
Understanding Social Prescribing in Socially and Economically Disadvantaged Settings: A Mixed-Methods Study of Link Worker Interactions and Networks



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Abstract

Background: Social prescribing has been implemented in primary care through the employment of link workers. Social prescribing recognises the social determinants of health with link workers connecting patients with non-medical support in their communities. A key part of the link worker role is to network and establish relationships between primary care and community organisations. These networks create referral pathways and enable organisations to work collaboratively to fill gaps in community service provision. In disadvantaged areas, limited community infrastructure may impact link workers' ability to build sustainable networks.

Aim: To explore and understand how link workers create and sustain networks and relationships for social prescribing in socially and economically disadvantaged settings. To explore how these networks and relationships shape patient experiences.

Methods: This multiphase mixed-methods study consisted of three parts. First, a meta-ethnographic systematic evidence synthesis (undertaken August 2021-November 2023) developed a foundational conceptual framework for understanding link workers' experiences and the contextual factors shaping their roles. Second, a social network analysis interview study with 21 link workers (interviews undertaken November 2022-February 2023) explored how they build and sustain professional networks across different socioeconomic and organisational contexts. Finally, in-depth longitudinal case studies explored the daily practices, challenges and adaptations of link workers in areas with high socioeconomic disadvantage. Case studies were undertaken with three link worker cases around which the research centred. Fieldwork involved ethnographic visits (which took place between November 2023-August 2024) and incorporated interviews with the three link workers, as well as 37 interviews with 23 patients and involved over 240 hours of ethnographic fieldwork.

Findings: Link workers span systemic gaps, compensating for fragmented services caused by austerity and underinvestment. In spanning systemic gaps, link workers employ creative and tactical approaches to overcome systemic barriers, as well as more system-aligned approaches that maintain the status quo. These different practices have implications for network building and the sustainability and equity of social prescribing. My research connects link worker practices to broader political and economic contexts and illustrates how different approaches to link working may emerge in response to these systemic constraints.

Implications: While link workers provide invaluable support to patients, without systemic support and strengthening of community infrastructure, the implementation of social prescribing link workers risks being unsustainable. Policy and practice ought to recognise the substantial relational labour involved in the link worker role which entails networking across fragmented services.

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List of Abbreviations

ABCD	Asset Based Community Development
ARRS	Additional Roles Reimbursement Scheme
CASP	Critical Appraisal Skills Programme
CHW	Community Health Worker
CLP	Community Links Practitioner
COPD	Chronic Obstructive Pulmonary Disease
CV	Curriculum Vitae
DERA	Deep End Research Alliance
FTE	Full-Time Equivalent
GP	General Practice
GPs	General Practitioners
HRA	Health Research Authority
ICS	Integrate Care System
ID	Identification
IMD	Indices of Multiple Deprivation
LW	Link Worker
MND	Motor Neuron Disease
NHS	National Health Service
NIHR	National Institute of Health and Care Research
PCN	Primary Care Network
PIP	Personal Independence Payment
PIS	Participant Information Sheet
PPI	Patient and Public Involvement
SNA	Social Network Analysis
SP	Social Prescribing
SPCR	School for Primary Care Research
UK	United Kingdom
VCS	Voluntary and Community Sector
WHO	World Health Organisation

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Preface

My interest in the topic of social prescribing came from my longstanding interest in the role that primary care may play in addressing the social determinants of health inequities. I have been involved in social prescribing research since 2019, undertaking research as part of the Oxford Social Prescribing Research Group at the Centre for Evidence-Based Medicine, Nuffield Department of Primary Care Health Sciences.

Two of my supervisors, Prof Kamal Mahtani and Prof Stephanie Tierney, are considered leading researchers in social prescribing both nationally and internationally, and co-authored one of the first systematic reviews examining the role of social prescribing and social prescribing link workers in primary care (1). While I was not involved in this foundational review, the findings of this review played an important role in shaping my research focus and questions. Working in this established research environment gave me access to extensive networks within social prescribing policy and practice. It also required careful reflection on how to position my own distinct contribution to the social prescribing literature within this existing body of work.

Before I began my doctoral work, I was involved in several social prescribing research projects which gave me important foundational knowledge and insight into social prescribing. These projects include a commentary on the ethical considerations in social prescribing practice (2), the role that volunteering may play as a social prescribing intervention (3,4), and the role that the cultural sector may play as part of social prescribing (5–7).

More significantly, I was a project co-applicant and researcher on an NIHR Health Services and Delivery Research (HS&DR) funded project (Award ID: NIHR130247) – a realist evaluation of the implementation of link workers in primary care. Before I began my own NIHR-funded doctoral fellowship, I worked on this realist evaluation project as a researcher, undertaking fieldwork and collecting primary data in the early phases of the project. Once I began work on my doctoral research full-time, my involvement on the HS&DR project became limited to attendance at co-applicant

meetings and reviewing and contributing to research manuscripts. I was not involved in the later stages of data collection or data analysis for this project.

The HS&DR project resulted in four key papers that were published while I was undertaking my DPhil on which I am a co-author (8–11). These papers explore the function of “holding” in link worker practice (8), the consequences of micro-discretions and professional boundaries (9), patient engagement in social prescribing (10), and the integration of link workers into primary care teams (11). In addition to these papers, an overall synopsis of the study was also published in the NIHR Journals Library (12). My contribution to these publications consisted of my early contributions to data collection, being involved in discussions around the interpretation of findings in co-applicant meetings and reviewing and providing feedback on draft manuscripts. I was not actively involved in the realist data analysis.

Throughout my doctoral research, I have drawn on the knowledge and insights I gained from this HS&DR project. Experience on the project gave me insights into the broader context of link worker implementation in primary care and their roles and practice. This HS&DR project helped inform the design of my own doctoral work and has been useful for helping to interpret and triangulate findings from the research presented in this thesis. However, I have also been conscious throughout of the need to maintain clear boundaries between my doctoral research and my previous research to ensure that my thesis makes a distinct and original contribution.

The research presented in this thesis represents a distinct and separate contribution to the literature on social prescribing and on link workers in several key ways. First, my doctoral work focuses on social prescribing in areas of social and economic disadvantage whereas the HS&DR project looked at the implementation of link workers more broadly. My doctoral research represents a deliberate theoretical and empirical focus on equity, exploring how social prescribing operates in areas experiencing disadvantage. Second, the research in this thesis employs social network analysis as a key methodology. This approach represents an entirely novel contribution to the social prescribing evidence base, and an approach that has not been previously applied in any of the social prescribing research team’s previous work. This approach allowed me to explore link worker relationship

structures that cannot be captured through realist and qualitative approaches alone. Third, all link workers and patients who acted as participants in the research presented in this thesis were recruited separately and completely independently from the HS&DR project and other research studies conducted by our group. There is no overlap in participants, geographical areas, or data collection between my doctoral fieldwork and the HS&DR project.

Chapter 1: Introduction and Background

1.1 Introduction

This thesis explores how social prescribing has been implemented in areas with high levels of social and economic disadvantage across England. The healthcare system in England is facing mounting pressures and increased demand driven by an aging population, a growing burden of multimorbidity, and over a decade of austerity and underinvestment. This has contributed to an increase in the number of complex health issues presenting in primary care, leading to greater clinical workloads. Alongside these demographic and epidemiological shifts, the National Health Service (NHS) is experiencing a workforce crisis, with a declining number of full-time general practitioners (GPs). Policy initiatives have sought to address these shortages by expanding the primary care workforce with additional roles to increase the range of services provided in primary care, as well as free up GP time.

It is also increasingly recognised that health is influenced by a range of social determinants—the conditions in which people are born, grow, work, and live (13). Patients frequently present in primary care with issues that fall outside the remit of traditional biomedical care but have a significant impact on health status and health outcomes (13). It is estimated that approximately 20% of GPs' time is spent discussing non-medical issues such as housing and financial insecurity (14). These social determinants also drive significant and persistent health inequities, with people living in the most deprived parts of England experiencing shorter life expectancies and higher rates of avoidable mortality compared to those living in the most affluent areas (13,15). Despite a greater need for services, deprived areas are often relatively underfunded (16,17), experience poorer health service delivery (13), and have poorer community infrastructure (18).

In response to some of these pressures, 'person-centred' and 'integrated' care models have become key components of the NHS Long Term Plan (19), aiming to provide holistic care that recognises the social determinants of health. The delivery of person-centred care is supported through the national roll-out of social prescribing, an approach that recognises the social determinants of health

and allows primary care professionals to refer patients to support in their local communities (1). The delivery of social prescribing is being supported by the introduction of link workers into primary care, through the Additional Roles Reimbursement Scheme (ARRS) (20), which is enabling the primary care workforce expansion. Social prescribing link workers, herein link workers, are non-clinical professionals who connect patients to social and community support, working with patients to identify and address some of the social determinants of health that may be having an impact on their health and wellbeing (21). Link workers are also tasked with undertaking community outreach and development activities, building collaborative networks across healthcare, local authority, and the voluntary and community sector (VCS), to identify and fill gaps in the provision of community services by mobilising and making use of existing resources (1,22,23). Social prescribing is also promoted as a means of addressing health inequities through its recognition of the social determinants of health and its community development activities (23,24).

Despite the policy enthusiasm for social prescribing as a means of addressing health inequities through action on the social determinants of health, there are significant uncertainties around how link workers may operate in socially and economically disadvantaged areas (2,25–28). In these areas, health needs and demand for services may be greater, but access to health and community resources may be more constrained (29). Critiques of social prescribing policy narratives have highlighted that social prescribing cannot address the structural drivers of health inequities (26,27,30). Instead, they have cautioned that social prescribing has the potential to exacerbate health inequities by disproportionately benefitting those in better-served areas (2,28). By focusing on behaviour change and community engagement, some have argued that social prescribing remains an individual-level solution that does not challenge the broader social and economic systems that produce and reinforce health inequities (26,31).

In this thesis, I explore some of these uncertainties by investigating how social prescribing link workers undertake a crucial and understudied aspect of their role—how they create and sustain networks for social prescribing in socially and economically disadvantaged areas. In doing so, I situate their practices within broader healthcare and systemic contexts and contribute to critical

discussions about the potential and limitations of social prescribing as a means of addressing health inequities through action on the social determinants of health.

In this chapter, I outline what social prescribing entails and provide a brief overview of its background. Then, I contextualise some of the core components of social prescribing within the wider health system and policy environment that I have alluded to in this introduction. I begin by defining and describing the social determinants of health and health inequities and situate social prescribing within the context of ongoing challenges in primary care, notably the uneven distribution of health and community services. I then provide an overview of the evidence for social prescribing, emphasising the systemic and contextual challenges that may shape its delivery, and outline the research gap this thesis will address. Finally, I state the overall aims, objectives and research questions for this thesis, before concluding this chapter with a presentation of the overall outline of this thesis.

1.2 Background

1.2.1 Social Prescribing

Social prescribing has been implemented on a large scale across the NHS in England (2,32) (19). It is a person-centred approach to health and wellbeing that seeks to acknowledge and address some of the effects of the social determinants of health (32). While various definitions, models, and implementation approaches exist internationally, a recent consensus study defines social prescribing as *“a means for trusted individuals in clinical and community settings to identify that a person has non-medical, health-related social needs and to subsequently connect them to non-clinical supports and services within the community by co-producing a social prescription—a non-medical prescription, to improve health and well-being and to strengthen community connections”* (33) (p.9). In practice, it entails working with service users (herein, patients) to provide them with personalised support by co-producing an action plan that assesses their needs, strengths and interests, and empowers them to take greater control of their health and wellbeing. Patients are then supported to access community resources (33), including referrals to gyms and other lifestyle support groups and

services, arts and cultural activities (34), green spaces (e.g. parks, gardens, woodlands) (35), as well as services that can offer support with housing, finances and welfare advice (1). Social prescribing is gaining traction internationally, with at least 25 countries around the world introducing it as of 2023 (32).

Community-led social prescribing practices began to emerge in the 1980s, with early approaches emerging from local partnerships between statutory services and sometimes individual general practice (GP) surgeries, and voluntary and community sector organisations and initiatives (36). The Bromley-by-Bow Centre, founded in 1984 in East London, which encompasses a GP surgery, church, nursery, children's centre, as well as community facilities and a café, is a prominent example of an early social prescribing initiative (36). Throughout the 1990s and 2000s, other local, small-scale schemes and partnerships developed between primary care practices and VSCE organisations, however, these examples largely existed in isolated local pockets (37,38)

In England, social prescribing is now a key part of the NHS Long Term Plan (19) and Personalised Care Agenda (39), with the hope that it will reduce the reliance on NHS primary care services (40) and reduce clinician workload (1). Its delivery is supported through the introduction of link workers, who have been brought on as new non-clinical members of the NHS primary care workforce (41). Link workers are typically non-clinically trained professionals who support patients in identifying issues affecting their health and wellbeing and accessing community-based support. A key aspect of the link worker role is to undertake activities aligned with an 'asset-based' approach to health, wellbeing, and community development (1,23). This involves building collaborative networks with partners across the health and care system, as well as the voluntary and community sector (VCS), to identify and fill gaps in community service provision and encourage community mobilisation (22,42).

The ways in which link workers operate locally can vary considerably (43), with some providing intensive, open-ended support, while others work within clearly defined boundaries, offering 'light touch' (44) support that may be limited to signposting people to activities, groups, or organisations (45). Currently, in England, link workers can be employed directly through Primary Care Networks

(PCNs) or sub-contracted through third-sector organisations (43). Other research on social prescribing link workers, including research I have been involved with, found that these variations in the implementation of link workers can be due to a range of factors including broad role specifications, the priorities of the organisations link workers are being employed or sub-contracted by, local population needs and priorities, and the evolving nature of the link worker role (11,43,46,47).

The NHS Long Term Workforce Plan, which lays out a cost-effective approach to meeting current and future healthcare demands, commits to increasing the number of link workers employed from 3000 in September 2022 to 9000 by 2036/37 (48). The ways in which patients are referred to social prescribing can also vary. Some are referred to link workers by their GPs or other primary healthcare professionals, while other models allow for referrals to social prescribing through other organisations in the local community, or allow patients to self-refer (1,40,43,44).

Social prescribing is also gaining traction internationally (38), with international comparisons revealing alternative implementation and financing models (49,50). While social prescribing in England has been supported through the implementation of a dedicated link worker role, other models internationally have focused on upskilling existing professionals rather than recruiting a new workforce (38,50,51), or leverage pre-existing community health workers already embedded in local contexts (50) to undertake social prescribing. Other models, such as those in the Netherlands (52), have decentralised modes of social prescribing delivery outside of primary care settings.

In comparison to the English model's primary focus on universal delivery of social prescribing through primary care, many international models have also demonstrated success by targeting social prescribing to specific populations. Examples include Singapore's focus on rehabilitation patients (53) and Japan's loneliness and social isolation-specific programmes (54). In parts of Spain, social prescribing is integrated within patients' medical records, where a directory of community activities is listed and can be filtered by themes (50). This enables primary care physicians, nurses, or social workers to make immediate referrals and manage follow-ups (50). Social prescribing initiatives are also expanding rapidly in Canada, with diverse geographical scope and delivery and funding

mechanisms (38,50,55). These international comparisons suggest that whilst the a strength of the UK model is its systematic national framework and workforce development, there may also be scope to explore more flexible, context-specific models.

Social prescribing is frequently framed as a way of addressing health inequities by responding to the social determinants of health (45), with policy makers stating that it is “*effective at targeting the causes of health inequalities*” (24). Social prescribing is presented as a ‘community-centred’ approach to health and wellbeing, which “*seeks to draw on and strengthen community capacity to take collective action that will in turn lead to changes in health or the social determinants of health*” (56) (p.19). It has also been described as an ‘asset-based’ approach, which aims to recognise and focus on a community’s strengths, rather than its deficits, as a foundation for creating social change (56).

1.2.1.1 Recognising the Social Determinants of Health

At the heart of social prescribing is the recognition that people’s health and wellbeing are determined by complex interactions between physiological, social, and environmental factors. These social determinants of health can be defined as the conditions in which people are born, grow, work, and live, and age, and the wider set of forces and systems shaping the conditions of daily life, such as economic policies and systems, development agendas, social norms, social policies and political systems (57). They are thought to account for between 30–55% of health outcomes, having a greater influence on health than healthcare or lifestyle choices (57). Income, education, geography, gender, disability, and ethnicity can all shape the opportunities people have to lead healthy lives (13). The social determinants of health are complex and often interdependent. For example, low income can limit access to safe and quality housing or nutritious food which in turn can shape health outcomes (13). Patients frequently present in general practice with issues relating to the social determinants of health such as welfare benefits, housing, or unemployment (14), with GPs in England spending almost a fifth of their time discussing these non-medical issues (14,58).

In the United Kingdom (UK) and globally, social determinants of health play a significant role in driving inequalities in avoidable mortality, life expectancy, healthy life expectancy, as well as access

to and experience of health services (13). Health inequalities are avoidable systematic differences in health between different groups of people (13). In England, health and health inequalities follow a social gradient (13)—the higher a person’s social position (shaped by education, occupation, income, gender, ethnicity, and race), the better their health outcomes. Those living in the poorest neighbourhoods die, on average, seven years earlier than those living in the most affluent neighbourhoods (13). These inequalities have increased since 2010, with life expectancy decreasing in the 10% most deprived areas and increasing in the 10% least deprived neighbourhoods (15).

The Marmot Review (13), a highly influential independent review of health inequalities in England, emphasised the role of social determinants on health and identified five core policy objectives for tackling health inequities. These include: 1) give every child the best start in life; 2) enable all children, young people and adults to maximise their capabilities and have control over their lives; 3) create fair employment and good work for all; 4) ensure a healthy standard of living for all; 5) create and develop healthy and sustainable places and communities. The review also introduced the concept of ‘Proportionate Universalism’ whereby actions on health inequalities must be “*universal, but with a scale and intensity that is proportionate to the level of disadvantage*” (p.15) (13). It also highlighted that action on the social determinants of health requires collaborative interdisciplinary partnership working, arguing that health inequalities cannot be addressed by any single organisation or sector (15). Social prescribing incorporates many of these tenets and has been included in many local strategies on health inequalities (59).

1.2.1.2 The Biopsychosocial Approach to Health

Social prescribing represents a shift in healthcare towards a more holistic or biopsychosocial model of healthcare, which recognises the need to consider the social and psychological dimensions of health in addition to its biomedical determinants (60). First introduced by Engel in 1977, the biopsychosocial model was a response to the limitations and perceived reductionism of the traditional biomedical model of healthcare (61). He argued that focusing solely on biological factors could not adequately address the complexity of health and illness (61). While the original model has been critiqued for being too broad and lacking guidance on how to prioritise or practically apply its

components, its principles have strongly influenced healthcare (60). The principles of the biopsychosocial model have informed changes in definitions of health from an ‘absence of diseases’ to a much broader understanding rooted in a more holistic view of health and illness. The World Health Organisation (WHO) now defines health as a “*state of complete physical, psychological, and social wellbeing*” (62).

1.2.1.3 Person-Centred Care

The acceptance of a biopsychosocial view of health has encouraged a shift towards person-centred or personalised care, due to the need to understand the individual circumstances of patients (63). Person-centred care has no single definition or conceptualisation, partly due to the fact that it is a highly individualised concept, meaning that what it entails will depend on the needs and circumstances of the individual receiving it (64). However, across the literature, common components of person-centred care have been identified including: establishing a therapeutic relationship between clinicians and patients; shared power and responsibility; getting to know the person; empowering the person; and developing trust and respect (64). Since the early 2000s, person-centred care has featured in a number of prominent reports and policy documents in the UK, with the Health and Social Care Act 2012 imposing a legal duty for NHS England to involve patients in their care (65). Social prescribing is now a core component of NHS England’s comprehensive model of personalised care, which aims to provide patients with choice and control over the way their care is planned and delivered (65). Recognising the social determinants of health and providing person-centred care has implications for the delivery of primary care services. However, as I outline in the next part of this chapter, primary care in England is under significant strain, with increasing demands and workforce shortages creating challenges for providing equitable patient-centred care.

