patients in the comparison practices 7 intervention practices and 8 comparison practices	Age: Intervention 49 years Comparison 56 years Gender: Intervention 59.2% females Comparison 61.1% females	The count of self-reported chronic conditions (Multimorbidity): Intervention 3.1 Comparison 2.3
Literature reviews								
(16) Bertotti et al., 2019 [77]	Not specified	Not specified	Variable but no clear details	Identified at least 11 different types of navigator roles	All types of navigators offered support to long-term conditions (LTCs), physical and mental health. Social prescribing link workers covered the widest mix of health (LTCs, physical and mental health) and social issues (social isolation, welfare advice, employment, and housing, although health coaches and health trainers also offered a mix of health and social support to users other types of navigators (community matrons, occupational therapists, and practice nurses) were primarily focused on supporting health conditions	Not specified	Not specified	The types of chronic conditions targeted included hypertension, diabetes, BMI over 30, smokers, cancer, asthma, chronic pain, osteoarthritis, chronic obstructive pulmonary disease (COPD), stroke survivors, frailty, and dementia. The level of mental health problems targeted was primarily mild to moderate with only one scheme including severe mental health problems
(17) Pescheny et al., 2019 [78]	Not specified	Not specified	Variable but no clear details	Social prescriber/social navigator	Examples include variable support but no clear details	Not specified	Not specified	Service users with variable physical and mental health conditions
(18) Public Health England, 2019 [79]	Not specified	Not specified	Not specified	All studies included in this synthesis involved referral to a link worker and this role could take a variety of different names: "community connector", "social prescribing Coordinator," "community links practitioner," "hub coordinator" or "service advisor"	Variable examples of support were provided as part of the link workers' role	Variable, where possible baseline and follow-up information was provided	Not specified	Service users with variable physical and mental health conditions and social issues
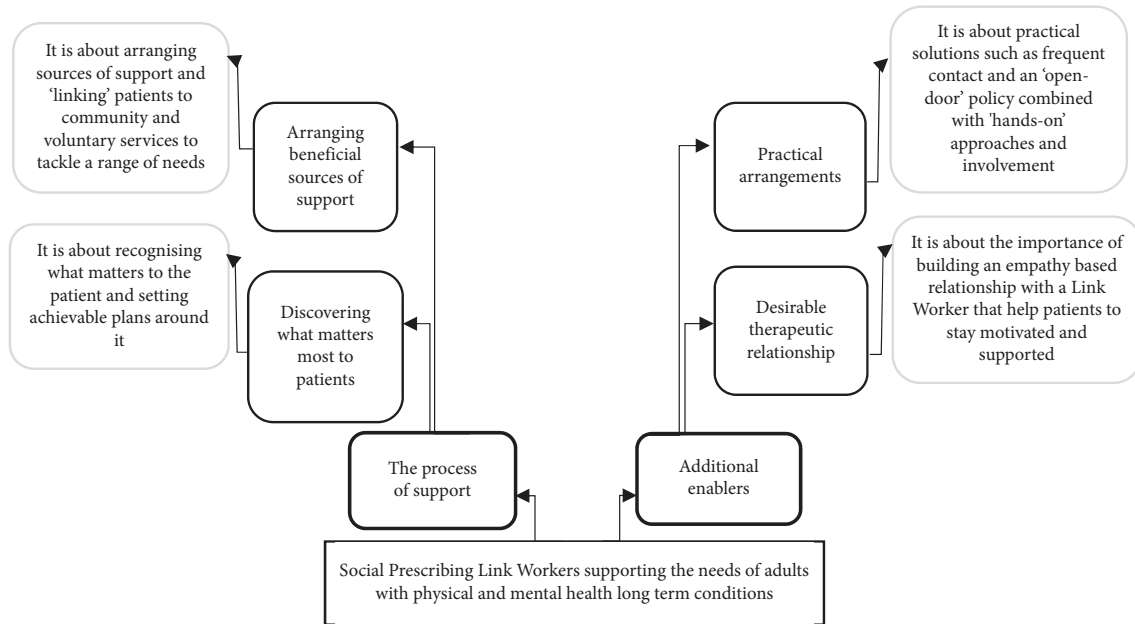
FIGURE 2: Themes and subthemes with key messages identified.

3.2. Supporting the Complex Needs of Adults Living with P + MH LTCs.

3.2. Supporting the Complex Needs of Adults Living with P + MH LTCs. Following the analytical process described in Section *Data Extraction and Analysis*, two themes and four subthemes were identified that succinctly summarise evidence from included studies and explain what aspects constitute how link workers might support the complex needs of adults living with P + MH LTCs (see Figure 2). The overarching title above houses two themes, namely, "*The process of support*" and "*Additional enablers.*" During the data analysis and synthesis of findings, it was evident that there were inherent elements that constituted successful processes of supporting this group of adults and additional elements that made the entire experience more positive. These are presented in the below-listed themes.