1.2.2 Primary Care and General Practice

Primary care services provide the first point of contact in the NHS and include GP, community pharmacy, as well as dental and optometry services. General practice has been described as the ‘bedrock of the NHS’ (66) as it is the most accessed part of the healthcare system (67) and serves as the entry point into other health services. General practices are usually independent businesses

contracted by the NHS to provide primary care services (68). Most are owned and run by partnerships, with GPs as the partners. However, these models are now beginning to change in response to population growth and mounting pressure on the healthcare system (68). Changes include shifts to larger organisations, such as GP federations or multisite providers, and approaches that incorporate greater multidisciplinary team working (68).

1.2.2.1 A Crisis in Primary Care

The NHS is facing considerable challenges. A growing aging population is driving the total burden of ill health (years lived with a disability). The number of people with complex multiple long-term conditions is projected to increase by 2.5 million (more than a third) by 2040 (69). The increasing demands on the healthcare system have not been met by proportional increases in funding, resulting in an expected shortfall of £4.8 billion in the NHS England revenue budget for 2024/25 (70). The growing complexity of cases has also intensified the nature of the GP workload, with practices needing to take on activities previously undertaken by secondary care (66).

Mounting pressures in general practice have been accompanied by a drop in the recruitment, training (71), and retention (72) of GPs, as well as an overall drop in workforce morale (72). The number of fully qualified full-time GPs decreased by 20% between 2013 and 2023, despite a 40% increase in average practice list size over the same period (68). Patient satisfaction in GP services has also sharply declined, with only 56% reporting a good overall experience making an appointment in 2022, compared with 71% in 2021. In response to these challenges, a number of system reforms have been introduced, including a move to integrated care and the introduction of additional roles into primary care, such as link workers.

1.2.2.2 Primary Care System Reforms

1.2.2.2.1 Integrated Care

In response to some of the challenges highlighted above, there has been a shift towards multisectoral and integrated ways of working, through which workload and expertise can be shared (73). While there is no universally agreed definition of integrated care, its principal characteristics focus on

bringing together fragmented aspects of the healthcare system to improve quality and safety through a commitment to ongoing partnerships (74).

In 2019, all general practices were encouraged to form Primary Care Networks (PCNs) (73). These are mostly geographically based groups of GP practices that work together alongside other primary care services, to deliver a wider range of services for local populations. There are now around 1,250 PCNs, with each one typically covering 30,000–50,000 patients (73). In 2022, 42 statutory bodies, Integrated Care Systems (ICSs), were introduced to work alongside PCNs and other local organisations to plan and provide coordinated care services (75,76). ICSs are partnerships formed by NHS organisations, local councils, social care providers, the voluntary sector, and other organisations with a role in improving local health and wellbeing, such as those in housing, employment, education, justice, and business (75). ICSs aim to improve outcomes in population health and healthcare, tackle health inequalities, enhance productivity and value for money through economies of scale, and support broader social and economic development (75). Each ICS has the flexibility to respond to the specific needs of its locality and develop plans to tackle issues relevant to its population and geography (75).

1.2.2.2.2 Additional Roles

To help address workforce shortages, expand the range of services available in primary care, and increase the number of annual appointments in general practice, in 2019, the government introduced the Additional Roles Reimbursement Scheme (ARRS) (20). A key stipulation of the scheme was that the roles needed to be additional, rather than filling existing vacancies. Examples of additional roles include social prescribing link workers, clinical pharmacists, first contact physiotherapists, physician associates, community paramedics, health and wellbeing coaches, and occupational therapists (77).

In addition to improving access to health services by increasing the range of support available and freeing up GP time, it is hoped that these additional roles will form part of multidisciplinary teams and team-based care. Multidisciplinary care is considered an important strategy in managing chronic diseases and multimorbidity through the sharing of expertise and knowledge (78) and may also play a role in delivering continuity of care (79). Continuity of care can be defined as “*the extent to which*

a person experiences an ongoing relationship with a clinician, and the coordinated clinical care that progresses smoothly as the patient moves between different parts of the health service” p.5 (80). It is considered a core component of general practice, and patients who receive it experience better health outcomes, higher satisfaction, and more cost-effective care (81).

While there are some examples of the successful integration of the ARRS roles (82), there have also been many challenges in effectively integrating and implementing them into primary care teams (68,82). The newly formed PCNs they were recruited into often lacked strategies, shared vision, and buy-in to the ARRS role. Many GP practices also lack adequate estate (66) limiting the amount of physical space available within practices for these new roles (82). There has also been ambiguity around the nature and purpose of the roles and a lack of understanding about how they might contribute to multidisciplinary working within existing GP structures (82). Concerns have also been expressed over the burden associated with their additional training needs, their cost effectiveness (68), the equity of distribution (83), the safety of their use, and the impact on relational continuity of care (being seen by the same healthcare professional) (68). Furthermore, the lack of supported implementation of the ARRS roles has meant that in many cases the individuals in these roles have struggled to develop a sense of autonomy and belonging in primary care teams (82,84).

1.2.2.2.3 Social Prescribing Link Workers

Social prescribing link workers are non-clinical staff who have been introduced into primary care through the ARRS. Their role is to connect and support people to access community-based support, including activities and services that meet the practical, social, and emotional needs required for their health and wellbeing. They are intended to form an important part of a PCN’s multidisciplinary team, working alongside other additional roles and healthcare professionals to optimise health outcomes (23). Research has shown that in October 2023, 2,719 full-time equivalent (FTE) link workers were employed across PCNs, with a mean of 2.198 FTE link workers per PCN (85). Long Term Workforce Plan (48) projects that by 2036/7 there will be 9000 link workers employed. The employment of link workers across England also varies geographically, with areas in the North of England having

clusters of high employment of link workers and with parts of the South East and North West having the lower levels of link worker employment (85).

There is currently no set qualifications or training for link workers (86). Those employed into link worker roles come from a variety of backgrounds with a range of personal and professional experience such as working in the VCSE, NHS, social care, local authority, education, volunteering, and the private sector (86). NHS England has, however, produced a workforce development framework that includes information on professional standards and competencies, as well as provide guidance on supervision and professional development (23). Some training for link workers has now been made available through the Personalised Care Institute (87). Topics covered by the training include: Introduction to the link worker role; developing personalised care and support plans with people; developing partnerships; introducing people to community groups and VCSE organisations; safeguarding vulnerable people; keeping records and measuring impact; supporting people with their mental health through social prescribing; social welfare, legal support and money guidance; social prescribing for children and young people; supervision; social prescribing and the Armed Forces Community; culturally responsive practice (87).

After referral to social prescribing, service-users are usually contacted by a link worker via phone call to schedule an initial appointment. These appointments can occur over the phone or in person. They can vary in length depending on the social prescribing scheme, though these are most commonly 30–45 minutes in length (8,88). Link worker appointments are designed to provide service-users with more time and space than the typically time-limited 10-minute GP appointments. This additional time allows link workers to explore the needs of patients in a holistic and person-centred way (1). Using active listening skills and motivational interviewing, link workers identify patient needs and priorities and then work collaboratively with them to create an action plan (89). The action plans may involve referrals to community groups or services (sometimes referred to as assets (1)) to support patients with a range of needs. Examples include: 1) material or legal needs (e.g. statutory services, food banks, debt and financial advice, job centre support); 2) services for health behaviours (e.g. exercise classes or gyms, cooking classes, smoking cessation programmes,

support for drug and alcohol users); 3) services for social connectedness and overall wellbeing (e.g. art groups, nature prescriptions, volunteering opportunities, bereavement support, befriending schemes, religious groups); 4) services to support physical health (e.g. chronic disease management support, cancer support); 5) services for mental health (e.g. stress management, counselling); and 6) services for special populations such as older adults, carers, or people with disabilities (e.g. carer support groups, respite care, falls prevention, and disability services) (88).

The workforce development framework (23) suggests that link workers support patients for an average of 6-12 sessions over a 3-month period and an annual caseload of 200-250 people (23)(REF). However, in other research I have been involved with, we have found that the amount of time that link workers support service-users for can vary considerably between different schemes, with some defining limits of 6–8 weeks and others providing ongoing support for multiple years (88,90). We also found that link workers often have discretion over the amount of time they support patients (9,88).

Concomitant with directly supporting service-users, the link worker role also involves undertaking community outreach and development activities, to build collaborative networks with partners from across health and care, local authority, and the VCS, to both identify and fill gaps in community services provision and encourage community mobilisation (1,22). The workforce development framework for link workers (23) states they should:

- Understand the Asset Based Community Development (ABCD) approach as a process that facilitates the sustainable development of communities based on strength and potential opportunity.
- Apply the ABCD approach to their role in supporting community development.
- Collaborate with community partners in mapping assets, provision and opportunities in local areas.
- Identify gaps in provision especially regarding health inequalities, recording these gaps and escalating through formal feedback routes.

- Facilitate co-production and co-design to support community development activities (for example in understanding gaps in services provision, and supporting service planning, design, and delivery) with patient needs at the centre of these efforts.
- Collaborate with partners in other organisations when supporting community development in order not to duplicate or undermine existing development or provision.

Through these activities, link workers contribute to the building of collaborative partnerships, which are central to ICSs and their mission to improve health, tackle health inequalities, and enhance productivity (75).

1.2.3 Asset-Based Approaches

Social prescribing policy emphasises community-centred ways of working and asset-based approaches to community development (91) and health and wellbeing (1). Health assets can be defined as: *“Any factor (or resource), which enhances the ability of individuals, groups, communities, populations, social systems and/or communities to maintain and sustain health and well-being and help to reduce health inequalities. These assets can operate at the level of the individual, group, community and/or population as protective (or promoting) factors to buffer against life's stresses.”* (p.18) (92).

Asset-based approaches focus on leveraging the strengths, skills and resources within a community, rather than focusing on its deficits or problems that need to be solved by health professionals or policymakers (93). They emphasise empowering communities to work collaboratively and develop capabilities to address social issues in a way that fosters sustainable and positive change (94). However, critics argue that these approaches can shift responsibility and resources away from the state and onto communities; this may inadvertently contribute to inequality and justify cuts to social programmes (94). Over a decade of austerity has seen cuts and disinvestment in healthcare, voluntary and community, as well as statutory organisations (95). These cuts have tended to disproportionately affect disadvantaged areas, where the need for services is usually greater (95,96). While asset-based approaches are intended to be used alongside investment in services, their implementation can be constrained by systemic inequities in service provision and access (97). As discussed in the next

section of this chapter, these inequities are particularly pronounced in socioeconomically disadvantaged areas.

1.2.4 Inequities in Service Provision and Access

While ensuring equal access proportionate to need is a fundamental principle of the NHS (98), both need for healthcare and access to it are not equally distributed across the country (13). Access to health and social care services is strongly influenced by a range of social, economic, and geographical factors that contribute to health inequities (13).

1.2.4.1 The Inverse Care Law and Uneven Distribution of Assets

Julian Tudor Hart's 1971 'Inverse Care Law' states that "*The availability of good medical care tends to vary inversely with the need for it in the population served*" (29). This access paradox continues to be salient for general practice (16). GP services serving more socioeconomically disadvantaged populations receive similar funding per registered patient compared with less deprived populations (16). However, compared with more affluent areas, deprived areas have fewer GPs per head adjusted for levels of need (16), smaller GP practices, shorter GP consultation times (99), and patients are less likely to have an appointment with a GP and more likely to have an appointment with a nurse (16). These inequities have also been observed in the implementation of link workers, with areas of highest need having statistically significant lower levels of link worker provision – areas with a 10-percentage point higher need for support from local services had 0.035 fewer full-time equivalent social prescribing link workers per 10,000 patients compared to the national mean of 0.449 per 10,000 patients (85).

This inverse service provision law has also been demonstrated to exist in the distribution of community assets such as VCS organisations, with more deprived areas having lower prevalence of third sector organisations (98, 99), as well as poorer access to high-quality green spaces that provide health and wellbeing benefits (102).

1.2.4.2 Left Behind Areas and Double-Disadvantage

Left behind areas can be defined as places facing the double disadvantage of high material deprivation and relatively low levels of social and physical infrastructure (18). These places have limited access to community spaces and local amenities such as parks, libraries, sports facilities, inadequate healthcare infrastructure, and poor public transport. There are also low levels of civic engagement, a weakened sense of belonging and trust, limited social networks (18). Left behind areas tend to experience high levels of unemployment, limited access to high quality jobs, education, and training opportunities (18). They have poorer health outcomes, with 24% of people having a long-term illness (compared with the national average of 18%), with higher prevalence of lung cancer, coronary heart disease, diabetes, hypertension, obesity, kidney disease, as well as higher levels of smoking and drinking, and lower levels of healthy eating (17). These conditions interact and work to perpetuate cycles of poverty and social exclusion (17).

Geographically, left behind areas tend to be concentrated in post-industrial regions in northern England and coastal regions in southern England, as well as on post-war social housing estates on the peripheries of cities and towns. In these areas, economic restructuring and deindustrialisation have limited opportunities for growth. Despite greater need for investment and calls for ‘Proportionate Universalism’ (13), these places continue to receive less local authority funding per capita than the national average, and even less than other similarly deprived neighbourhoods (103). Residents of these areas often feel overlooked by policymakers, contributing to dissatisfaction, political disconnection, and a lack of trust in national decision-making (17,18).

1.2.4.3 The Indices of Multiple Deprivation

The Indices of Multiple Deprivation (IMD) are a widely used tool to identify, quantify, and rank levels of deprivation across small geographic areas. In England, IMD provide a set of relative measures of deprivation in Lower-layer Super Output Areas (LSOAs) (104). LSOAs usually contain between 1,000–3,000 people and 400–1,200 households, and are sometimes also referred to as ‘neighbourhoods’ or ‘small areas’ (105). The indices are based on seven differently weighted domains of deprivation including: income deprivation; employment; education, skills and training;

health and disability; crime; barriers to housing and services; and living environment (104). IMD combines measures across these domains to provide an overall relative measure of deprivation and then ranks areas from the most to the least deprived. These relative measures have been used to inform and support policymaking, resource allocation, and are frequently used in academic research on deprivation (14). IMD is referred to throughout this thesis.

1.3 The Promise of Social Prescribing

1.3.1 The Evidence Base for Social Prescribing

The evidence base for the effectiveness of social prescribing is considered to be mixed with limited conclusive high-quality evidence to support the implementation of social prescribing link workers (106). Systematic reviews have been critical of the methodological limitations of social prescribing evaluations (40,89,106), highlighting the lack of randomised controlled trials, poor study designs, as well as heterogeneity in social prescribing programmes and outcome measures (40,89,106). These reviews have highlighted mixed evidence for the potential of social prescribing to decrease the demand on primary care (40), and limited evidence for improvements in health related quality of life and mental health outcomes (106). Qualitative studies have pointed to improvements in self-esteem and confidence (107), social isolation (108), wellbeing (109), long-term condition management (110), and reduced strain on healthcare services and other healthcare professionals (8). Others have emphasised the need for longitudinal research to investigate the long-term benefits of social prescribing, as most quantitative studies have only focused only on short-term outcomes of six months or less (40). It has been noted that social prescribing is unlikely to represent a ‘quick fix’ (111,112) and, given its fairly recent implementation into primary care, sufficient time may not have passed to fully capture its impact (112).

Social prescribing can be considered a complex intervention (1)—interventions with multiple interacting components, often targeting different levels of a system, making it difficult to isolate the exact causes of observed effects (113). The implementation of the link worker role (the complex intervention) as part of social prescribing is composed of a range of different components (e.g.

educating, encouraging, empowering, and supporting patients), includes a number of different stakeholders (e.g. patients, the VCSE sector, primary care staff, and the link workers themselves), and produce a range of different outcomes (e.g. for patients, for practices, and for the health service) through a range of mechanisms (e.g. behaviour change, building social capital) (1,12).

Guidance from the Medical Research Council and National Institute for Health and Care Research highlights that the evaluation of complex interventions needs to go beyond questions of efficacy and whether an intervention achieves its intended outcome (114). Instead, complex evaluation research ought to consider broader questions around context and the other impacts that an intervention may have, theorising how complex intervention works, how they contribute to system change, and how this evidence can then be used to support real world decision-making (114). These considerations involve a trade-off between precise unbiased answers to narrow and specific questions, with more uncertain answers to broader and more complex questions (114). While the evidence for the effectiveness of social prescribing may be mixed, or in some cases limited, this may not be a reason to disregard its potential to bring about positive outcomes. The complexity of social prescribing as an intervention may require assessments of its evidence base beyond traditional gold-standard (115) assessments of efficacy. Recent social prescribing research studies have taken more theory driven approaches, designed to uncover how outcomes are produced from the interaction between different intervention contexts and mechanisms (8,9,116). These studies have focused on why, how, for whom, and under what circumstances might the implementation of social prescribing link workers bring about outcomes of interest (8,9,116). Whether or not social prescribing is effective or brings about desired outcomes depends on specific individual, interpersonal, organisational and policy level factors (116).

1.3.2 Social Prescribing as an Answer to Health Inequities?

Social prescribing is frequently framed as a way of addressing health inequities by responding to the social determinants of health (30,45), with policy makers stating that it is “*effective at targeting the causes of health inequalities*” (24) “*seeking to draw on and strengthen community capacity to take collective action that will in turn lead to changes in health or the social determinants of health*” (56)

(p.19). Social prescribing incorporates many of the tenets featured in Marmot's recommendations for tackling health inequalities, including shifting the focus onto social determinants of health, and encouraging intersectoral and multidisciplinary collaboration (13).

However, social prescribing discourses frequently focus on individual-level determinants and behaviour change through referrals to community activities (45). Yet health inequities stem from systemic issues, such as income inequality, housing, education, employment instability, and structural discrimination (27). Individual-level interventions, on their own, are unlikely to bring about the systemic and structural changes needed for action on social determinants of health and health inequities (26,27,117).

The social determinants that create health inequities may also limit individuals' ability to engage with social prescribing (27); as highlighted above, the distribution of and access to health services and community assets is already more limited in areas of greatest need (29). Some have therefore cautioned against the potential of social prescribing to exacerbate existing inequalities by disproportionately benefitting those in better-served areas (2,27,28).

Pot (30) provides a critique of the policy framings of social prescribing, highlighting that it is frequently presented as a 'hyper-solution' promising action on multiple issues simultaneously. In the case of social prescribing, policy framings present it as addressing patients' social needs, workforce and health system pressures, as well as contributing to community building and societal change through fostering social inclusion, cohesion, and solidarity. Pot argues that underlying hyper-solutionist framings is the assumption that no major changes or investments in the healthcare or community infrastructure are required as interventions such as social prescribing will make efficient use of existing resources. She contends that these framings of social prescribing can be linked to the logic of austerity, allowing policymakers to claim action on social determinants of health while prioritising cost saving.

1.4 Summary of the Research Problem

Effective social prescribing relies on the availability of local community infrastructure, to which link workers can establish relationships and referral pathways (1). The Inverse Care Law describes how people most in need of health care are least likely to receive it (29). This pattern persists in the NHS today, with GP practices in more deprived areas of England being relatively underfunded, understaffed, and performing less well on a range of quality indicators compared with more affluent areas (118). This inverse service provision law has also been demonstrated to exist in the distribution of voluntary and community sector organisations, with more deprived areas having lower prevalence of third sector organisations (100,101). Existing studies of social prescribing in socioeconomically disadvantaged areas highlight that link workers may face challenges when seeking to build sustainable partnerships with overstretched and underfunded community organisations (17,119). Furthermore, socioeconomic context can introduce a high degree of uncertainty and instability into patients' lives, shaping their ability to access health and community services (26,28).

While public policy is promoting social prescribing as an effective means of reducing health inequalities through action on social determinants of health, a growing body of literature has begun to question this assumption. Some have cautioned that social prescribing has the potential to exacerbate inequities through disproportionately benefitting those experiencing greater social and economic advantage (2,26,28,120).

The Marmot Review advocated for collaborative interdisciplinary partnership working for action on the social determinants of health (15). While a key aspect of the link worker role is to work across healthcare and voluntary and community sectors to foster collaborative partnerships, research to date has not yet provided a detailed exploration of how they undertake this aspect of their role. Nor have there been detailed studies exploring how contexts of deprivation shape the ways in which link workers carry out their roles.

1.5 Research Question, Aim, and Objectives

Through the research presented in this thesis, I seek to address the knowledge identified above by undertaking a multiphase mixed-methods study to explore how systemic challenges may shape the roles, practices, and experiences of social prescribing link workers in socioeconomically disadvantaged settings. In line with guidance for research on complex interventions (114), the research in this thesis focuses on contextual factors that influence the implementation of social prescribing and the ways in which link workers build and sustain networks for its delivery. This focus provides insights into how systemic barriers, such as limited community infrastructure and resource constraints, shape link workers' ability to build sustainable social prescribing networks and deliver person-centred care. In doing so I also aim to contribute to discussions around the potential of social prescribing to influence health inequities through action on the social determinants of health.

1.5.1 Central Research Question:

How do link workers create and sustain networks and relationships for social prescribing in socioeconomically disadvantaged settings, and how do these shape patient experiences?

1.5.2 Aim

To explore and understand the nature and process of how link workers create and sustain networks and relationships for social prescribing in socioeconomically disadvantaged settings. To explore the implications of these relationships for patients.

1.5.3 Objectives:

- 1) To undertake an evidence synthesis of current literature to develop an initial conceptual framework to understand the factors shaping link workers' experiences of their roles.
- 2) To interview link workers working across areas with different levels of socioeconomic disadvantage about their experiences of carrying out their roles and building relationships between primary care and voluntary and community sector organisations.
- 3) To describe and map link workers' professional social networks to gain an understanding of how these are shaped and developed.

- 4) To explore and assess the interactions between link workers and patients experiencing socioeconomic disadvantage.
- 5) To integrate findings from this study to produce recommendations to support the equitable provision and implementation of social prescribing.

1.6 Thesis Outline

The research problem and objectives outlined above guide the structure of this thesis, which is presented across six chapters. The chapters build on each other to explore how link worker roles and the ways in which they create and sustain networks for social prescribing are shaped by contexts of social and economic disadvantage.

In this chapter, Chapter 1, I started by defining social prescribing and outlined the health system and policy contexts that serve as a background for the research in this system. I then identified the gap the research in this thesis seeks to address before outlining the research question and the aims and objectives of this thesis.

In Chapter 2, I provide an overview of the overall methodological approach for the research, listing the research questions, aims, and objectives. I highlight the ontological and epistemological assumptions underpinning this work, as well as stakeholder and patient and public involvement in this research.

In Chapter 3, I present results from a meta-ethnographic evidence synthesis of link workers' experiences of their roles. Through the synthesis I developed an initial conceptual framework that provides a foundation for the primary research in Chapters 4 and 5.

Chapter 4 explores link workers' professional networks, examining how these are developed and sustained in different socioeconomic and organisational contexts. Using social network analysis and qualitative interviews, I characterise the structural and relational dynamics of the link worker role, setting the stage for a detailed exploration of these in Chapter 5.

In Chapter 5, I present findings from three in-depth longitudinal case studies of link workers where I explore the real-world practices, challenges, and systemic barriers faced by link workers and the implications of these for patients and the sustainability of social prescribing.

In Chapter 6, I integrate findings from the three empirical chapters (Chapters 3–5), relating them to the research questions and express the overall conceptual framework developed through the work in this thesis. I then conclude this thesis with a discussion of the findings, highlighting the contribution they make to the literature, as well as implications for research and practice.

1.7 Conclusion

In this introductory chapter, I have provided an overview of some of the wider health system and policy contexts underpinning the introduction of social prescribing and link workers into primary care in England. This thesis addresses a gap in the literature by exploring how contexts of social and economic disadvantage shape the roles, practices, and experiences of link workers, focusing on how they build and sustain networks for the delivery of social prescribing. In the next chapter, I outline the methodological approach I used to undertake this research.

Chapter 2: Methodology

2.1 Introduction

In the first chapter of this thesis, I highlighted that research to date has not yet systematically and explicitly explored how socioeconomic factors shape the ways in which social prescribing is being implemented, despite the potential challenges that socioeconomic disadvantage may pose to social prescribing. Nor has there been an exploration of the relational aspect of the link worker's roles and how they establish and sustain networks within and across organisations for the delivery of social prescribing. In this second chapter I will detail the overall methodological approach that I used to address this knowledge gap and to meet the aims and objectives of this thesis. A more detailed discussion of the methods I have used will follow in each of the subsequent empirical chapters.

I start by restating the aims, objectives and research questions of this thesis. I then discuss the philosophical principles and assumptions that informed my overall approach and choice of study design. I detail the ethical considerations involved and the process of reflexivity which I aimed to embed throughout the research process. Finally, I describe how I involved patients and members of the public, as well as key stakeholders, throughout the research process.

2.2 Research Aims and Objectives

The aim of this research was to explore and understand how link workers create and sustain networks and relationships for social prescribing in socially and economically disadvantaged settings. To explore how these networks and relationships shape patient experiences.

To meet this aim, I identified the following objectives:

- 1) To undertake an evidence synthesis of current literature to develop an initial conceptual framework to understand the factors shaping link workers' experiences of their roles.
- 2) To interview link workers working across areas with different levels of socioeconomic disadvantage about their experiences of carrying out their roles and building relationships between primary care and voluntary and community sector organisations.

- 3) To describe and map link workers' professional social networks to gain an understanding of how these networks are shaped and developed.
- 4) To explore and assess the interactions between link workers and patients experiencing social and economic disadvantage.
- 5) To integrate findings from across this thesis to produce recommendations to support the equitable provision and implementation of social prescribing.

2.3 Research questions

How do link workers create and sustain networks and relationships for social prescribing in socioeconomically disadvantaged settings, and how do these shape patient experiences?

2.3.1 Secondary Research Questions:

- 1) What does the existing literature say about the factors that shape link workers' experiences and perceptions of carrying out their roles? (Answered in Chapter 3)
- 2) What are the experiences and perceptions of link workers around creating networks between primary care to voluntary and community organisations in different settings? (Answered in Chapters 4 and 5)
- 3) How do link workers build and sustain relationships with VCS organisations for the delivery of social prescribing in areas with high levels of socioeconomic deprivation? (Answered in Chapters 4 and 5)
- 4) How do these networks and relationships change over time? (Answered in Chapter 5)
- 5) What support and resources do link workers need to successfully undertake this networking work? (Answered in Chapters 4 and 5)
- 6) What impact do link workers have on patients experiencing social and economic disadvantage? (Answered in Chapter 5)

2.4 Ontology and Epistemology

All research is underpinned by philosophical assumptions regarding the nature of reality and what is real (ontology) and of the nature of knowledge or how we come to understand reality (epistemology). These are important because they provide a basis and context for the research and inform the way the research is approached methodologically.

While several philosophical frameworks have been delineated (121,122), traditionally, two main contrasting philosophical orientations to research, or research paradigms, have guided scientific inquiry (123,124). The first is positivism, which is grounded in the realist ontological assertion that there is an objective, singular reality that is independent from human experiences and interpretation (125). For positivists, knowledge about reality is accessible through observation and objective measurement of the real world rather than through eliciting the beliefs, experiences, or opinions of individuals. Positivism “strives toward measurability, objectivity, the reducing of uncertainty, duplication, and the use of standardised procedures” (p.64) (126). From a positivist paradigm, research should strive to be as objective as possible - free from researcher bias and influence (123). Positivist approaches tend to rely on quantitative, experimental methods that facilitate objective measurements and assessments of the phenomena under study (127,128). These approaches tend to be aligned with deductive ways of reasoning where an existing theory or hypothesis is tested through a study designed to confirm or disprove the hypothesis, and which seeks to draw generalisable conclusions from initial premises (124).

On the other hand, constructionism is grounded in the idealist ontological assumption that rejects the notion of a singular reality or truth, and holds that reality is socially constructed. Constructionism embraces the idea of multiple realities that are individually constructed and shaped by social factors such as gender, ethnicity, culture, age, and class (123,124). Under this paradigm, research is not value free, but instead is a subjective process shaped by the active involvement of the researcher. Constructionism focuses on the way people interpret and make sense of their experiences and realities and how broader social contexts have shaped these constructed understandings (123,129). Constructionist approaches tend to rely on qualitative, non-experimental methods, such as interviews and observations, that allow researchers to access the detailed understandings and interpretations that individuals have about their realities (123). These approaches tend to employ inductive ways of reasoning where conclusions and interpretations of phenomena are derived solely from observations and where theories or explanations are generated through these observations (124).

For philosophical purists, these two approaches may be considered logically inconsistent and mutually exclusive, prohibiting the combining of the two methodologies as they produce disparate forms of knowledge (129). Pragmatism is an alternative world view that embraces methodological pluralism, occupying a middle-ground between the two paradigms described above. Ontologically, pragmatism views reality as constituting both an objective external natural/physical reality as well as socially constructed subjective realities. Invoking the notion of intersubjectivity, it accepts that there is a real world but also that we all have our own interpretations of that real world (123,130). Knowledge about the world can therefore be accessed through observation, experience, and experimentation, and can be both biased and unbiased (121).

According to pragmatism humans interact with the physical world in a way that creates meaning and knowledge. This then leads to the development of theories that can then be tested on the grounds of how well they can be applied (123). Pragmatism uses abductive logic or reasoning which involves making a plausible explanations or conclusion based on available evidence (131). Pragmatism recognises the dynamic and flexible relationship that often exists in research between deductive and inductive reasoning (130). For example, observations often lead to hypotheses which are then tested experimentally or in relation to other data, and vice versa. Pragmatism has been described as employing a practical “what works” approach (132) to research, that places the research questions and objectives in the foreground of methodological decision-making (123), and focuses on solving practical problems in the real world (133). As such, it advocates for employing a combination of methods that work best for answering the research questions. Embracing methodological pluralism is crucial for being able to understand complex social phenomena (123).

In this thesis I was interested in exploring and understanding the processes through which link workers create and sustain professional networks and relationships to deliver social prescribing in socially and economic disadvantaged settings. The research was also concerned with understanding the implication of these processes on patient experiences and outcomes from social prescribing. Understanding these processes fundamentally involves exploring and characterising the perspectives, lived experience, and social realities and social networks of link workers and patients.

The study of social networks and social realities has been described as inherently requiring a mixture of research methods and tools, relying on multiple approaches to describe the contextual nature of social action and to measure social structure (134,135). Given the complex social phenomena I am interested in exploring, this research embraces the principles and philosophical tools offered by pragmatism to inform its study design, data collection, and analysis. This approach recognises the “complexity and messiness of social life” (136) (p.14), which is pertinent to questions around the implementation of social prescribing and the link worker role, and how these interact with contexts of deprivation.

2.5 Theoretical Underpinnings

In addition to the broader philosophical orientations to knowledge outlined above, research is also underpinned by theoretical perspectives and assumptions which provide both analytic power and validity (127). A theory can simply be defined as “a system of ideas or concepts intended to explain something” (128). While theory is not always made explicit (127,128), it helps to understand, explain, or predict phenomena (128). Making the theories that underpin the research explicit can help connect the research to existing knowledge and can provide explanatory power to research findings as well as identify their limitations and enable critique (127,128). Theories can help inform research questions, and guide research design, methodological decisions, and can help ensure rigour (137,138). Theories are essential for helping us to move beyond descriptive accounts of healthcare delivery to understanding underlying factors that shape practice and outcomes (139). Primary care and its delivery operate at the intersection of individual health needs, individual interactions, and broader social systems, and theory can help navigate this complexity (140). Without theories, health policy risks only looking at and addressing symptoms of problems rather than root causes. For example, introducing link workers to address health inequities without fully considering how structural factors like the Inverse Care Law described in Chapter 1 or over a decade of austerity may fundamentally constrain link workers’ ability to deliver equitable care.

The overall approach to this research is underpinned by two key theories. First, the theory of social capital (141), and second, the political economy of health (142,143), these are described in detail below. Throughout the empirical chapters of this thesis, I also draw on other theories, such as theories around “communities of practice” (discussed in greater detail in Chapter 4) and De Certeau’s theory of “strategy and tactics” (discussed in greater detail in Chapter 5) that helped me move beyond describing patterns in my research data towards explaining them (138).

2.5.1 Social Capital

One of the first systematic reviews of social prescribing was a realist systematic review (1) which identified social capital as being key to the delivery of social prescribing, with link workers described as a “vehicle” for its accrual (1). Social capital can be defined as “features of social organisation such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit” (141). The literature often distinguishes between three key forms of social capital (144): bonding social capital, which refers to the social capital within a group or community; bridging social capital, which occurs between social groups (145); and linking social capital which refers to the relationships among people or institutions at different levels of societal power or hierarchy (144).

Within the context of social prescribing, bonding social capital is thought to facilitate trust, problem solving and support between link workers and the other actors they work with (community organisations, primary care staff, and patients) (1). Link workers can act as bridges between primary healthcare and community organisations to help establish trust and ways of working, where this may have previously been more difficult due to the lack of bridging social capital between the two groups (1). The connections that link workers make may then benefit patients by linking them into groups, which may increase their social capital and improve their health and wellbeing (1).

Because this first influential review of social prescribing identified the importance of social capital, it shaped my early thinking around social prescribing. The focus on social capital drew my attention to the role that link workers play in building networks between primary care and the VCS. This focus informed my choice of research questions and research methodology. My research explores how link workers establish relationships and build networks across different sectors to deliver social

prescribing. Social network analysis (SNA) is a key approach to studying social capital and social networks (146) and was chosen to allow me to systematically map link worker networks and their structure.

2.5.2 The Political Economy of Health

The political economy of health is concerned with how political, economic, and socio-historical forces interact and shape population health and approaches to managing it (142). It seeks to explain how factors such as power, political ideology, wealth distribution, social class, and social policy shape health and access to care, criticising how capitalist market approaches often prioritise profit over equity and population health (142,143,147,148). The political economy of health can be considered a critical perspective, actively questioning and analysing existing assumptions, societal norms, and power structures, aiming to uncover hidden dynamics (147).

In the introductory chapter of this thesis I highlighted that the Inverse Care Law (29) may be relevant to social prescribing. Julian Tudor Hart who identified the Inverse Care Law, connected it to the political economy of health stating that “The Inverse Care Law is mainly an effect of the market, that relentlessly subordinates human values to the pursuit of profit” (p.67) (143). My project is concerned with an intervention (social prescribing) that is purported to address social determinants of health and health inequalities (24). Hence, it requires considering the economic and political forces shaping health and social care systems, and the livelihoods of people accessing them.

The ideas of the political economy of health have informed key aspects of the research in this thesis. They have informed my choice of research questions; my selection of case study sites; how I described the social and economic histories of the case study sites; and interview questions I asked participants, such as by focusing on questions around funding for community activities and patient access. Drawing on ideas of the political economy of health allowed me to move beyond description in the analysis and interpretations stages of the research, allowing me to explain how link workers work within systemic constraints and the resources at their disposal, and how this then shapes patient engagement with social prescribing.

2.6 Mixed Methods Research Design

For this research, I undertook a mixed methods study with a multiphase design (121). Mixed methods approaches offer a way of combining qualitative and quantitative research approaches, reconciling their ontological and epistemological differences by taking a pragmatic worldview, as described above (121,123). They prioritise the research questions and give priority to the best combination of methods to address the research problems.

Mixed methods approaches go beyond the separate quantitative and qualitative results, producing new forms of knowledge that are more than the sum of their parts through the process of integration. They offer a way for exploring complex phenomena in detail by providing multiple types of evidence, therefore allowing researchers to answer questions that could not be addressed by quantitative or qualitative approaches alone (121).

To produce an in-depth and multi-faceted understanding of the complexity of social prescribing schemes in their real-life contexts my research included three interlinked workstreams. In the first workstream I conducted secondary research, undertaking a systematic review of the literature. The primary research in workstreams two and three adopted convergent parallel designs. Convergent designs are used to “obtain different but complementary data on the same topic” (p.122) (149). The intention of this design is to bring together qualitative and quantitative findings to produce triangulated results about the phenomenon under study. The qualitative and quantitative data are collected and analysed concurrently and independently. Once the results from each are produced, they are then merged in a final step of analysis. See Figure 1 for a visual depiction of the study design and how the different workstreams of the research are related to each other. In the following sections I briefly describe each of the three workstreams, highlighting the rationale for each and the research questions and objectives they looked to address. Further in-depth discussion of each of the workstreams and the methods I employed will follow in relevant chapters. A timeline of the research activities can be found in Figure 2.

Figure 1: Diagram illustrating the mixed methods study design and the relationship between different workstreams as well as how each workstream maps on to each of the research questions.

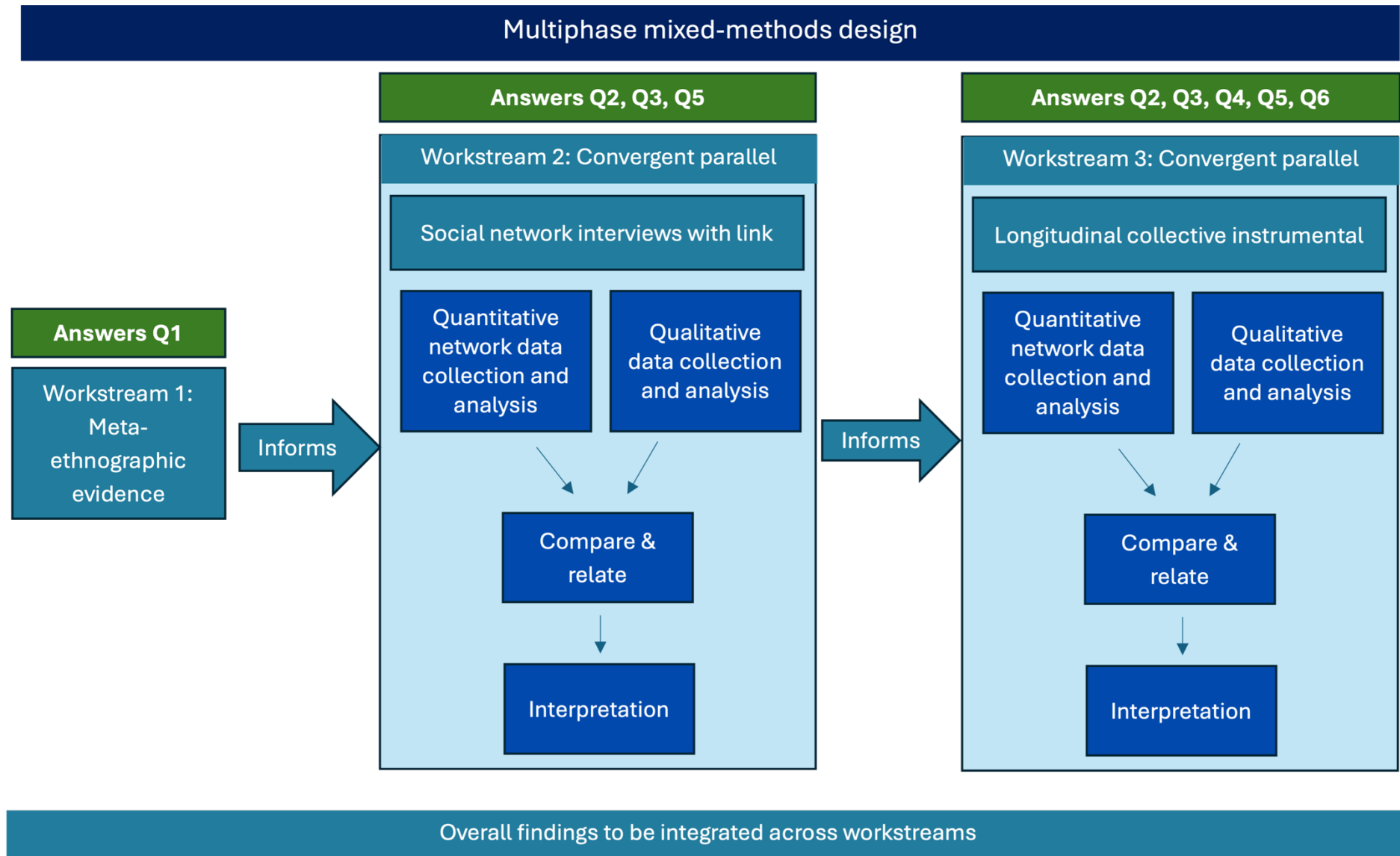


Figure 2: Timeline of DPhil research activities.