3.2.1. The Process of Support. In this theme, the process of support was understood as a procedure that consisted of several main forms of support, namely, "*Discovering what matters most to patients*" and "*Arranging beneficial sources of support.*"

The sub-theme of "*Discovering what matters most to patients*" is about the initial form of support, which consisted of identifying and developing a plan based on patients' priorities and needs. It was central to helping patients feel that their concerns were taken seriously and that goals were set around it. The subtheme of "*Arranging beneficial sources of support*" is about organising a range of support avenues to help patients implement changes in their health, wellbeing, and living circumstances.

(1) Discovering What Matters Most to Patients. Thirteen articles identified that the initial priority for supporting the complex needs of adults with P + MH LTCs was to help patients recognise their own needs and preferences, ultimately assist in identifying what mattered most to the patient, and

coproduce a plan of action with achievable goals that patients can have control over [62–66, 69–74, 78, 79]. From the sole perspective of patients, they emphasised that it was important that link workers had taken thorough notice of patients' circumstances and their wishes and focused on creating realistic and meaningful goals that patients could achieve [64–66, 69, 72] "'*mini-goals*" *that represented* "*achievable somethings*" [69, p.7]–and felt able to continue making progress. Studies with link workers emphasised that patients had autonomy rather than being dictated and highlighted that plan development, often during initial meetings, was a coproductive process [62, 63, 66, 70, 71, 73, 74, 78], discussing "*what they wanted and what was going to work for them*" [73, p.32]. The priority was to empower patients to voice their main concerns and encourage them to take control of their lives and their health needs [65, 71, 74].

(2) Arranging Beneficial Sources of Support. Sixteen articles identified that another element essential to supporting adults with P + MH LTCs, ultimately helping patients to materialise their goals, was arranging onward support or "linking" and putting resources in place to address their needs. "Linking" predominantly focused on referrals to a range of community group activities and services to implement positive behaviour and attitude changes in long-term condition management, physical activity and healthy eating, confidence building and self-worth, improving sense of belonging in community and tackling loneliness, learning and reviving skills but also offering services for addressing welfare rights, employment and education support, housing and financial worries [62–71, 73–75, 77–79] as well as managing addiction [65, 75]. Pursuing link worker prescribed support, particularly for physical and mental health benefits was "*transformative*" [69, p.8] and improved self-care strategies [66, 74, 78] and lowered risk factors associated with several

long-term conditions [73]. However, there were setbacks that delayed engagement with support services such as employment and family/caring commitments [64], referrals on hold due to limited availability in the services [62, 67, 70], complex physical ill-health[65], fluctuating symptoms and multimorbidity complications from P + MH LTCs [69] and severe emotional episodes [64]. It is also important to note that the success of "linking" to sources of support was heavily dependent on a set of enablers, as described in later sections.

3.2.2. Additional Enablers. In this theme, additional enablers were understood as added elements that were fundamental in supporting adults' needs with P + MH LTCs. In this context, additional enablers consisted of "*Desirable therapeutic relationship*" and "*Practical arrangements,*" both of which were instrumental to the success of supporting patients with their needs.

The subtheme of "*Desirable therapeutic relationship*" is about an empathy-based rapport with a link worker that was a catalyst in helping to achieve positive changes in patients' lives. Link workers' personality and skills were instrumental in this interaction. The subtheme of "*Practical arrangements*" is about a range of practical and "hands-on" solutions that facilitated patients' engagement and were important elements of support.

(1) Desirable Therapeutic Relationship. Thirteen articles identified that a therapeutic-style relationship between the patient and the link worker had most value to the success of the intervention [62–67, 69–71, 73–75, 78]. This relationship was built on desirable link worker interpersonal characteristics and skills, such as an empathic and nonjudgemental attitude to patients, an openness that helped patients feel at ease, and approachable and honest communication that altogether helped patients feel valued and listened to [63, 65, 66, 69, 70, 74]. Link workers were described as "friend-like" points of contact that showed interest and care, were encouraging, and used appropriate motivational and coaching approaches that instilled resilience to continue [62, 64, 71, 73, 75, 78]. Patients were attracted to this type of person-tailored and empathic rapport that was central to the success of supporting patients with their needs [65–67].

(2) Practical Arrangements. Fifteen articles identified that practical solutions such as flexible "*open door*" [66, p.6] contact, frequent follow-up meetings with sufficient time allocation, one-to-one approach, appointment reminders and regular check-in phone calls were instrumental in successful engagement with the intervention [62–64, 66–71, 73–78]. The consistent nature of contact with a link worker translated to improved self-esteem[69], accountability [73], and better uptake of referred activities [76]. Particularly, patients valued direct "hands-on" engagement with a link worker and their support such as accompanying patients to appointments [64, 77], making initial contact with referred services [75], assisting with washing patients' dog [62], "*aiding in house*

clearance for a hoarder" [71, p.7], assisting with welfare and housing advice and applications rather than making a referral or due to lengthy waiting [66, 70], providing home visits [62, 71], and also offering therapeutic support related to bereavement and long-term condition management [67]. However, factors such as personnel changes [67, 69], remote interactions due to pandemic lockdowns [67], costly travel to referred activities [75], and referral delays [71] resulted in a loss of engagement.

Duration of the intervention was sometimes problematic; patients wanted to stay engaged with their link worker long-term [66, 69] or have a greater number of sessions [74] to accommodate the fluctuating and chronic nature of their multiple LTCs and social demands resulting from multimorbidities.

Collectively, articles in this review have reported studies that consisted of different social prescribing link worker-led interventions. Specifically, the "Ways to Wellness" (WtW) interventions [64, 66, 69] were designed to support adults aged 40–74 years with physical LTCs with coexisting depression and/or anxiety to improve patient's health and wellbeing through a personalised service delivered by link workers, and the "Deep End Link Workers" interventions [65, 76] were designed to support the needs of people on average 50 years or older with multiple LTCs and social problems living in deprived areas. Further articles reported studies with link workers who delivered "WtW" intervention [62, 70], and the remaining articles reported findings from individual social prescribing link worker-led intervention studies carried out in different parts of the UK [63, 67, 68, 71–74, 77–79], of which a study by [75] was completed in Ireland and a study by [67] was completed in the COVID-19 context. Details about social prescribing link worker intervention arrangements varied, but normally interventions lasted from 6–8 weeks and up to 2 years or longer (with link worker discretion), were carried out face-to-face in community, GP practices, and domiciliary settings, and were supported by telephone, e-mail, or text contact as frequently as required depending on patients' needs, and often on a weekly basis, although not confirmed across all studies.

However, four studies noted that these intense levels of engagement and support come at a cost to link workers who reported increasing tension and burnout from having to meet referral targets, arrange and deliver support and help patients at the "crisis point" [62, 63, 68, 70]. Link workers agreed that their roles consisted of unrealistic expectations, and it was becoming challenging to set boundaries with patients who wanted intense and frequent support and also meet organisational priorities that focused on referral rates. Particularly, concerns were raised that although link workers offered person-centred support to all, link workers believed that some complex cases needed more specialist support that they felt was beyond the remit of their role [63, 68]. Link workers recognised that a "handholding" approach was not encouraged by their organizations [62]; however, "signposting" was often seen as an ineffective form of support for patients [63, 68], particularly those with complex circumstances and socioeconomic deprivation, and as such link workers were adopting the approach of being "a friend but not a friend" [70].

4. Discussion

This integrative review examined the evidence to identify how social prescribing link workers support the complex needs of adults living with P + MH LTCs and contributed new ideas to a better understanding of the role of link workers.

Collectively, the evidence in the field of the link worker social prescribing model showed that support is implemented variably, ranging from light signposting and linking of patients to a variety of local assets to holistic and personalised support.

We identified 18 articles in this review which agreed that "signposting" adults with P + MH LTCs to community-based nonmedical resources were insufficient on its own. The existing description of social prescribing link workers connecting people to community-based support diminishes the additional forms of support that link workers are providing. The seemingly unlimited remits of support that link workers offered to this group of individuals ranged from empowering and encouraging adults to make positive life-style changes through detailed person-centred goal setting, progress monitoring, securing access to support groups and behaviour change activities to providing intense "hands-on" levels of engagement and involvement, such as assisting clients with domestic tasks, accompanying them to appointments, assisting with welfare benefits applications, and offering therapeutic types of emotional support. While ensuring that support was person-centred and delivered in a holistic approach, as referred to by Kimberlee [35], the frequency of support was also tailored to the person's needs. This is consistent with one of the identified studies in our review [77] confirming that most link workers offered intense support, i.e., accompanying patients to appointments. In return, patients (i.e., adults with P + MH LTCs) were highly appreciative of this support, recognising that the rapport with a link worker was central to their stories of improvement [65], portraying link workers as "friend-like" contacts who helped these adults to feel that they matter [64], and through appropriate support were able to turn their lives around, including but not limited to health [69]. Aligned with the reported [77] findings, we found consistent evidence that an empathy-based link workers skillset and a "coaching" style approach were instrumental to successful patients' engagement.