Year of DPhil	Pre-DPhil	Year 1												Year 2												Year 3												Year 4															
Calendar Year	2020	2021												2022												2023												2024												2025			
Calendar Month	Feb	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
PPI and Stakeholder Meetings	█				█									█																																							
Workstream 1: Meta-ethnography					█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█																
Workstream 2: Interviews with link workers																					█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█																
Workstream 3: Focused ethnographic case studies																																						█	█	█	█	█	█	█	█	█	█	█	█				
Thesis submission																																																				█	

2.6.1 Workstream 1: Meta-ethnographic systematic review (Chapter 3)

The literature regarding social prescribing and link workers is growing rapidly, both across the UK and internationally. Many of these studies have been qualitative explorations of the experiences, implementation and effects of social prescribing in different settings. Conducting a systematic literature review can help ensure planned primary research draws on existing evidence as well as contributes to filling gaps in the evidence base (149). I, therefore, began the research in this thesis by undertaking a systematic literature review with a broad focus on link workers' experiences of their role in general. This approach enabled me to review the social prescribing literature broadly to ensure that subsequent research could address gaps in the literature. This broad approach then helped me develop more specific questions relating to link worker social networks and deprivation while situating them within the broader context of link worker experiences.

I adopted a meta-ethnographic approach to undertake my systematic literature review. Meta-ethnography is an interpretive approach to evidence synthesis and involves systematically comparing and translating conceptual data from qualitative studies to identify and develop new overarching theories, concepts and models (150,151). My review followed the steps of conducting a meta-ethnography outlined by Noblit and Hare (152). It allowed me to integrate the disparate literature on social prescribing and link workers to produce a novel conceptual framework explaining how social prescribing is being enacted and experienced by frontline social prescribing staff. The initial conceptual framework developed from this workstream was then taken forward to be further refined and developed by the subsequent workstreams.

2.6.2 Workstream 2: Social network analysis interviews with link workers (Chapter 4)

In Workstream 2 I looked to build on the findings from Workstream 1 (which took a broad view of link workers' experiences), exploring more specifically, and in greater detail, link workers' experiences of working across areas with different levels of deprivation and how they worked to build and sustain professional networks for the delivery of social prescribing. In the interviews I took a social network analysis approach which involved a mixture of qualitative semi-structured questions and structured network questions.

Social Network Analysis (SNA) is an approach that conceptualises social life as being created by social relations and by the patterns formed by these social relations (153). These relationships then in turn shape the opportunities for action available to actors within the network (134). SNA looks to explore and understand the opportunities available to actors through their networks, and can help characterise how social relationships among persons, groups, or organisations are established and evolve (154). Social network analysis research comprises theories, methodologies, and methods for mapping, measuring, analysing, and visually representing relationships and structures of networks (155,156). It aims to reproduce the structure of society in analytic terms by representing the structures, or patterns that emerge from interweaving social ties, or relations (134). SNA has a history rooted in anthropological and ethnographic research (157) and has also been applied across healthcare and health services research (154,156,158). The qualitative semi-structured questions within the SNA interview aimed to elicit rich data about link workers' experiences of working in areas with different levels of social and economic disadvantage as well as the contextual factors that shape how they build their professional networks for the delivery of social prescribing. The more structured network questions were designed to collect quantitative data about link workers' professional network composition and structure. In alignment with the convergent parallel design (121) of this workstream, the qualitative and quantitative data were collected and analysed concurrently and independently. The results from each of the strands were then merged at the interpretation stage. A more detailed overview of SNA and the design of the interview questions and overall approach to the research is provided in Chapter 4.

2.6.3 Workstream 3: Longitudinal case studies of link workers in areas with high levels of social and economic deprivation (Chapter 5)

The third and final workstream built on the findings from workstreams 1 and 2, using case studies to explore in even greater detail the ways in which link workers build and sustain their professional networks and work with patients in contexts of social and economic deprivation.

Case study research aims to produce in-depth, multi-faceted explorations of complex issues in real-life settings (159) and can help identify and explain causal links and pathways involved in new policy initiatives such as social prescribing (159). I adopted a longitudinal collective and instrumental

approach (160) for my case study design. Collective approaches involve studying multiple cases simultaneously to gain a broader understanding of the phenomenon of interest (159). Instrumental case study approaches use cases as a way of understanding broader issues. Instrumental approaches can facilitate both the testing and development of new theory, as well as cross-case comparison (161). I provide a more detailed discussion of different case study approaches in Chapter 5.

Given that the focus of this thesis is on the networking work undertaken by link workers, this study took individual link workers as cases around which to focus the research. Designing my case studies in this way allowed me to explore how networking work link workers undertake is shaped by challenges encountered in different socially and economically disadvantaged settings. Taking a longitudinal approach, I revisited my case study sites after 6-9 months to explore how link worker relations and connections may have evolved over the timeframe. In accordance with instrumental approaches, I sought to sample from “typical” cases (159) in order to draw examples from different types of typically “left behind” (162) areas. I adopted a mixed-methods approach to each case study with a convergent parallel design. The analysis of the cases focused both on the particularities of each individual case as well as on bringing together findings from cross case analysis to identify similarities and differences across them.

2.7 Ethical Considerations and Ethical Approval

This research was granted ethical approval by the University of Oxford Medical Sciences Interdivisional Research Ethics Committee (Ref: R76908/RE001) for Workstream 2, and by the London - Chelsea Research Ethics Committee (Ref: 23/PR/0911) for Workstream 3. The research conducted for this thesis was not interventional/experimental and data collection was largely unobtrusive. The subject matter explored in this thesis was unlikely to cause distress to participants, but the project did entail working with people who may have been undergoing difficult life circumstances. Ethical issues were therefore mainly interactional and related to data protection.

2.7.1 Informed Consent

Each link worker and patient who took part in the study was provided with written versions of the participant information sheet (PIS) when they were first contacted about taking part in the research. The PIS detailed the exact nature of the study; what it involved for participants; any risks involved in taking part. It stated that participants were free to withdraw from the study at any time for any reason without prejudice to legal rights, and with no obligation to give the reason for withdrawal. All participants were given as much time as they wished to consider the information, and they were given the opportunity to question me as the researcher to help them decide whether they wanted to participate in the study. Participants provided written or verbal consent before any study specific activities were undertaken.

For interviews, I obtained written informed consent through a consent form that was signed and dated by the research participant as well as by me, the researcher. When data were collected remotely, by telephone or via Microsoft Teams (MS Teams), I took verbal informed consent. Participants were read out the statements on the consent form and I, the researcher, made a written record that verbal consent had been received. Each participant was also given or sent a signed (by the researcher) copy of the informed consent form to keep for their own personal records.

As part of my study, I conducted ethnographic observations of link workers' consultations with patients. In these cases, the link worker introduced me, the researcher, to patients they were consulting with. I then very briefly explained to each patient the purpose of the study and explained that I would make some written notes about their consultation with the link worker. I explained that no identifiable or information would be recorded, and that the focus of the observation was on how the link worker interacted with the patient, rather than on the patient themselves. I then provided the patient with a summary PIS and a full PIS for them to review. Each participant was given the opportunity to consider the information and ask questions, as well as a reminder that they were free to decline taking part. If they indicated that they were happy to take part in the research, they were asked to sign a consent form giving me permission to be present during their meeting/consultation with the link worker. If the patient declined to give consent, I did not remain present in the room during their meeting.

2.7.2 Interactional Considerations

2.7.2.1 Working with Link Workers

One of the ethical and interactional considerations for this research was that asking link workers' experiences of their job with them might lead to discussions of the effects of their role on their mental health and wellbeing, potentially triggering distress. In developing the protocol for the study, a plan was established for how to deal with such a situation should it arise. If a participant began showing signs of distress, I would stop the recording. I would then check that the participant was okay and remind them that they were free to withdraw from the study. If the participant said they were happy to continue, the interview would resume. If the participant decided to stop with the interview, I would encourage them to seek help (e.g. from their GP or line manager).

2.7.2.2 Working with Patients

Similarly to working with link workers, it was important to consider situations in which patients might encounter emotional distress while discussing their life circumstances and the reasons they had become involved in social prescribing. As with the link workers, if a patient began showing signs of distress, I would stop the recording and the interview, check how they were doing and if they wished to continue, and remind them that they were free to withdraw from the study. If they became upset, I would check that the patient had adequate support around them and signpost them to sources of appropriate support such as their link worker or their GP. If a patient disclosed something that suggested they or those close to them were at risk of serious harm, their link worker or GP would be informed by the researcher. This was also explained on the consent form they signed before taking part in the study. The study materials were reviewed by patient and public involvement (PPI) contributors to help ensure that their content was clear across a range of language and literacy levels.

2.7.3 Data Protection Considerations

Each of the interviews was audio recorded and sent to a professional transcribing service to be transcribed. The transcribers used have been approved by the Nuffield Department of Primary Care Health Science's information governance team and have signed a confidentiality agreement that

included an agreement to delete all data once it had been transcribed. Once I received the transcriptions, I checked them against the audio recordings. All audio recordings were then removed from all devices. All names and identifying material were removed from transcripts and network maps following analysis.

Interview transcripts, consent forms, and background details (e.g. age, gender, ethnicity) of participants were stored on OneDrive (for Business), and anonymised participant data were stored in files that could only be accessed by me, the researcher. Any other identifiable data (e.g. names prior to assignment of a number, contact details) were destroyed when individual participant involvement was complete. Records of consent will be retained for three years following publication, as per the Health Research Authority (HRA) policy.

2.7.3.1 Additional considerations for social network analysis

This research project involved interviewing link workers about their experiences of their roles, and how they interact and connect with local voluntary and community organisations. As part of this, link workers were asked to identify local groups and individuals with which they connect to deliver social prescribing. In doing so, they named colleagues and local groups. Social network research poses a number of specific ethical challenges as it involves interview participants providing information about “alters” - individuals other than themselves (153). The first of these challenges concerns consent, as it usually is not possible to gain consent from alters. A second challenge concerns the right to opt out of the research (163), which alters are not able to do as they are not participants and may not be aware that they have been named as being part of a study participant’s personal network. To maximise anonymity and limit the amount of identifiable information that was collected about alters, study participants were asked to name alters by first name or nickname only for the purposes of the network map construction. All participants were made aware that all the data they provided would be treated confidentially and that it would be stored in password protected folders on a password protected University owned laptop.

2.8 Reflexivity

It is important to acknowledge that research cannot be value free but is shaped by the researcher and the subjectivities they bring with them (129). Reflexivity is “sensitivity to the ways in which the researcher and the research process have shaped the data collected including the role of prior knowledge, assumptions, and experience, which can influence even the most avowedly inductive inquiries.” (p.219) (128). Being reflexive involves acknowledging the researcher’s position, identifying possible biases, researcher subjectivity and how these may have shaped the research process (129,164). Reflexivity has important consequences for the trustworthiness and credibility of the research and how it is interpreted (129,164).

As a researcher, I have an academic background in anthropology and applied health service research. I have a longstanding interest in health inequities, the social determinants of health, and the social, economic, and political forces that drive them. This interest is, in part, driven by personal experiences of growing up in an environment of social and economic insecurity. It is important to acknowledge that the research in this thesis has, to a certain extent, been approached through a critical lens, informed by the political economy of health (142,143) which seeks to uncover the political, social and economic forces that drive health inequalities and the policy push for social prescribing.

I have worked in primary care research since September 2016 and have worked on a range of pertinent topics in primary care. These topics include patient experiences of conditions and health services, digital access to primary care and other health and care services (165–168), and person-centred approaches to the management of polypharmacy and deprescribing (79). Through my work in primary care research I became interested in the role that primary care may play in helping to tackle social determinants of health inequities. It was through this that I became interested and involved in social prescribing research, which I describe in detail in the preface of this thesis, and why I decided to undertake a DPhil in this area.

My previous experience in health services research provided me with many of the research skills and competencies necessary to undertake the research presented in this thesis. My supervisory team

consisted of four experts in the areas of health services research, social prescribing, medical sociology, social network analysis, and general practice. My lead supervisor Prof Mahtani is a practicing general practitioner who has led a number of research projects around the redesign of primary care services and his experience as a clinician has been key in steering my project so that it is relevant to the needs of patients and health care practitioners on the ground. Prof Tierney is an experienced health services researcher and has expertise in both qualitative, and mixed-methods approaches. She is considered a leading authority in social prescribing research both nationally and internationally and her expertise have been central in ensuring that my research makes a significant contribution to the social prescribing literature. Prof Catherine Pope is a professor of medical sociology and a Fellow of the Academy of Social Sciences. She is also an expert in qualitative and mixed methods for applied health research and has been a key contributor to developing methods for evidence synthesis, including meta-ethnography which I employ in this thesis (see Chapter 3). Prof Hogan is a sociologist, data scientist, and expert in SNA which forms a central methodological component of this thesis. He played a key role in developing the Network Canvas software which I used to collect the network data in this thesis (see Chapter 4). Each of my supervisors brought distinct methodological and subject area expertise that were essential for this mixed-methods research project. They were also able to offer guidance and act as a sounding board, enabling critical reflection of my own positionality helping me to sense check my interpretations of the data as they were developing (169), as well as highlight where I needed to undertake more training. Throughout this research it has been important to draw on the outsider perspectives offered by the patient and public involvement groups and stakeholder engagement activities. I describe these in further detail below.

Throughout my research I took reflexive notes (128) documenting my reactions to events occurring during the research process, my positionality in relation to my research participants, and the extent to which these may have influenced my emerging interpretations. Each chapter reporting findings from my research section will therefore have a section documenting these reflexive thoughts. I also conclude this thesis with a reflection of my DPhil journey and development as a health services researcher at the end of Chapter 6.

2.9 Patient and Public Involvement and Stakeholder Engagement

Patient and public involvement (PPI) is research carried out “with” or “by” members of the public, rather than “to”, “about” or “for” them (170). The term “public” refers to patients and service users, potential patients or service users, carers, as well as organisations that represent people who use services (170). PPI can be included through all stages of the research cycle and may produce higher quality research through helping researchers identify appropriate research priorities, ensuring the accessibility and relevance of study materials (such as interview guides, recruitment leaflets, and participant information sheets), improving the data analysis process by sense-checking emerging interpretations, and improving the reach of the research through supporting dissemination activities (171). These can all help ensure that research is relevant to the needs of those whom the research seeks to serve, therefore ensuring the research is more likely to have positive impact (170). Good PPI in health research means actively involving patients or members of the public through the research process in a way that is inclusive, values diverse perspectives and lived experiences, and offers genuine influence over study priorities, design, delivery, and dissemination, and builds trust (172). Recognising the importance of Patient and Public Involvement (PPI) in research (21,173) I aimed to include public and lay perspectives through all stages of the research cycle (169).

In addition to involving patients and the public, I also engaged a range of key social prescribing stakeholders, including link workers, general practitioners, and voluntary and community sector representatives to help ensure that my study produced insights that were practical and relevant to practice. Stakeholder engagement is a key component of applied health research and can help to bridge the gap between evidence and practice by aligning research priorities with real-world problems (174).

My project has been informed and shaped by a number of public and stakeholder engagement events including one public engagement event in February 2020, two stakeholder engagement events held in April 2021 and April 2023, and three PPI meetings across the study. Below I describe these in more detail and the impact they had in shaping the planning and design of the research as well as supporting the research activities.

2.9.1 Shaping the planning and design of the research

Before the start of my DPhil, in February 2020, I led a Patient and Public Involvement and Engagement event, supported by the NIHR School for Primary Care Research (SPCR) (Project reference 445). The event entitled “Healthy Community Fair” took place at a local rural community pub and involved a number of creative and interactive activities to stimulate discussion around how social prescribing may support health and well-being across different life stages in areas which may not be as well served. Activities included arts and crafts, board games, building model healthy neighbours, and a tap-dancing session. Each activity was facilitated by a researcher who helped hold informal discussions on what health might mean and look like and how social prescribing might fit in. The engagement event was attended by 34 members of the public who were recruited from the local community through their newsletter bulletin. Event attendees comprised individuals across a range of ages from families with children to those of retirement age. Most attendees were white British. Attendees highlighted the importance of the networks of relationships between people and organisations within their community for their health and wellbeing. They emphasised that these networks are particularly important in rural areas and other “hard to reach” settings and noted that the way in which organisations and people connect within communities should be a priority for future research. These discussions helped to identify the need for networks to facilitate social prescribing and helped me identify a key focus for my DPhil research.

In April 2021, I held an online knowledge exchange workshop (supported by the University of Oxford Knowledge Exchange Seed Fund) attended by 11 social prescribing stakeholders, including social prescribing link workers, general practitioners, and representatives from the voluntary and community sectors, as well as members of the public. These participants were recruited through the Oxford Social Prescribing Research Network. The workshop was facilitated by external professional facilitators experienced in running patient and public involvement activities (175). The facilitators supported the moderation of the meeting and designed interactive activities using Google Jamboard to stimulate discussion. The workshop kicked off with me presenting an overview of social prescribing and the fact that I was developing a research proposal to look at the impact that social prescribing may have on

communities. The facilitators then discussed three lenses (individual, community, and system) through which participants may want to consider priorities, processes, and important outcomes for social prescribing. Participants were divided into break-out rooms to have small group discussions. The group was then brought together to share learning from the smaller discussions. During this workshop, we identified key outcomes and processes important for social prescribing in communities. Key outcomes and processes discussed included the importance of successful collaborations between primary care and the voluntary and community sector and understanding how social prescribing operates in areas with less well-developed community/social networks.