Nevertheless, our review noted that link workers were placed in a controversial position. Link workers recognised complex needs of adults living with P + MH LTCs and demonstrated willingness to help where necessary, while knowing that "handholding" approach was not encouraged [62] and experiencing competence concerns in supporting complex clients who needed specialist support [63]. Thus, boundary setting was complicated as some clients were in critical circumstances, mostly adults in deprived communities who needed intense mental health and social support, effectively leaving link workers with continually growing expectations, bigger caseloads, and feeling overworked. Equally, referral and assessment rates were increasingly prioritised, thus complicating time resources for engagement with patients [62]. This finding is consistent with

evidence suggesting that the link workers role is becoming unrealistic, ranging from supporting diverse groups of patients through person-centred approaches, tackling service funding concerns, and operating interventions tightly linked to financial targets [46, 49, 51].

Our findings accord with current suggestions that social prescribing interventions require a skilled workforce [19, 29, 49] that is equipped and supported to deal with the complexity of caring for an increasingly ageing population with multiple conditions [33]. Recent evidence proposed that the role of a link worker needs a clearer scope and possibly standardised referral criteria that could improve caseload management systems [26, 81]. The latter suggestion is, however, conflicting, proposing to categorise patients according to medical conditions or sociodemographic characteristics; this may dismiss the complexity of adults with P + MH LTCs who face multiple intertwined challenges and health inequalities, as noted in this review, and may in fact result in disproportionate use of resources. Notwithstanding, as illustrated in some cases of the reviewed evidence, patients want a long-term ongoing support to accommodate the fluctuating and chronic nature of their multiple LTCs and social demands, thus altogether current types of social prescribing link worker support may be insufficient for longer-term management and alternatives may be required.

We have demonstrated in this review that adults with P + MH LTCs receive diverse and mostly intense types of social prescribing link worker support. Notwithstanding, this finding warrants further research work and inferences should consider the heterogenous nature of these studies. The majority of other research in this field focused on mechanisms around the set up and delivery of social prescribing link worker interventions [82], uptake processes and patients' adherence [83], types of social prescribing interventions [31], taxonomy of interventions for better comparison [81], or social prescribing outcome evaluations/ effectiveness research [29, 45]. While these research studies have expanded the evidence base, a focus is needed on achieving a better understanding of the patient groups and their needs [47, 53] and potentially tailoring link worker support based on types of patients that would benefit the most [72].

4.1. Overview of Study Quality. This review is consistent with previous systematic reviews [e.g., 31, 45, 47, 48] that identified information shortcomings in social prescribing-related studies. This creates challenge for making inferences about social prescribing link worker interventions and types of groups supported. For example, we noted that some studies failed to specify illness-related information and instead provided generalised information (e.g., adults with physical and mental health chronic conditions or patients with multiple LTCs) or the average number of medical conditions. Demographic information such as participants ages and genders were also not conclusive. However, it was noted that most participants ranged between 40 and 60 years of age and were mostly female. Furthermore, there was limited consistency in reporting contextual information about the process of social prescribing

link worker interventions such as the length of support, the means of delivery, or the frequency of support as well as the order of supporting components. As evidenced in this review, practical arrangements of support such as one-to-one setup or duration of sessions and the number of arranged phone contacts or appointment reminders played an integral part in supporting adults with P + MH LTCs, however, this crucial information was not systematically recorded but was often inconsistently presented as part of findings illustrations or sporadically discussed amid contextual information about the intervention. These information shortcomings and methodological gaps, as observed by the CASP quality assessment tool, provide foundations for improving future work in the field.

4.2. Strengths and Limitations. A key strength of this review is the integrative nature of disparate methodologies to form an understanding of the phenomena under investigation [54] as well as strength in evidence evaluation, the formation of further research questions, and information application for decision-making in healthcare [55–57]. This is also a potential limitation due to the risk of combining evidence of multiple studies. However, to minimise error and bias in reporting, this review followed systematic methodology strategies to enhance rigour throughout the review stages (e.g., quality assessment, thorough data extraction and synthesis, discussions amongst reviewers, and iterative nature of the write up). The appraisal of the methodological quality of studies for inclusion in the review guided researchers in understanding the methodological choices of included studies and identified missing components that are informative for other research teams. Another strength of this review is the breadth of evidence searched combined with the peer review process. We were systematic in searching peer-review and grey literature that offered a wider scope for potential evidence, however, gaps were observed such as limited inclusion of grey literature search databases (e.g., OpenGrey, GreyNet) that may have offered a more thorough search for evidence. Thus, it is important to note that time and resource constraints meant that some, particularly local, unpublished evaluation studies were not identified in searches. Any uncertainties regarding the inclusion and/or exclusion of studies were discussed amongst the review team members, and a consensus was reached.