2.9.2 Supporting research activities

I drew on two key PPI groups throughout my research time. The first group, composed of six people, was established to support other social prescribing projects run by the Oxford Social Prescribing Research Network (176). The group consisted of six members of the public with varied backgrounds and experiences, including experiences of seeing social prescribing link workers or having caring responsibilities. The second group was a pre-established PPI group who work with the Deep End Research Alliance (DERA) Yorkshire and Humber (177). The “Deep End” movement originated in Glasgow in response to the need to address the Inverse Care Law (29) as formal and informal networks of general practices working together with local patients and communities. Deep End research programmes now run internationally, focusing on work that highlights the socioeconomic disparities in resource allocation and health outcomes in primary care (177). The PPI Group at DERA Yorkshire and Humber was established in 2017 and includes 12 individuals from a variety of local ethnic minority and underserved communities. The group has developed strong PPI expertise and has supported a diverse range of research projects over the years.

The Oxford-based PPI group supported the analysis in Workstream 1. I presented my emerging thoughts and early analysis about the meta-ethnographic evidence synthesis. I then led a roundtable discussion about the concepts I was developing through my analysis, inviting them to challenge them and share how they did or did not resonate with their experiences. They also asked me questions which helped me refine the way I presented and communicated the concepts.

To speak to the Deep End PPI group I travelled to Sheffield to meet them at their regular meeting location. Before each of my visits I would send the group a plan of what would be discussed, making it clear why I needed their help. Each meeting would last two hours, and I would start with a brief presentation of the research I was doing and the specific aspects I required their input on. I then ensured the discussion and any activities I involved them with were interactive and accessible. Examples include making use of brainstorming with post-it notes, small group discussions, and pair work. The Deep End PPI group commented on the emerging findings of Workstream 2 and on the design of Workstream 3. They made a number of helpful suggestions regarding some of the wording on the interview schedule for the patient interviews. They also reviewed excerpts of data from Workstream 3, contributing to some early analysis of the patient interviews from Workstream 3, and helping me to identify a theoretical framework through which to analyse my data. The specifics of these contributions are discussed in Chapter 5.

In addition to PPI activities, I held an online stakeholder engagement workshop in April 2023 during which I discussed emerging findings from workstreams 1 and 2. The purpose of the workshop was to share emerging findings and get feedback on them, as well as to promote knowledge exchange and identify opportunities for future research and collaboration. The workshop was attended by 15 social prescribing stakeholders including social prescribing link workers, social prescribing managers, members of the National Academy for Social Prescribing, and academic researchers, and patients. Participants were asked to consider them in light of their own experiences working in social prescribing, as well as to reflect on what these findings may suggest for policy, practice and future research. The discussions were visually summarised by an artist from Scriberia (178) who specialise in illustration and visual minutes (see Figure 3) and then checked by me for accuracy. Two key ideas emerged from the discussions in this workshop. The first was an analogy of the link worker role being likened to “sorting through a messy kitchen drawer”, dealing with miscellaneous issues that seemingly didn’t fit anywhere. The second was the idea that link workers engage in “firefighting” - working to tackle emergencies relating to basic needs such as housing, finances, food, and heating. These ideas helped to shape my thinking around the link worker role and the analysis of the data in my research.

SOCIAL PRESCRIBING IN DISADVANTAGED SETTINGS

OXFORD SOCIAL
PRESCRIBING NETWORK
VIRTUAL SEMINAR, APRIL 17

RESEARCH BACKGROUND

- THE EFFICACY OF SOCIAL PRESCRIBING RELIES ON STRONG LINKS EXISTING BETWEEN HEALTH CARE PROVIDERS AND COMMUNITY ORGANISATIONS.
- AREAS WITH HIGHER LEVELS OF SOCIAL DEPRIVATION MAY HAVE WORSE SERVICE PROVISION + LIMITED COMMUNITY INFRASTRUCTURE.
- BUILDING COMMUNITY LINKS IN POORER AREAS MAY BE MORE CHALLENGING.
- IF THESE CHALLENGES AREN'T ADDRESSED, SOCIAL PRESCRIBING COULD WORK TO WIDEN HEALTH INEQUITY.

SYSTEMATIC LITERATURE REVIEW

- SOCIAL PRESCRIBING IS POORLY DEFINED - WHICH CREATES A RISK OF IT BEING USED AS AN OVERFLOW FOR REGULAR HEALTH SERVICES!
- THERE IS INCREASED NEED FOR SERVICES EVEN AS THEIR FUNDING IS BEING CUT!
- THERE MAY BE A LACK OF COMMUNITY INFRASTRUCTURE FOR SOCIAL PRESCRIBING
- PATIENTS REFERRED OFTEN HAVE COMPLEX NEEDS...
- IT FEELS AS IF GPs USE SOCIAL PRESCRIBING REFERRALS WHEN THEY DON'T KNOW WHAT TO DO WITH PATIENTS!
- WE CAN'T BE EVERYTHING TO EVERYONE! BUT, MAYBE PART OF OUR ROLE IS TO "SORT THE KITCHEN DRAWER"
- NOW, WHERE SHOULD THIS ONE GO?
- SOCIAL PRESCRIBER OPINIONS NEED TO BE TAKEN SERIOUSLY!
- WE NEED TO KNOW WHERE TO COMMUNICATE UNMET NEEDS
- SIGNPOSTING PATIENTS TO SERVICES THEY NEED.
- SOCIAL PRESCRIBING ISN'T A "QUICK FIX" TO MEDICAL PROBLEMS - A SOLO, HOLISTIC APPROACH IS REQUIRED.
- MORE CLARITY ON ROLES + RIGOROUS SYSTEMS ARE NEEDED TO SUPPORT SOCIAL PRESCRIBING.
- ...AND SOME HAVE SUGGESTED IT CAN SERVE AS A DUMPING GROUND FOR DIFFICULT PATIENTS.

LINK WORKER INTERVIEWS

- LINK WORKER PAY AND JOB SECURITY CAN VARY WIDELY BETWEEN DIFFERENT AREAS AND ORGANISATIONS, CREATING PROBLEMS FOR CONTINUITY OF SERVICE PROVISION.
- LINK WORKERS WORKING IN DISADVANTAGED AREAS WORK WITH HIGHER PATIENT CASELOADS!
- LINK WORKERS ARE SUPPORTING AN ALREADY OVER-STRETCHED SYSTEM!
- IN UNDERPROVIDED AREAS, LINK WORKERS ARE OFTEN SUPPORTING PATIENTS' BASIC NEEDS.
- -THIS REDUCES THE TIME AVAILABLE TO THEM TO BUILD COMMUNITY NETWORKS!
- LINK WORKERS NEED TIME AND AUTONOMY TO PROVIDE BEST SERVICE.
- WORKING AS PART OF A TEAM HELPS LINK WORKERS BUILD CONNECTIONS
- PATIENTS MAY BE LESS ABLE TO ENGAGE WITH SOCIAL PRESCRIBING WHEN ALL THEIR ENERGY IS GOING ON SURVIVING!
- LINK WORKERS MUST BE RECRUITED TO MATCH THE REQUIREMENTS OF THE COMMUNITIES THEY ARE SERVING.
- CAN WE BYPASS THE GP + SOURCE REFERRALS DIRECTLY IN THE COMMUNITY?
- IN MANY AREAS LARGE NUMBERS OF PEOPLE ARE NOT REGISTERED WITH GPs.
- CAN YOU PRESCRIBE ME A HOUSE?
- ALLOCATION OF LINK WORKERS SHOULD BE PROPORTIONATE TO EACH AREA'S NEED.

DISCUSSION

- WHAT IS THE ROLE OF SOCIAL PRESCRIBING IN ADDRESSING HEALTH INEQUALITIES?
- HOW MUCH CAN WE FORMALISE THE ROLE? - IS IT SPECIALIST OR "JACK-OF-ALL TRADES"? - BALANCE BETWEEN SPECIALISING AND FLEXIBILITY.
- IF MOST ENERGY IS SPENT ON DEALING WITH EMERGENCIES - HOW DO WE DO LESS 'FIREFIGHTING'? - HOW DO WE MANAGE A HOLISTIC APPROACH?
- SOCIAL PRESCRIBERS OFTEN DO MORE THAN THEY ARE PAID FOR, WHICH CAN EXACERBATE INEQUALITY. - VAGUE DEFINITION OF ROLES CONTRIBUTE TO THIS.
- IF WE ARE GETTING INCORRECT REFERRALS ARE WE REPRESENTING THE POTENTIAL OF SOCIAL PRESCRIBING ADEQUATELY?

PRIORITIES FOR FUTURE RESEARCH:

- RIGOROUS MAPPING OF CORRESPONDENCE OF LEVELS OF DEPRIVATION TO SOCIAL PRESCRIBER PROVISION.
- RESEARCH REFLECTING WHAT IS HAPPENING IN PRACTICE.
- BETTER EVALUATION MEASURES.
- MAPPING WITH POPULATION HEALTH OUTCOMES



Figure 3: A visual summary of discussions during a stakeholder engagement workshop produced by Scriberia.

2.10 Conclusion

In this chapter, I have outlined the overall methodological approach that I have used to undertake the research in this thesis. My orientation to research is grounded in pragmatism, employing a “what works” approach (132) to understanding how social prescribing and the link worker role operate in socially and economically disadvantaged settings.

This research has been informed by two theoretical perspectives. Social capital theory shaped my early thinking about social prescribing, directing my focus to the networking work link workers undertake as part of their role and which I explore using SNA in this thesis. Secondly, ideas of the political economy of health have provided a critical lens for understanding how broader social, economic, and political forces may influence social prescribing implementation, the link worker role, and patient experiences in socially and economically disadvantaged settings. These ideas have played a central role in shaping the research in this thesis, including my choice of research questions, data collection decisions, as well as data analysis and interpretation.

To address my research questions, I have undertaken a multiphase mixed methods approach with three interlinked workstreams. In the first workstream I conducted a meta-ethnographic evidence synthesis; in the second workstream I conducted SNA interviews with link workers; in the third workstream I undertook longitudinal case studies. In designing my research, I have taken into account various ethical and practical considerations, as well as reflected on my positionality as a researcher. This research has also been shaped by PPI and stakeholder engagement.

In the following three chapters I present the research I conducted across the three different workstreams for this thesis.

Chapter 3: A meta-ethnography of the factors that shape link workers' experiences of social prescribing

3.1 Note on the publication of Chapter 3

The research I present in this chapter has been published in BMC Medicine as Turk, A., Tierney, S., Hogan, B. *et al.* A meta-ethnography of the factors that shape link workers' experiences of social prescribing. *BMC Med* **22**, 280 (2024). <https://doi.org/10.1186/s12916-024-03478-w>. In this chapter I have adapted this published paper to make it compliant with departmental regulations for including published work in a doctoral thesis, making it clear how this work relates to the other chapters in this thesis.

As the lead author of this paper, I conducted all aspects of the research and writing, including study design, writing the protocol, undertaking the screening and selection of studies, analysis, writing and finalising the final manuscript. The co-authors on this paper are my DPhil supervisors and supported the development of this manuscript in accordance with their role as academic advisors.

3.2 Introduction

The evidence synthesis presented in this chapter develops an initial conceptual framework to contextualise the networking work link workers undertake in the broader context of their roles. Syntheses of the literature can be conducted for a number of reasons, including to identify gaps in the literature to ensure that any primary research planned contributes to filling gaps in the evidence base, or to inform policy and practice (179). The literature regarding social prescribing and link workers is growing rapidly. Many of these studies are qualitative explorations of the experiences of link workers and patients, implementation, and effects of social prescribing in different settings. A consistent theme from current research has been the need to develop a refined theoretical understanding of the processes that shape the ways in which link workers undertake their role across a range of settings (119,180). However, to date there has been no synthesis that attempts to develop

a theoretical understanding of the factors that shape link workers' experiences of working in their roles.

To ensure that the work in this thesis both builds on the existing literature and contributes to it, I conducted a systematic review of published qualitative research on the factors shaping link workers' experiences of their role and the ways in which they are being implemented. While the focus of this thesis is the way in which link workers build and sustain networks in socially and economically disadvantaged settings, the focus for this review was deliberately broad, focusing on link workers' experiences of undertaking their roles in general. This broad approach enabled me to develop an understanding of the wider factors shaping how link workers undertake their roles, as well as allowing me to situate their networking work within other aspects of their roles. It also allowed me to review the social prescribing literature broadly, helping to ensure that my research could address gaps in the literature. To address the need to develop a theoretical understanding of link workers' experiences of social prescribing, my synthesis sought to develop a novel conceptual framework which explains how social prescribing is being enacted and experienced by frontline social prescribing staff.

3.3 Methods

3.3.1 Approach to Synthesis: Meta-Ethnography

There are numerous approaches to synthesising qualitative research (181,182) with three broadly different purposes for synthesis including aggregation (primarily for the mapping of evidence, such as scoping reviews), configuration (to produce explanations for phenomena), and integration (to bring together different findings in a way that generates additional insights) (179).

Through this review I aimed to develop a novel conceptual framework, that offers a theoretical understanding, of the factors that shape link workers' experiences of social prescribing. I, therefore, chose to employ a meta-ethnographic approach to evidence synthesis to integrate the disparate literature on the link worker role. Meta-ethnography (152) is a theory generating and integrative and interpretive methodology for the synthesis of qualitative evidence (150). The approach is

interpretive, rather than aggregative, and involves systematically comparing and translating data from qualitative studies to identify and develop new overarching theories, conceptual frameworks, and models (150,151) through reinterpretation (re-analysis) of published findings (179).

The meta-ethnographic approach may produce a reciprocal translation (where different studies are translated and interpreted into one another), a refutational synthesis (which demonstrate and explain opposing interpretations), or a line of argument synthesis (which goes beyond and brings together reciprocal translations (152,179).

Conducting a meta-ethnography involves seven stages: getting started, deciding what is relevant to the initial interest, reading the studies, determining how the studies are related, translating the studies into one another, synthesising the translations, and expressing the synthesis. I will outline each of the steps below. The protocol for the review was registered on PROSPERO [CRD42021264595]. I followed the eMERGe guidance when conducting and reporting this meta-ethnography (150).

3.3.1.1 Getting started

The first stage of conducting a meta-ethnography involves “*identifying an intellectual interest that qualitative research might inform*” (p. 26) (152) with a focus on a relevant real-life phenomenon.

The thesis research question this review sought to address was:

Thesis Question 1: What does the existing literature say about the factors that shape link workers’ experiences and perceptions of carrying out their roles?

3.3.1.2 Deciding what is relevant to the initial interest

I conducted a systematic search of key electronic databases with the support of an information specialist to identify relevant published literature to be included in the review. The search covered a mixture of health and social sciences literature to identify published qualitative studies containing data about factors that shape link workers’ experiences of their role and its implementation. Nine databases were searched in August 2021. The databases searched were Medline (OvidSP)[1946-present], Embase (OvidSP)[1974-present], CINAHL (EBSCOHost)[1982-present], PsycINFO (OvidSP)[1806-present], Health Management Information Consortium (HMIC) (OvidSP) [1979-

July 2021), Social Science Citation Index (Web of Science Core Collection) [1900-present] and Sociology Collection - Applied Social Sciences Index & Abstracts, Sociological Abstracts and Sociology Database (Proquest) [1952-present]. The search strategy consisted of title/abstract keywords and subject headings describing the link worker role, primary care and qualitative research. The search terms recognised the fact that link workers are sometimes referred to by other titles such as social prescriber or community connector. Full search strategies are available in Appendix. In addition, OpenGrey was searched for grey literature such as policy reports.

As the literature on social prescribing is growing rapidly, I set up a Google Scholar alert with the term “social prescribing” to keep abreast of newly published papers. This continued until the point of finalising my analysis in November 2023. I also scanned the reference lists of included papers to identify other potentially eligible studies which may have been missed by the searches. The decision to exclude studies based in lower and middle-income countries was made because these countries do not yet have link worker models of social prescribing reported in the literature (38,50). The full inclusion criteria for studies in the review focused on link worker models of social prescribing and can be found in Table 1.

Table 1: Criteria for publications included in the review.

Inclusion	Exclusion
<ul style="list-style-type: none"> • Studies on social prescribing with a link worker model • Qualitative studies (that used a qualitative approach to data collection and analysis) • Mixed methods studies where qualitative components could be distinguished from the quantitative ones • Studies with perspectives from link workers employed through primary care as well as other agencies • Studies with perspectives from services users, primary care staff, or voluntary and community 	<ul style="list-style-type: none"> • Studies not containing data related to the factors relevant to link workers’ experiences of their roles in social prescribing • Studies based in lower and middle-income countries • Questionnaires/surveys with open-ended questions • Reviews • Conference abstracts • Studies that did not contain sufficient detail on how

Inclusion	Exclusion
sector staff which discussed factors relevant to link workers' experiences of their roles <ul style="list-style-type: none"> • Written in English • Grey literature with sufficient detail on how qualitative components were undertaken 	qualitative components were undertaken

I managed the screening process using Rayyan (183), a systematic review management platform. I conducted the initial screening of the retrieved references by title and abstract to exclude irrelevant studies, and a sample (20%) was screened by a second reviewer (another DPhil student) to ensure that I was applying inclusion criteria consistently. Disagreements were resolved through discussion with the second reviewer. I read all papers included after title and abstract screening in fully, assessing them for their relevance. I scanned the bibliography of each included paper to identify further eligible papers. The same process and criteria were also applied to studies identified by the Google Scholar alerts.

3.3.1.3 Quality appraisal

There is considerable debate on whether or not qualitative research should be subject to critical appraisal; some argue that doing so stifles the interpretive and creative aspects of qualitative research, reducing it to a list of overly prescriptive technical procedures (184), or that the checklists do not appreciate the heterogeneity of approaches to qualitative research. Noblit and Hare (152) did not advocate for the formal appraisal of studies as part of meta-ethnography as they argued that study quality would become apparent by how much it contributed to the synthesis (152,186). However, critical appraisal has been performed in meta-ethnographies to examine the overall quality of included papers and to identify gaps in the reporting (187,188). With this in mind, I undertook a critical appraisal of studies included in the review using the Critical Appraisal Skills Programme (CASP) Qualitative Studies Checklist (189). I did not exclude studies based on their scoring, however undertaking the critical appraisal allowed me to identify areas for improvement for future research studies to consider.

3.3.1.4 Synthesis

Each stage of the synthesis was an iterative process during which I regularly met with my supervisors to discuss emerging ideas. I also discussed these emerging ideas with a patient and public involvement group and a stakeholder group which included social prescribing link workers, policy makers and social prescribing managers (see Chapter 2). These discussions helped ensure that my findings and analyses resonated with those who have lived experience of social prescribing. They also provided important opportunities for reflexive practice.

3.3.1.5 Reading the studies

This stage involved the repeated reading of the studies, identifying and becoming familiar with their key concepts and determining how studies related to one another by comparing their aims, focus, characteristics, theoretical approaches, and findings. I extracted contextual information about each study's sample, setting, and methodology. I also extracted themes from each of the papers (also known as second order constructs) (150,152) using a table in which these themes were noted along with illustrative data (first order constructs) (150,152). I also noted additional ideas that arose while reading the papers to help inform my development of third order constructs.

3.3.1.6 Determining how the studies are related

I then considered relationships between the key concepts I extracted from the papers. This involved looking across the studies for similar or recurring concepts. I grouped them into initial categories which I labelled using terminology that adequately described all the relevant concepts they contained. I then juxtaposed and compared these categories against each other to explore the possible relationships between the key concepts these categories reflected. I drew "conceptual maps" (Appendix 1) to aid the exploration of how these initial categories might relate to each.

3.3.1.7 Translating studies into one another

"Translating" is central to meta-ethnography. It describes the idea that each author is using their own "interpretive language" and therefore a comparison of conceptual terms across studies is needed (150). Such comparison involves an interpretive reading of meaning, but no further conceptual

development (188). I compared second-order constructs from the included studies systematically to identify the range of concepts and whether their meanings were similar or contradictory. This involved noting and summarising each second order construct and its definition in an Excel table and mapping the presence of each construct across each of the included studies. During this process I re-examined the initial categories developed in the previous stage and reorganised them based on the emerging translations.