The categorisation of synthesised findings helped us identify the ways that link workers supported the needs of adults with P + MH LTCs that can now function as a systemised source of information for practitioners working in the field and for researchers to observe areas that warrant further research work. Although, we tried to remain vigilant and consistent when completing different stages of this review, it is important to note that evidence across some of these studies was inconsistently reported and often lacked details, as raised earlier. Thus, whilst these findings represent a synthesis of knowledge, drawing out generalisations should be treated with caution. Also, most of the studies were completed in the UK and were limited to the English language. While all efforts were made to identify diverse evidence from other countries, and there were no limitations placed on countries when carrying out literature searches,

published evidence is mostly limited to one country; thus, findings are particularly relevant to the social prescribing context within the UK. This may also warrant future collaborative work with other countries and may encourage cross-sector collaboration [26].

4.3. Implications. Social prescribing interventions with a link worker are diverse and offer widespread support to different groups. However, the scope of this review included adults with P + MH LTCs, and its sole focus was on identifying how social prescribing link workers support the complex needs of this group. This review noted several suggestions that may warrant further research work and practical implementations.

First, evidence was consistent in suggesting that this group of adults mostly needed an intense level of support, what Kimberlee [35] termed as "holistic," often with no boundaries on time and frequency parameters. Adults with P + MH LTCs dealt with multiple challenges, often resulting from the cumulative impact of LTCs, socio-economic deprivation, and mental health problems, making it difficult for patients to break unhelpful practices, behaviours and thoughts. Link workers were central in helping these adults; however, often this was accomplished at the expense of over-stretched roles and not clearly coordinated support. The general impression was that link workers decision-making about supporting adults with P + MH LTCs was mostly led by patients' needs and aspirations, the urgency of problems, and what seemed reasonable and appropriate for supporting the patient to help improve their wellbeing. Thus, this review suggests pursuing further primary work (1) to understand the needs of this patient group and learn how they can benefit from social prescribing link worker support in a sustainable way; and (2) to learn how the role of a link worker is implemented to support people living with P + MH LTCs.

Second, our review noted that there was no established protocol for the reporting of contextual information such as the number, duration, and nature of visits or the nature of support provided. The sporadic reporting of information may imply inadequate record-keeping or selective reporting of data. These are potentially missed opportunities for swift reporting of social prescribing interventions on delivery methods and types of support accessed. It also prolongs the process for achieving any regional or national joining up of approaches or health data centralisation [26]. We propose that standardising the implementation of link worker interventions for adults living with P + MH LTCs may help in reducing pathway uncertainty, discord, or duplication of effort as well as contribute to reducing the gap in health inequalities. However, the process of achieving this warrants further research work.

Lastly, in addition to broadening the knowledge about the scope of social prescribing link workers' role, this review offers insights for improving existing role descriptions, particularly in areas where the role is loosely described as a "facilitator" or "connector" for linking people to a range of community and voluntary services. Patients heavily relied on link workers for a range of support and advice, and as evidenced, "linking" or

"signposting" without the added enablers was insufficient. Thus, when considering improvements related to the social prescribing link worker role, it is important to consider the additional work and engagement that link workers undertake, thus adding a greater impact.

5. Conclusions

This review has gathered evidence about how social prescribing link workers might support adults with P + MH LTCs and provides a better understanding of some of the complexities about the way that this group of adults is supported. The evidence highlighted that link workers play a pivotal role in the success of these interventions. However, the implementation of this role and its sustainability were uncertain.

The next step is to carry out further research employing in-depth qualitative work with this patient group to better understand their needs and learn how they can benefit from link workers' support in a sustainable way as well as learn how the role is implemented to support people living with P + MH LTCs. We anticipate that our further qualitative work could foster the development of a specialised programme for supporting this group of adults and propose a chain of work packages to scale-up this research.

Data Availability

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

Conflicts of Interest

DSB is a Medical Patron of Anxiety UK, which is a mutual aid and advocacy organization for people affected by anxiety. The remaining authors declare that they have no conflicts of interest.

Acknowledgments

Supplementary Materials

Supplementary materials are presented for extracted methodological information from all included studies, literature searches, illustrative data synthesis, and the reporting of the PRISMA checklist. All other materials, as specified in the manuscript, are available upon reasonable request from the corresponding author. (*Supplementary Materials*)

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