3.3.1.8 Synthesising translations

I undertook a reciprocal synthesis where the different studies included were viewed as a whole and from which I was then able to build a line of argument (190) (overarching model) which explained the new emerging storyline of the synthesis (191). I revisited the categories developed in previous stages through further discussion with my supervisory team. This facilitated additional interpretation and allowed me to develop key overarching concepts (third order constructs) (Table 3). I then linked these final third order constructs through additional discussion and analysis to develop a “line-of-argument synthesis”, which provided a further interpretation that put any similarities and differences across studies into a new interpretive context (150). This allowed me to produce an overarching conceptual framework of the experiences of link workers carrying out social prescribing.

3.4 Results

The searches of online databases yielded 2,543 records. I screened each record’s title and abstract for relevance, after which I read 75 records at full text level. From the database search, 15 papers were included in the review, 5 additional papers were identified through the Google Scholar alerts, and a further paper was identified through scanning the bibliographies of included papers (Figure 4). In total I included 21 studies published between 2017 and 2023, reporting the results of 17 different studies (6 publications report the findings from one larger project) (See Table 2).

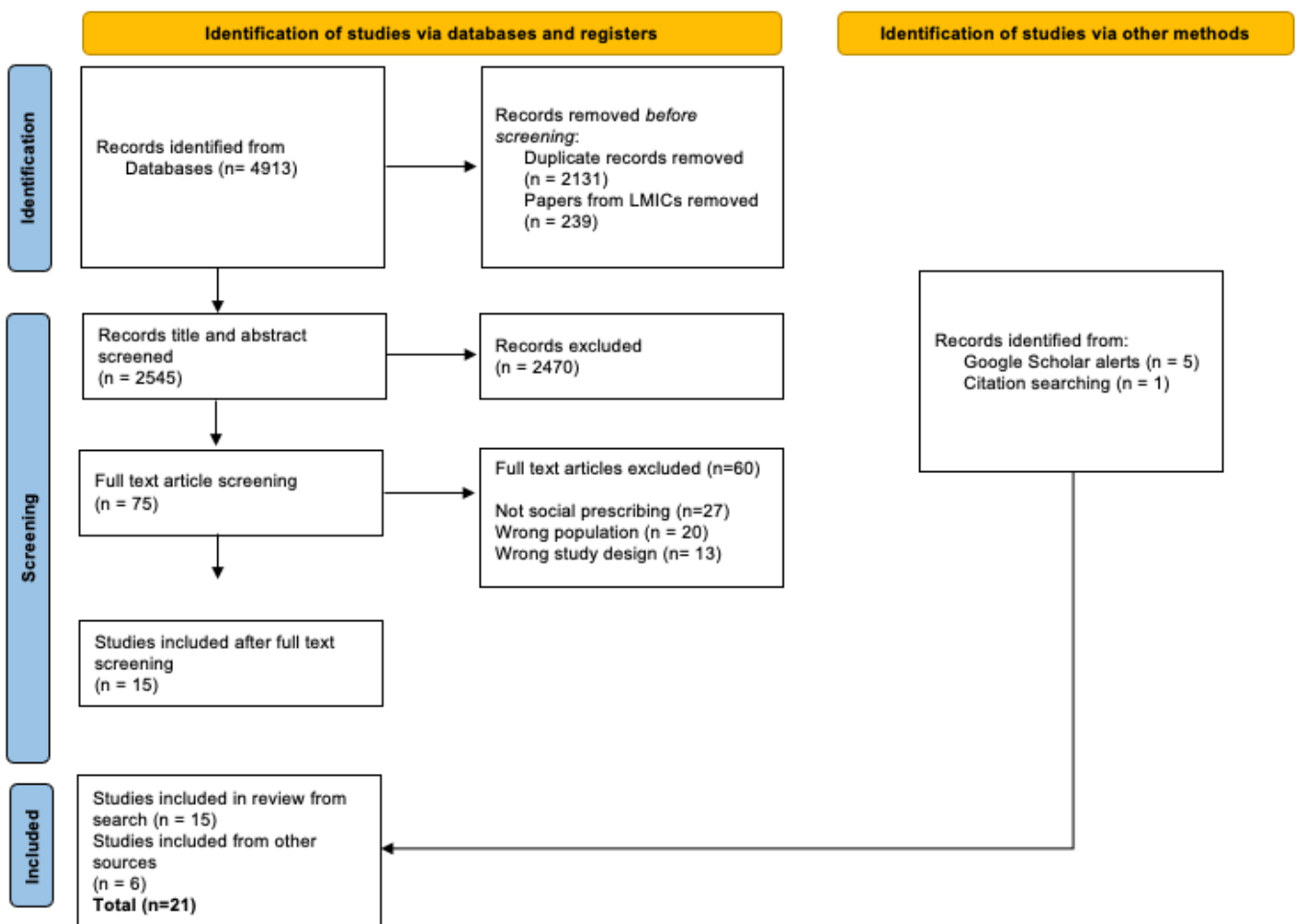


Figure 4: Flow diagram showing study selection.

Table 2: Table of study characteristics. The * beside 6 of the publications indicate that they report findings from the same larger project.

Authors	Aim	Country/ setting	Social prescribing service	Sample size	Sample characteristics	Method of data collection	Analysis
Beardmore 2019 (192)	To explore routes into social prescribing, and link worker's experiences of the sector and potential career progression.	Urban/suburban area of South West England	Various services, details not provided	8	Members of the social prescribing workforce with varying levels of responsibility from six different organisations (NHS, Local Authority and VCS)	Semi structured interviews	Thematic analysis
Chng et al. 2021 (111)	To explore the implementation process of social prescribing in practice.	Deprived areas of Scotland	Each intervention practice had a full-time salaried community links practitioner (CLP) appointed, who was employed by a Scottish Government-funded third-sector organisation. Intervention practices were also offered additional programme management support by the CLPs' employing organisation.	>31 (exact number is unclear)	Practice staff with responsibility for leading the social prescribing programme, including link workers, as well as other key social prescribing stakeholders.	Focus groups, email surveys, in-depth interviews	Thematic analysis
Fixsen et al. 2020 (193)	To critically examine a developing rural social prescribing scheme from multiple stakeholder perspectives and to present a relational model for local social prescribing schemes.	Rural area, Shropshire, United Kingdom	A social prescribing initiative conducted in the rural area of Shropshire which forms part of the wider local health and wellbeing strategy to promote health and reduce health inequalities	24	key stakeholders (practice managers, disability and employment advisors, social care workers, GPs, link workers, public health consultants, patients.)	Interviews	Modified grounded theory

Authors	Aim	Country/ setting	Social prescribing service	Sample size	Sample characteristics	Method of data collection	Analysis
Fixsen et al. 2021 (194)	To qualitatively examine and compare the responses of three social prescribing schemes in Scotland to the COVID-19 pandemic.	Deprived area Glasgow, Scotland	Social prescribing scheme delivered through the Scottish government where link worker support patients navigating support in the community	23	link workers, GPs, social prescribing managers, representatives from the voluntary and community sector	Interviews	Inductive thematic approach
Frostick and Bertotti 2019 (195)	To identify the training, skills and experience social prescribing Link Workers, working with patients presenting with long-term conditions, need to carry out their role safely and effectively within primary care services.	London, United Kingdom	various - not described in detail	13	link workers in post for 6 months or more- from three London-based social prescribing schemes	Interviews and focus groups	Thematic analysis
Griffith et al. 2022 (31)*	To identify factors shaping delivery context and link worker practices through the interacting logics of choice and care. To examine how these practices resonated with contemporary social prescribing discourses and the stated aims and objectives of national policy.	Socioeconomically deprived urban area of North East England	A social prescribing scheme for those aged 40-74 with certain long-term conditions. Link workers were provided by two third sector organisations one of which focused on community development and had a longstanding commitment to behaviour change. The scheme was partially funded through a Social Impact Bond.	not clear	20 link workers; 13 interviews with service managers	Ethnographic fieldwork (interviews, focus groups, observation)	Thematic content analysis

Authors	Aim	Country/ setting	Social prescribing service	Sample size	Sample characteristics	Method of data collection	Analysis
Griffiths et al. 2023 (196)	To explore the perspectives of social prescribing staff in United Kingdom (UK) NHS social prescribing services.	Central England	Social prescribing services delivered across a county in central England	18	link workers	interviews	Thematic analysis
Hazeldine et al. 2021 (197)	To investigate the early implementation of link worker social prescribing using a researcher in residence model	South West England, United Kingdom	<p>Two social prescribing services.</p> <p>The first service was delivered by consortium of six Voluntary and Community sector partners, with objectives to develop social capital and the wellbeing of individuals and communities, covering an adult population of 221,673. Link workers were based in a GP practice.</p> <p>The second service was based in a single GP practice where they shared an office and had regular contact with colleagues. The service covered a population of 46,000. Link workers were employed by a single Community Development Trust.</p>	13	11 link workers and 2 social prescribing managers	Structured conversations guided by a topic guide. Researcher made detailed field notes	Thematic analysis
Holding et al. 2020 (198)	To understand the challenges of delivering support and the resources and community infrastructure required for successful delivery of social prescribing.	England	A national social prescribing programme supporting people at risk of, or experiencing, loneliness to connect with their communities. It involved link workers and volunteers working closely with service-users for up to 12 weeks to develop social links through signposting to community activities and other support.	24	9 volunteers and 15 link workers	Semi structured interviews	Interpretive thematic analysis
Khan et al. 2021 (199)	To understand perceptions of social prescribing within	Four socio-economically disadvantaged areas	N/A	37	members of the public	focus groups and interviews	Thematic analysis

Authors	Aim	Country/ setting	Social prescribing service	Sample size	Sample characteristics	Method of data collection	Analysis
	the wider community	in North-West England.					
Mackenzie et al. 2020 (26)	To explore the concept of "fantasy paradigms" empirically using data from an evaluation of a social prescribing case	Glasgow, Scotland	The Link Worker Programme employed Community Links Practitioners (CLPs), as an additional resource with community development expertise based in GP practices: to engage with 'vulnerable' patients and to connect them with community resources. The CLPs acted as a channel between GP practice and community services to support organisational links; and to foster change within General Practice.	47	professionals involved with delivering social prescribing	Interviews	Thematic analysis
Moffat et al. 2017 (110)*	To describe the experiences of patients with long-term conditions who are referred to and engage with a Link Worker social prescribing programme and identify the impact of the Link Worker programme on health and wellbeing.	West Newcastle upon Tyne, United Kingdom	Social prescribing link workers trained in behaviour changed methods who offer a holistic and personalised service. They receive referrals from primary care health professionals and connect patients to community organizations. Patients can participate in the program for up to 2 years, with the option for Link Worker discretion for extended support if necessary. Contact frequency is mutually agreed upon and varies based on individual needs. Meetings with link workers can occur face-to-face or through various digital communication channels.	30	adults with long term conditions	Interviews	Thematic analysis
Moore et al. 2023 (86)	To gain an understanding of the experiences of social prescribing link workers regarding their professional identities within their roles.	Clinical Commissioning Group area covering a range of city, urban, and rural environments, although it was more rural and less ethnically or socioeconomically	Mixture of link workers employed directly by the Clinical Commissioning Group or commissioned through a social prescribing provider	13	social prescribing link workers	Interviews	Thematic analysis

Authors	Aim	Country/ setting	Social prescribing service	Sample size	Sample characteristics	Method of data collection	Analysis
		diverse than the national average.					
Morris et al. 2023 (200)*	To explore accounts of how an existing social prescribing service adapted to meet clients' needs in the first wave of the pandemic, and of how clients experienced these changes.	Deprived urban area of North East England	A social prescribing scheme for those aged 40-74 with certain long-term conditions. Link workers were provided by two third sector organisations and could support patients for up to approximately 3.5 years.	57	clients ($n = 44$), link workers ($n = 5$) and service provider managerial staff ($n = 8$)	Remote interviews	Thematic analysis
Pollard et al. 2023 (28)*	To explore how a social prescribing intervention was delivered by link workers and the experiences of those referred to the intervention.	Economically deprived urban area of the North of England	A social prescribing scheme for those aged 40-74 with certain long-term conditions. On referral from GP practices, patients were assigned a link worker. The link worker was expected to support patients to access relevant local community services, or in some cases, to support them to develop self-directed programmes. Link workers support patients for an average of 18 months, but in some cases this support was extended up to four years. Link workers were provided by two third sector organisations.	39	20 link workers; 19 patients	Participant observation, focus groups, interviews	Thematic analysis
Rhodes and Bell 2021 (201)	To explore the challenges of working as an SP and their experiences of training and support received as they develop in this new and evolving role.	Greater London, United Kingdom	Various - not described in detail	9	social prescribers	Interviews	Thematic analysis

Authors	Aim	Country/ setting	Social prescribing service	Sample size	Sample characteristics	Method of data collection	Analysis
Simpson et al. 2020 (202)	To explore the application of social prescribing with people living with motor neurone disease.	North West Coast of England	Link workers focused on motor neurone disease, but social prescribing model not described in detail	13	4 link workers, 9 patients with MND	Interviews	Thematic analysis
Skivington et al. 2018 (119)	To investigate issues relevant to implementing a social prescribing programme to improve inter-sectoral working to achieve public health goals.	Scotland	Community links practitioners (CLPs) with a third-sector or community development background and were employed to work in GP practices. Referrals were received from primary care professionals, to support patients to access community organisations, with the aim of improving their health and wellbeing, and mitigating the negative impacts of the social determinants of health.	36	6 link workers and 30 community organisation representatives	Interviews	Thematic analysis
White et al. 2022 (203)	To evaluate/examine from multiple perspectives the effectiveness of one city-based social prescribing service.	Socioeconomically disadvantaged urban area of Northern England	A social prescribing service delivered by two community organisations and available to those aged 16 years and over. Support was provided by Link Workers based within GP practices and other locations including community centres.	57	link workers, GPs, social workers, patients	Interviews, focus groups, surveys	Thematic analysis
Wildman et al. 2019 (204)*	To explore link workers' definitions of their role in social prescribing and the skills and qualities they perceive to be essential for effective client engagement.	Socioeconomically deprived areas in North East England	The social prescribing service was delivered by four third-sector organisations who employ link workers and receive referrals from primary-care practitioners based in 17 general practices.	15	link workers	Focus groups and interviews	Thematic analysis
Wildman et al. 2019 (205)*	To explore experiences of social prescribing among people with	Socioeconomically disadvantaged area	A social prescribing scheme for those aged 40-74 with certain long-term conditions. Link workers were provided by two third sector organisations one of which focused on	24	patients	Semi-structured	Grounded theory approach,

Authors	Aim	Country/ setting	Social prescribing service	Sample size	Sample characteristics	Method of data collection	Analysis
	long-term conditions one to two years after their initial engagement with a social prescribing service.	of North East England.	community development and had a longstanding commitment to behaviour change. Link workers are trained in behaviour change methods, that help patients identify which areas of their lives they wish to change and how. These techniques emphasis patients' choice and control over their decisions and behaviours.			follow-up interviews	thematic analysis

3.4.1 Study characteristics

The 21 studies included in the meta-ethnography (Table 2) were published between 2017 and 2023. They included over 531 participants, and a range of social prescribing initiatives. Sample sizes varied between eight and >31 participants (in one of the studies it was unclear how many participants took part (111)). Seven studies included perspectives exclusively from link workers or social prescribing managers; seven included the perspectives of link workers in addition to other staff (e.g. GPs or voluntary and community sector staff); two included the perspectives of link workers and patients; two included a mixture of perspectives from link workers, other staff and patients; two discussed patient perspectives only; and one study included perspectives from members of the public.

Seventeen of the studies were based in England, and the remaining four in Scotland. While the inclusion criteria did allow for studies outside of the UK, none of the international publications met the inclusion criteria. Eight studies explicitly stated that they were based in socioeconomically disadvantaged areas.

Most of the studies employed interview techniques (either in person or online), some used focus groups, while others used a mixture of techniques such as interviews, focus groups, participant observation, and ethnographic fieldwork. None of the grey literature identified through the searches provided enough detail on data collection or analysis to be included in the review.

3.4.2 Critical appraisal

Following the CASP Checklist (206), most of the studies included clear and relevant research aims, used appropriate methodologies and research designs, and clearly stated their findings (Appendix 2). However, some did not explicitly discuss reflexivity, or ethical considerations beyond indicating that the studies had received approval from research ethics committees.

3.4.3 Synthesis

Through the synthesis I developed a “line of argument”, and produced a narrative based around third order constructs (152). This allowed me to develop a conceptual framework that offers a novel theoretical understanding of the link worker role, explaining how link worker experiences are shaped

by structural tensions that arise from a mismatch between the policy ideal of social prescribing and the realities of its implementation. These inherent tensions are present at each of the levels that social prescribing operates at. These tensions shape link workers' experiences of their roles and call into question the sustainability of social prescribing.

I present the narrative in the proceeding sections, with the third order constructs organised under four headings that represent each of the levels at which social prescribing operates – the link worker level, the organisational level, the wider system level, and the patient level. Tensions present at each level are outlined. Table 3 presents the third order constructs and how they fit into my overall line of argument, indicating which papers made contributions to each third order construct.

Throughout the next section, authors' interpretations (from included papers) are identified using quotation marks, whilst direct quotations from study participants in the included studies are presented in italics with quotation marks.

Table 3: Formation of third order constructs from second order constructs in each included paper. Publications with * were based on the same larger study. The shading indicates to which parts of the line of argument each paper contributed to.

Third-order constructs	Role definition as a double-edged sword	The quasi-professional status of the link worker role	Balancing tensions in the relational nature of link working	A reliance on individual characteristics as drivers of success	Organisational buy-in	The pressure of targets	Support for Link workers	A struggling wider health and care system	Local variation and structural poverty	Link workers as an additional resource	Challenges to the dominant discourses of “choice” and “empowerment”	The temporal and material requirements for person-centred care
Contribution to line of argument	Tensions in the link worker role				Tensions at the organisational level			Tensions at the wider system level			Tensions at the patient level	
Beardmore 2019												
Chng et al. 2021												
Fixsen et al. 2020												
Fixsen et al. 2021												
Frostick and Bertotti 2019												
Griffith et al.* 2022												
Griffiths et al. 2023												
Hazeldine et al. 2021												
Holding et al. 2020												
Khan et al. 2021												
Mackenzie et al. 2020												

Third-order constructs	Role definition as a double-edged sword	The quasi-professional status of the link worker role	Balancing tensions in the relational nature of link working	A reliance on individual characteristics as drivers of success	Organisational buy-in	The pressure of targets	Support for Link workers	A struggling wider health and care system	Local variation and structural poverty	Link workers as an additional resource	Challenges to the dominant discourses of “choice” and “empowerment”	The temporal and material requirements for person-centred care
Moffat et al. 2017*												
Moore et al. 2023												
Morris et al. 2023*												
Pollard et al. 2023 *												
Rhodes and Bell 2021												
Simpson et al. 2020												
Skivington et al. 2018												
White et al. 2022												
Wildman, Moffatt, Penn, et al., 2019 *												
Wildman, Moffatt, Steer, et al., 2019*												

3.4.3.1 The link worker level

My analysis revealed tensions relating to the ways in which the link worker role itself has been implemented into the health and care system. These tensions relate to role definition, professional identity, relational working, and reliance on individual link worker characteristics as drivers of success. Each of these tensions has implications for link workers' workloads, and the ways in which their roles are understood and accepted by others working in healthcare. These factors may act as stressors on link workers, threatening link worker retention and in turn risking the potential for social prescribing to deliver desired outcomes.

3.4.3.1.1 Role definition as a double-edged sword

Link workers have been introduced into the health and care system as a new role, often with flexible remit and without clear job descriptions (194,195,201). On the one hand, this flexibility can allow link workers to tailor the way they worked to fit with the population and area they serve, ultimately helping them to provide person-centred care (86,196). However, this same lack of clear role definition can cause role stress through workload overload and complexity (86,197). It could also lead to confusion/ambivalence among other members of staff about what social prescribing is and what the link worker role could offer, in turn contributing to inappropriate referrals (201).

The flexible nature of the link worker role has led it to be operationalised in different ways across different organisations (194), with "their job scope and remit being poorly defined from the outset" and their role being "not well understood by external referrers" (201) (p.3). This can lead to unrealistic expectations or confusion around what is achievable through social prescribing (203) and to the referral of patients with complex needs that exceeded the remit of the link worker role (194,196,197).

Studies noted that link workers were sometimes used to "fill gaps", which is an identified risk of having unclear professional identities in newer professions (86). In the included studies, parameters of the link worker role were frequently exceeded due to concerns that nobody would support patients otherwise, because "no other professions would deviate from their role boundaries" (86) (p.5).

Furthermore, a lack of understanding of referral criteria could lead to link workers feeling that social prescribing was being “used as a dumping ground for difficult patients” (195) (p.6). The filling of gaps was particularly pertinent in the context of overstretched and underfunded statutory and mental health services. In these contexts, link workers often ended up taking on more clinical risk (86,198) or providing more specialist support, such as acting as unqualified social or advocacy workers (198), due to long waiting lists or lack of availability for more specialised services. Not having onward referral options may also limit link workers’ ability to set boundaries with patients (119,204).

3.4.3.1.2 The quasi-professional status of the link worker role

Link workers have been introduced into the health and care system as a new “professional” role, but without the formal training and registration that might afford them the professional status (194) and identity to give them the confidence needed to deal with the complex cases they encounter in their work (86,201). Coupled with the lack of understanding or ambivalence about the role from other primary care professionals, link workers sometimes felt that they were “treated as outsiders going apparently unrecognised by practice staff” (28) and sometimes found it difficult to become integrated and visible in primary care due to “entrenched professional hierarchies” (31).

Formal training is considered essential for the building of professional identity and status (86). Across the studies, however, there was considerable variation in the training link workers received. While formal training could increase link worker confidence in performing their role (204), some link workers reported that their training was often minimal, inconsistent and non-standardised (86). Some of them needed to draw on skills and training they received in previous roles (86) and those taking on more senior responsibilities felt like they did not have enough training for this (192). In other contexts, link workers reflected that the training they had received was overly theoretical and lacked practical elements to prepare them for dealing with the range, severity, and complexity of issues they encountered (201,204); or with specific health conditions (202). Furthermore, opportunities for career progression within the role were often limited, which could affect role retention (192,194). However, it was acknowledged that formal training available to link workers

was improving and that this may suggest social prescribing is moving towards integration into mainstream practice (86).

The absence of a shared and commonly understood role and professional identity and pathway could threaten professional resilience and fulfilment (86) and the retention of link workers (86,192). However, it was noted that professionalising the role, by bringing in formal qualifications and registration, may have consequences that hinder the successful delivery of social prescribing (86). Formal professionalisation and registration may increase the legitimacy of the role, as well as improve equitable access to social prescribing and consistency for patients through greater standardisation (86). However, it was also noted that making the link worker role registered profession may make it more restricted and remove some of the individuality and the flexibility currently available in social prescribing, which is considered key to person-centred care (86,196). Professionalising the link worker role might also present a barrier to connecting with patients who may find it easier to relate to someone who is not a “professional” and “*more like them*” (86) (p.4). Finally, creating a “barrier to entry” through requiring registration and specific training may impact recruitment to the link worker role which is already difficult (86).

3.4.3.1.3 Balancing tensions in the relational nature of link working

Social prescribing hinges on link workers establishing and nurturing relationships between individuals and organisations in a way that builds trust and fosters collaboration (31,110,194–196,200,203–205). Relationships with link workers were sometimes likened to friendships by patients, and contrasted to interactions they were used to having with healthcare professionals - often depicted as rushed and impersonal (205). Link workers were described as a “*companion*” with whom patients could share their stories; these close relationships were necessary for the success of social prescribing (205). This relational nature of social prescribing work was described as being “*a bit of a balancing act*” between being a “*friend but not a friend*” (204) (p.996), where it was also vital to maintain boundaries in a way that did not foster patient dependency (196) and protected link workers’ time and headspace (203). A key strategy for setting boundaries with patients involved referrals into

other agencies, although, as described later, local community infrastructure may not always be readily available to permit this to happen (204).

Being able to get to know patients, to explore and understand their individual contexts, and “empowering” (195)(p.6) them to make decisions for their health and wellbeing could be a “particularly satisfying” aspect of the link worker role (195) (p.6). A link worker in the study by Beardmore noted that “*I just love working with people. It’s quite a privilege to be part of someone’s journey*” (192) (p.44). Beardmore noted that the relational nature of the work, and the fulfilment gained from supporting people, facilitated this satisfaction in spite of the potential negative impact of the lower link worker salary (192). However, in the study by Moore et al., link workers felt that they were not being remunerated enough for the workload and risk they often found themselves taking on (86).

Link workers’ ability to form relationships with other healthcare professionals and community organisations was another key factor for the success of social prescribing services (111,119,195,196,204). Link workers are uniquely placed to act as a bridge between different stakeholders due to their understanding of both primary care and the voluntary and community sector (119). This networking aspect of the role required the link worker and social prescribing service to be fully embedded into a GP practice; when it was fully integrated, it could lead to the whole practice developing links with community organisations (111). However, in other cases it could be challenging to transition from individual relationships between staff to more enduring collaborations with organisations, irrespective of the individuals involved (119). Staff continuity is a concern for the longevity of these collaborative relationships, which can be compromised if link workers leave their role due to poor job satisfaction.

3.4.3.1.4 A reliance on individual characteristics as drivers of success

As described above, I identified no singular clear definition or remit of the link worker role, or specific previous experience or training required to undertake it. However, it was apparent that the skills, experience, and personal characteristics that link workers possessed were often the driving

force behind social prescribing programmes, meaning the role should not be undertaken by “*just anyone*” (199) (p.4).

Previous professional backgrounds often influenced how link workers approached their role and the levels of confidence they had in its execution (198). For example, link workers who previously worked in mental health professions or had mental health training felt more confident and able to make decisions (197).

Empathy, being non-judgemental and supportive, compassionate, having listening skills and being able to put people at ease, were all considered essential traits for link workers (119,193,195,199,204), and necessary for building the trust required to encourage behaviour change and non-directive goal-setting (204). Knowledge of the local area was considered key for promoting collaborative working between primary care and community organisations (119,194). Furthermore, being proactive and tailoring the service to the needs of the local community were also regarded as essential to the success of social prescribing (198).

A reliance on the characteristics of individual link workers as drivers for success may pose a threat to the sustainability of social prescribing schemes given the role stresses described above which may threaten the retention of link workers in their role.

3.4.3.2 The organisational level

The organisational realities into which link workers and social prescribing were implemented shaped their experiences of the role. The extent to which primary care organisations bought into social prescribing, were able to provide support and space for link workers, as well as funding models and targets, could all influence link worker experiences.

3.4.3.2.1 Organisational buy-in to social prescribing

Across studies, the extent to which organisations within which link workers were based bought into or understood the service could have a considerable impact on how link workers experienced their role. “Social prescribing champions”, staff with an in-depth understanding of the remit of the role and who worked to embed social prescribing into practices, can facilitate link worker access to

practice meetings, training sessions, and increase visibility of the social prescribing service in the practice (28,197). Strong collective leadership – where responsibility for social prescribing was shared between general practice staff (GPs, link workers, and practice managers) helped to integrate social prescribing into the practice and enabled link workers to be proactive and strategic with the community networking aspect of their role (111). In cases where practices were not as engaged or did not fully understand what the social prescribing service could offer, link workers had to take a more active role promoting the service, leaving them with less time to provide focused and holistic person-centred care (28,204). Co-locating link workers in primary care, providing space for them in practices, was noted to help referrers to understand and remember the link worker role (203), as well as making the social prescribing service seem trustworthy and credible to patients (194).

3.4.3.2.2 The pressure of targets

Organisational targets and service funding models that reward high referral volume and the completion of wellbeing assessments could influence link workers' approaches to patient care. These targets may cause a drift towards social prescribing approaches that prioritised the completion of assessment instruments at the expense of more holistic person-centred care (28,31,204). Furthermore the pressure to generate a high number of referrals could mean link workers accepted clients not necessarily ready to engage with social prescribing, or those with complex needs (204).

3.4.3.2.3 Support for link workers

Studies highlighted organisational support which could have a positive impact on link workers' experiences of their role. Support available to link workers varied across the different contexts described in the studies. It was noted that link workers in larger organisations with clear organisational structures were more likely to be part of teams where workload could be shared (192). These link workers also had better access to support and training (192). Well-embedded workforce support and clinical supervision were found to be key to being able to deal with the complex cases (197). Where organisational support for link workers was not in place, some link workers could find themselves isolated, which could lead to feelings of anxiety and a decreased capacity to cope (192,197,201). In converse, those working in teams with other link workers (rather than in isolation)

could draw on their link worker colleagues for emotional support and reflection (201), and this could help promote a sense of success in the role (31).

3.4.3.3 The system level

A key part of the link worker role is to facilitate patients' social prescribing journeys from primary care to community groups and organisations. Social prescribing programmes depend on a "thriving" local community sector (193), that provides referral options for link workers to meet patient needs (198). A number of the studies I reviewed drew attention to the fact that wider health and social care systems, as well as the voluntary and community sectors, were overstretched and underfunded (28,31,119,193,194,197,198,204). Several papers highlighted the impact that austerity had both on the availability of community and statutory services, and on the demand for them (through its impact on patients' livelihoods); this has been described as a "perfect storm" (119) (p. e493) and a "threat to the future sustainability" (198) (p. 1541) of social prescribing.

3.4.3.3.1 A struggling wider health and social care system

Link workers sometimes felt like social prescribing was being used as a way to "boost up a crippled mental health service" (192) (p.45), or as a "holding pen" (196) (p.74) for other services that were over capacity (197). Fixsen and colleagues (194) talked about "changing demands"; they described how the pressure from closures of various local statutory and non-statutory services was compounded by the impact of the Covid-19 pandemic, and limited onward referral options for link workers. This meant that link workers needed to directly provide support for people with complex and/or severe mental health concerns, as well as support for those experiencing food poverty, unemployment, or needing benefits advice (197).

3.4.3.3.2 Local variation and structural poverty

Studies highlighted that the availability of services could vary across localities. Affluent areas were sometimes described as having an "abundance of community activities" (198), while those working in areas with high levels of socioeconomic disadvantage noted that lower availability of activities and services limited their scope for onward referral (31). Link workers made references to

“*structural poverty*”, identifying the lack of investment in the local area (31). Area level differences in service provision have implications for accessibility to services. For example some services required travel to access them which had implications for patients who did not have easy access to transport options (31,197,198,204) and being able to tailor support to patient needs (202). For other patients their ability to engage with and access social prescribing was limited by their complex life circumstances (28,205).

3.4.3.3.3 *Link workers as an additional resource*

In the context of a system struggling from the effects of austerity, link workers were “welcomed as an extra resource” to tackle workload (119) (p. e491) or to deal with “the social” (26). However, as described in earlier sections, link workers’ poorly defined role made them vulnerable to “filling gaps” (86).

The lack of onward referral options or other appropriate sources of support can mean that link workers end up taking a more involved approach to patient care than originally anticipated (198). This may include taking on more risk than they have training for, and having to deal with complex cases when there is no other support available (86). There may also be a risk that patients develop “*dependency*” on their link worker in the absence of other support (203). Having appropriate onward referral options was highlighted as key to helping to avoid patient dependency on the link worker (203), and to improving link workers’ ability to cope with high numbers of social prescribing referrals (204). Providing longer-term and more intensive support may obstruct one of the main aims of social prescribing which ideally seeks to signpost people away from primary care to appropriate community or statutory services (1).

3.4.3.4 The Patient Level

Social prescribing and the personalised care agenda (39) emphasise providing patients with “choice and control”, and assume that patients will be motivated and empowered to make changes that will benefit their health and wellbeing. However, across the reviewed studies, there was evidence to suggest that those experiencing social and economic deprivation or other precarious life

circumstances, may not be able to engage with social prescribing to the same extent as patients from more affluent backgrounds. As a result, those in the most disadvantaged positions may be less likely to benefit from social prescribing. This finding calls into question social prescribing's goal to help improve health equity. While more intensive and involved approaches to social prescribing may benefit disadvantaged groups, they require additional time, training, and support for link workers, and may not immediately deliver on social prescribing's goal to reduce patient attendance in primary care.

3.4.3.4.1 Challenges to the dominant discourses of "choice" and "empowerment"

Griffith et al. (31) observed how link workers' narratives about their role were often ideological and conflicted, and on multiple social prescribing discourses. They highlight the logics of "choice" and "care" (31) dominant in social prescribing discourses among link workers, as well as in the policy logic of social prescribing. The "logic of choice" gives prominence to individual choice and control over services and support received. In the context of social prescribing, this means that patients have a range of options, and they are encouraged to take an active role in deciding which services and activities they would like to participate in. The onus is on individual patients to become "empowered", through support provided by the link worker, to take control of their health, health behaviours, and personal situation. The "logic of care", on the other hand, emphasises relational and holistic support, and focuses on building strong relationships with patients and tailoring support accordingly.

A dominant narrative among primary care staff in the reviewed papers was that poor health is caused by poor individual lifestyle choices, and that the role of social prescribing is to build the confidence of patients to empower them to make better decisions in relation to their health and wellbeing (26,86), and to encourage "self-accountability" (196). In some cases, it was suggested that patients needed to be able to self-refer to social prescribing as it signalled empowerment and autonomy. It was also argued that practitioner-led referral risked cultivating dependency (203) which could be considered a "threat to success" for social prescribing (196).

However, a number of studies drew attention to various material and social circumstances that shaped the lives of patients and their ability to engage with social prescribing. Focusing on empowerment and motivation may mean that patients from more affluent backgrounds are more able to engage with the intervention and invest in their long-term health (28) whereas those from more deprived backgrounds may struggle. Social determinants of health shape the parameters within which individuals might be able to exercise choice and autonomy, as illustrated in this quotation from a participant in the study by Mackenzie et al. (26): *“life's not great, they've got very little in the way of money now and they're being squeezed and sanctioned 'til they're blue in the face. They haven't got a job, they probably have to go and get a job, if they do ... it'll be like a zero-hour contract below the living wage ... and so, to try and do that little bit extra about trying to live a more healthy lifestyle can just seem a bit pointless.”* Furthermore, local variation, lack of local investment, and structural poverty described in this chapter may limit the “choice” of onward referrals for patients, further problematising the notions of choice and empowerment which are at the heart of some social prescribing discourses.

3.4.3.4.2 Temporal and material requirements for person-centred care

Despite dominant discourses emphasising personal empowerment, link workers do engage in approaches which can be interpreted as more aligned with the “logic of care”. Link workers often support patients with basic needs such as housing, homelessness, unemployment, and financial support (28,119,198,200,204). They may also take on more intensive approaches by offering longer-term support (205), conducting home visits (110,205), accompanying patients to activities or groups in the community (28,31,205), helping users from socioeconomically disadvantaged areas to navigate and access community services (204), and providing advocacy (31). These more involved and longer-term approaches to social prescribing may be key in supporting individuals with multiple long-term conditions and experiences of socioeconomic deprivation (204).

However, these more involved approaches may require more time and more training for link workers, and may cause them high levels of stress and emotional burden. Such approaches may also not

immediately deliver on social prescribing's goal to reduce patient attendance in primary care as patients may require multiple visits over longer periods of time before feeling "empowered".

3.4.4 Line of Argument

My analysis has highlighted inherent tensions present at each of the levels that social prescribing operates at. These tensions may arise from a mismatch between the policy logic around social prescribing initiatives and the realities into which it is being implemented. These highlighted tensions shape link workers' experiences of their role and call into question the sustainability of social prescribing and the link worker role as currently implemented. This conceptual framework offers a theoretical understanding of the link worker role by highlighting and explaining the underlying structural dynamics and tensions that shape link worker experiences. A visual summary of the key components of my line of argument can be seen in Figure 5. This visual summary is intended as an illustrative device to communicate the key domains of the line of argument identified through the meta-ethnographic evidence synthesis. It summarises the core domains that underpin link worker practice and experience, illustrating how individual, organisational and systemic factors interact to shape link worker experiences and social prescribing practice. However, this visual summary only represents a simplification of the components of the line of argument rather than the nuanced relationships that exist between them. The boundaries between the different domains are overlapping and porous rather than discrete and does not illustrate any directionality that may exist between the different components. This visual summary, therefore, serves as an illustration of the line of argument and its components rather than a prescriptive framework or model.



Figure 5: Visual summary of key components in the line of argument developed through this synthesis of qualitative literature.

At the link worker level, the way in which the link worker role itself has been delineated and implemented may threaten the potential of social prescribing to deliver its intended outcomes. Link workers have been introduced into the health and care system as if they were a “professional” role, but without the formal training and registration that would afford them professional status. In its current form, the link worker role is not strictly defined or boundaried. This flexibility in the role may allow link workers to tailor the way they work to fit with the population and area they serve, ultimately helping them to provide person-centred care. On the other hand, it can cause role stress through workload overload and complexity, as well as confusion/ambivalence among other members of staff about what social prescribing is and what the link worker role can offer, in turn contributing to inappropriate referrals. In the context of an overstretched system, link workers may end up filling

gaps and “holding” (8) patients they cannot move on into other more appropriate services. Enjoyment and fulfilment in the role appear to come from the fact that connecting with patients and supporting them on their journeys feels rewarding. The role stress that link workers may experience, coupled with low wages, may pose a threat to link worker recruitment and retention. Given that much of the success of social prescribing seems to rely on individual link worker characteristics (such as being well-connected, knowledgeable about the local area, and having the skills needed to connect and build trusting relationships with patients), the role stress link workers may experience and associated implications for recruitment and retention, may have serious implications for the success and sustainability of social prescribing programmes.

The organisational contexts into which link workers and social prescribing are being implemented can vary, influencing link workers’ experiences and the ways in which social prescribing is embedded into practice. Organisational buy-in appears to be essential for social prescribing. This includes having support from leadership and the presence of champions who advocate for link workers and help to integrate them and the service into practices. Furthermore, co-locating link workers in primary care settings may enhance their visibility and credibility. Organisational targets and funding models can shape the link worker role, sometimes leading to a focus on quantity of referrals rather than the quality and impact of person-centred approaches. Support from organisations, including clear structures, teamwork, and access to training and supervision, are essential for link workers to manage their workload and address the emotional aspects of their roles effectively.

Social prescribing and the link worker role are about moving patients out of primary care, and into other sources of support which may be more appropriate for their needs (1). The logic of the intervention relies on the presence and accessibility of onward referral options – community organisations and services, health and social care services, and statutory services. Yet, as discussed in several studies in this synthesis, decades of austerity have led to a decrease in the availability of community and statutory services, as well as an increase in the demand for these services through the impact on individual livelihoods (28,31,119).

Social prescribing and the personalised care agenda (39) emphasise providing patients with “choice and control”, and assume that they will be motivated and empowered to make changes that will benefit their health and wellbeing. However, across the studies I reviewed, there was evidence to suggest that those experiencing precarious life circumstances may not be able to engage with the intervention to the same extent as patients from more stable or affluent backgrounds. The pervasiveness of the discourses of choice and control may shift link workers away from more intensive care-focused and person-centred approaches which may be more likely to benefit those experiencing difficult life circumstances and health inequities.

3.5 Discussion

The aim of this meta-ethnographic synthesis was to develop a novel conceptual framework to understand the factors that shape link workers’ experiences and the ways in which their role is being implemented. My synthesis of 21 qualitative studies found that the lived reality of being a link worker appears to be shaped by tensions present at each of the levels at which social prescribing operates. These tensions are structural and emerge from a mismatch between the ways in which social prescribing has been conceptualised and the realities into which it is being implemented.

One of the dominant system-wide discourses, or policy logics, promotes social prescribing as a means of tackling health inequities through overcoming the social determinants of health and addressing failures of the health system to do so (45). A number of the studies included in this synthesis discuss the impact that the long lasting effects of austerity have had both on the system level infrastructure into which social prescribing and link workers have been introduced as well as on people’s livelihoods (26,28,31,119,205). The “structural antecedents” (1) required for social prescribing to succeed have been shaped by political and economic forces which have seen cuts and disinvestment in voluntary and community as well as statutory organisations (95). These cuts have tended to disproportionately affect disadvantaged areas, where the need for services is usually greater (95,96). The impact of these cuts has been to widen health inequities (95). The idea that social prescribing might mitigate the impact of austerity on healthcare by linking service users with community resources and encouraging collaborative working between organisations may therefore

be questioned. As a result of these service gaps, link workers may find themselves “holding” (8) service-users who they cannot connect onwards due to relevant services or support either not being present or having limited capacity (31,207). The lived experience of link workers, as depicted in the studies included in this review, highlights how the state of the wider healthcare system impacts their workloads and role stress. Furthermore, estate-related pressures within GP surgeries (66) may mean that they are not able to provide link workers with physical space in practices (203). The cuts in funding to public services may also have an impact on an organisation’s ability to adopt new healthcare innovations such as social prescribing (208).

Other authors have highlighted the pervasiveness of neoliberal rhetoric present within social prescribing discourses (26,120). Neoliberalism is a political and economic ideology that emphasises market-based values such as individual choice, competitiveness, economic liberalisation, privatisation, and profit maximisation. Neoliberalism is said to lead to policies that promote individual choice and responsibility, and commodification, which can have negative impacts on health and health equity (209). Austerity measures, such as cutting social spending, align with the neoliberal focus on minimising government involvement and reducing public services in order to promote economic growth. This can result in policies that prioritise budgetary constraints over social welfare (209). The focus on individuality and empowerment place the onus on maintaining health on individuals and communities (31).

Social prescribing policy emphasises community-centred ways of working and asset-based community development (91). These approaches focus on leveraging the strengths, skills and resources within a community, rather than focusing on its deficits; empowering communities to work collaboratively to address social issues in a way that fosters sustainable and positive change (94). However, critics argue that these approaches can shift responsibility and resources away from the state and onto communities and may inadvertently contribute to inequality and justify cuts to social programmes (94).

In terms of factors that influence the ways in which link workers work with patients, the focus on individual choice and empowerment in social prescribing has been called “fantastical” (26);

individualising health inequities and targeting individual behaviours as the main solution, rather than addressing the fundamental causes of inequities and ignoring the socio-political determinants of health (117). As shown in this review, the material and social circumstances of people's lives can influence their ability to engage in social prescribing. In the context of austerity, where community services and infrastructure may be limited, "choice" and "control" can therefore become misnomers. While those experiencing disadvantage may benefit from social prescribing, this may require a more involved and long-term approach from link workers that supersedes the 6-12 sessions over a three month period typically expected for social prescribing (210). Evaluative research has identified that a lack of cohesion between what is expected in terms of patient turnover and what is needed to support people with challenging life circumstances can become a considerable source of tension for link workers, affecting their job satisfaction and retention (211).

My review highlighted the role stress link workers experience through lack of clear role definitions and professional status. Role stress can occur when individuals face conflicting or incompatible expectations within a role they occupy, or when roles are unclear or poorly understood (212). This strain arises from the challenges of balancing multiple and sometimes contradictory demands and expectations associated with the role. While the reviewed papers suggested that role flexibility appeared to be a requirement for the delivery of person-centred and responsive care, the struggling infrastructure into which the link worker role has been implemented means that this same role flexibility puts the link worker role at risk of being used to fill gaps. A significant policy rationale for social prescribing is its potential to meet unmet needs and contribute to service development in local communities (1), however, gap-filling may expose link workers to more risk and complexity than they are prepared, trained, or compensated for, risking link worker retention (86). In other contexts, it has been cautioned that gap-filling may undermine a profession's attempt at establishing itself and being understood by others (213). This may also make it difficult for link workers to feel valued or respected by colleagues due to the lack of appreciation of the role's unique contribution to healthcare (213).

While the infrastructure that social prescribing and link workers have been implemented into may pose a number of challenges that threaten the sustainability of social prescribing, it is important to recognise that there are examples of social prescribing schemes that have thrived (214,215) and that it can have positive outcomes in people's lives (205). Future research could explore the ways in which link workers navigate the challenges of the structural and material realities they work in to deliver positive outcomes for patients.

3.5.1 Strengths, limitations, and reflexivity

This review is the first to synthesise published qualitative data of social prescribing link workers' experiences of carrying out their social prescribing role in a way that develops a novel theoretical understanding. This is a novel contribution to the literature on social prescribing. A key strength of this review lies in its meta-ethnographic approach. This led to the development of a "line of argument synthesis" which allowed us to move beyond the findings of individual studies to create a novel conceptual framework and theoretical understanding that is more than the sum of the parts included in the synthesis (216). This framework provides a theoretical explanation of how structural tensions and dynamics shape link worker experiences of delivering social prescribing.

As with other qualitative syntheses, my review relied on the interpretations of the original study authors as well as their selection and presentation of study participant quotes (187). I include participant quotes throughout my synthesis to help ensure it was grounded in participant experiences. Meta-ethnography was originally developed for synthesising meaning across ethnographies, which traditionally provide thick descriptions (150,151) of the phenomena they are studying in order to contribute to a broader theoretical understanding. This thick description and focus on meaning supports the development of third order interpretations within a meta-ethnographic synthesis. As Atkins et al. (187) also found, qualitative research in health service research and public health is often more descriptive and applied, focused on providing evaluations and recommendations for policy and practice (217). This meant that third order interpretations may be more dependent on descriptions of themes identified in studies rather than interpretations (187).

Social prescribing and the link worker role both have numerous definitions and operationalisations internationally (43). The search strategy attempted to account for differences in terminology internationally and tried to locate studies on interventions that met the operational definition of social prescribing, but which may not have referred to it as such. However, it is important to acknowledge that my review focused on link worker models of social prescribing which therefore may have limited included papers to those from United Kingdom (UK) settings where this link worker model is now well-established (38).

The studies included in my review were published during a period of significant evolution in social prescribing implementation (2017-2023). This timeframe incorporates some of the earlier conceptions of social prescribing, its formal introduction into the NHS through the Long Term Plan (2019) (48), the Covid-19 pandemic (194), as well as progressive efforts to establish and professionalise the link worker role (218). And while this synthesis did not specifically analyse how link workers' experiences may have evolved over time as social prescribing became more established; it does incorporate perspectives from a crucial time in social prescribing's implementation. Future research could build on the conceptual framework developed in this review to explore whether the structural tensions identified in this synthesis have changed or evolved as the link worker role has become more established in the healthcare system.

This review benefitted from a range of multidisciplinary expertise and insights from social science, clinical practice, and health service, policy, and social prescribing research. This different expertise was helpful in developing the focus of the synthesis, and in the analysis process of translating and interpreting meaning across the different studies. I have research interests in health inequities, the social determinants of health, and the social, economic, and political forces that drive them, which may have had an impact on how study findings were read and interpreted. Emerging findings were however discussed with a lay patient and public involvement group, as well as with a range of key social prescribing stakeholders in order to sense check interpretations as they were developing (169) (see Chapter 2).

3.5.2 Implications for policy and practice

My review highlights a need for greater consideration of how the link worker role is defined, deployed, and trained, and retained, as well the need to ensure that the infrastructure they are being implemented into is ready to support them. The question of link worker retention is particularly pertinent in the broader context of global healthcare workforce shortages, where recruiting and retaining staff in key roles is already challenging (219). Social prescribing models may need to acknowledge the need for more intensive and longer-term modes of delivery to support those experiencing social and economic disadvantage. This may require moving away from short-term outcomes-based approaches to funding and evaluation and towards approaches that capture the complexity and potentially non-linear and longer term nature of patients' social prescribing journeys (31). Further consideration ought to be given to ensuring that appropriate community infrastructure is available and able to receive social prescribing referrals. A failure to acknowledge the wider reality of people and communities means that social prescribing risks not being able to deliver its intended outcomes. Fundamentally, social prescribing should not be considered a substitute for broader social policy changes needed to address health inequities and ensure the equitable distribution of funding to areas and populations of greatest need.

3.6 Conclusion

In this chapter I have synthesised the qualitative literature on link workers' experiences of social prescribing to contribute to the existing literature by producing a novel conceptual framework to understand the factors shaping link workers' experiences of their roles. My synthesis offers a novel theoretical understanding of the link worker role by explaining how structural tensions and dynamics that shape link worker experiences. Link workers experience tension in their roles due to the structural realities into which they have been deployed. These realities are shaped by political and social forces and these tensions link workers experience call into question the sustainability of social prescribing and its ability to deliver on its policy promise to address health inequities. This framework satisfies the aims of meta-ethnography by developing a conceptual framework that offers a novel interpretive understanding of link workers' experiences that reveals previously

unacknowledged connections between wider structural contexts and the ways in which they shape the link worker role. In the context of this thesis, the conceptual framework developed in this chapter represents both a theoretical development as well as an initial framework which I will continue to develop through the research in this thesis. The next chapters of this thesis are going to explore how link workers navigate these tensions and realities to build networks for the delivery of social prescribing and benefit to patients

Chapter 4: Exploring and Characterising Link Worker Professional Networks

4.1 Introduction

In Chapter 3, I identified that link workers experience tension in their role due to the structural realities into which they and social prescribing have been deployed. In this chapter, I explore how link workers undertake a crucial and understudied part of their role—building networks across healthcare and community organisations for the delivery of social prescribing.

The resources available to link workers through their professional networks, have been theorised to be a key mechanism in the success of social prescribing schemes (1). A key aspect of the link worker role is to undertake activities aligned with an ‘asset-based’ approach to community development, as outlined in Chapter 1. This involves working collaboratively with partners from across the health and care system to create referrals pathways, identify and fill gaps in community services provision, and encourage community mobilisation (1,23). Despite the key role that link worker professional networks play in the delivery of social prescribing, to date there has not yet been a study that has explored and characterised link worker professional networks and the ways in which they are built and sustained.

Furthermore, effective social prescribing relies on the availability of local community infrastructure to which link workers can establish relationships and referral pathways. As discussed in Chapter 1, the Inverse Care Law, which describes how people most in need of healthcare are least likely to receive it (220), and has been demonstrated to continue to persist in the NHS today, with GP practices in more deprived areas of England being relatively underfunded, understaffed, and performing less well on a range of quality indicators compared to more affluent areas (118). This inverse service provision law has also been demonstrated to exist in the distribution of voluntary and community sector organisations, with more deprived areas having lower prevalences of third sector organisations (100,101). Existing studies of social prescribing in socially and economically disadvantaged areas highlight that link workers may face challenges when seeking to build sustainable partnerships with

overstretched and underfunded community organisations (17,119). This challenges the idea that social prescribing may work to tackle gaps in local health and community services provision through leveraging community resources and in doing so work to ameliorate health inequalities.

The research presented in this chapter aims to address this gap in the literature by employing a social network analysis approach to systematically explore and characterise link workers' professional networks and the way these are built and sustained for the benefit of patients. It also aims to uncover the ways in which wider contexts of deprivation and organisational setting may shape these processes.

4.2 Aim and Research Questions

I used a social network analysis approach to explore how link workers build and sustain their professional networks for the delivery of social prescribing, and how these processes may be shaped by organisational setting and contexts of deprivation. While the main focus of this thesis is on how link workers and social prescribing operate in areas with high levels of social and economic disadvantage, in this study I also explore how organisational context may impact link workers' networking work. Organisational context was identified as an additional analytical dimension of interest through discussion with social prescribing stakeholders (see Chapter 2) as well as through other work on social prescribing I have been involved with (8–10,84).

The research in this chapter aims to answer the following thesis questions originally outlined in Chapter 2:

Thesis Question 2: What are the experiences and perceptions of link workers around creating networks between primary care to voluntary and community organisations in different settings?

Thesis Question 3: How do link workers build and sustain relationships with VCS organisations for the delivery of social prescribing in areas with high levels of social and economic deprivation?

Thesis Question 5: What support and resources do link workers need to successfully undertake this networking work?

To guide the research in this chapter and answer the questions above, I also developed more specific social network analysis questions:

- 1) How does the composition (characteristics of network alters (221)) of link workers' professional networks vary across different areas of deprivation and organisational setting?
- 2) How do link worker professional network structures (the patterns of the relationships in the network (153)) vary across different areas of deprivation and organisational setting?

4.3 Methods

4.3.1 Study Design and Approach: Social Network Analysis

Social Network Analysis (SNA) is an analytic approach (153), that conceptualises social life as being shaped by social relations and by the patterns formed by these social relations. Social networks are therefore defined as a set of socially relevant actors, or 'nodes', connected by one or more relations, also known as 'edges' (153). Networks are formed by individual agents through intentional and creative actions that contribute to the formation of the web of relationships within a network (134). This web of relationships, then in turn shapes the opportunities for action available to actors within the network (134). SNA looks to explore and understand the opportunities available to actors through their networks, and can help characterise how social relationships among persons, groups, or organisations are established and evolve (154).

The social network research approach comprises theories, methodologies, and methods for mapping, measuring, analysing, and visually representing relationships and structures of networks (155,156). It aims to reproduce the structure of society in analytic terms by representing the structures, or patterns that emerge from interweaving social ties, or relations (134). Social network analysis has a long history, rooted in anthropological and ethnographic research which used systematic approaches to study human interactions through mixing qualitative interviews and field observations with graphical presentation of social patterns (157). Social network analysis has been described as neither qualitative nor quantitative, but instead as structural, relying on multiple approaches to describe the contextual nature of social action and measure social structure (134,135). It has been referred to as being as an inherently mixed methods approach, "*inherently combining both qualitative and*

quantitative elements to create a single source or set of data that is then, typically, further examined using iterative quantitative and qualitative strategies” (222). Quantitative methods are useful for describing and modelling networks, whereas qualitative approaches allow us to describe and contextualise networks. Social network analysis has been applied across a range of healthcare settings for designing and evaluating complex interventions (154), assessing and evaluating cross-sector collaborations for health (223) and investigating the development of trust between actors (158). Throughout this chapter, and this thesis, I use a variety of social network analysis terminology. Table 4 presents key network analysis terms used in this chapter with brief definitions.

Table 4: Key network terms used in this thesis and their definitions.

SNA Term	Definition
Ego	The focal individual whose network is being analysed (the interview respondent).
Alter	The people or organisations in the respondent’s (ego’s) network.
Node	The actors in a network (e.g. people or organisations).
Tie/Edge	The relationship or connection between two nodes in a network.
Egocentric	Focused on the networks of a single respondent (the ego)
Name generator	A survey question to elicit the names of people (alters) in the respondent’s (ego’s) network.
Name interpreter	A follow-up question that collects more detailed data of the people (alters) that the respondent (ego) has nominated (e.g. how long have you known this person?).
Network size	The total number of people or organisations (alters) in the respondent’s (ego’s) network.
Network composition	The characteristics of the people or organisations in the network (alters).
Average degree	The average number of ties per node in the network—a measure of the overall connectivity of a network.
Isolates	Nodes in the network that are not connected to any other nodes.
Subgroup	A subset of nodes in a network that have a dense number of ties amongst themselves.

4.3.1.1 An egocentric network approach

SNA studies are typically concerned with either whole networks or with personal networks, also known as egocentric networks or egonets. Whole network studies focus on a relevant, bounded

population such as a classroom, a sports team, or an organisation. They aim to collect network data on and from all members of that population, seeking to establish the existence of edges (connections/relationships) between all the nodes in the population. On the other hand, egocentric networks (also known as egonets) are the networks which form around a focal individual social actor (ego). Egocentric studies collect data relating to the ego, and the people, or 'alters' that ego includes in their network, as well as the ties or edges between alters as perceived by ego (134). This study was concerned with the ways in which link workers establish their professional networks for the delivery of social prescribing. I therefore adopted an ego-centric approach to allow me to study how individual link workers across different contexts build, sustain, and negotiate their networks. It is important to note that these ego-networks are the link workers' perceptions and interpretations of their relationships and the relationships between others in their network. These cognitive representations (ego-networks) may not necessarily reflect objective network structures (224) but they are valuable because they shape how link workers navigate their social networks and understand the opportunities available to them in their role.

4.3.2 Sampling and Recruitment

I recruited a purposive sample (225) of link workers working in both advantaged and disadvantaged areas of England, as defined by the Indices of Multiple Deprivation (IMD) (104) of the GP practice at which they were primarily based. I employed principles of maximum variation sampling, aiming to ensure that the sample included link workers from a range of settings (e.g. rural or urban); sectors (based in primary care or the community sector); and with different levels of experience. I did this to enable me to explore a wide range of link worker perspectives and to identify both differing and shared patterns across the sample (226).

My recruitment strategy employed the principle of information power (227), which indicates that the more information the sample holds relevant for the study, fewer participants are needed (227). I ascertained this through reflecting on the information richness of my dataset and how it aligned with the aims and objectives of my study (127) in discussion with my supervisors.

Link workers were recruited through a study advertisement (see Appendix 3) that was circulated through the Social Prescribing Network newsletter sent out in October 2022 and on the social media platform formerly known as Twitter. The Social Prescribing Network (SPN) (228) is a national body that connects people interested in social prescribing, with organisations and other groups to facilitate knowledge exchange. Forty-four potential participants responded to the study advertisement, and from those who expressed an interest I purposively selected participants to ensure variation across socioeconomic and geographical settings and organisational contexts, and experience levels. I conducted the recruitment of participants iteratively, where I reviewed the developing sample and targeted underrepresented categories (for example by sending out additional reminder emails to participants who had expressed an interest and who also possessed underrepresented characteristics) to help ensure my sample achieved variation.

Although the recruitment materials were circulated both via Twitter and the SPN mailing list, all participants who took part in my study were recruited through the SPN. This recruitment route may have favoured link workers who were already engaged in professional or academic networks relating to social prescribing and who therefore may have a particular interest in research or service development. My study sample may therefore underrepresent link workers working in more isolated settings or those less connected to national networks. However, my recruitment approach also helped ensure I had access to participants across the country with varied experiences across different regions and organisations.

4.3.3 Data Collection and Handling

4.3.3.1 Network Canvas

I collected the ego professional network data of the link workers using Network Canvas (229). Network Canvas is an innovative, open-source software package for collecting social network data (230). It has been designed to provide an accessible, engaging, and interactive interface for data collection (231). Network Canvas' development was informed by the principles of participant-aided sociograms, an interview-based data-collection procedure for social network analysis (232). The Network Canvas suite includes two key tools: *Architect*, an application through which the researcher

visually designs interview protocols; and *Interviewer*, an application through which the researcher administers the interview to study participants in a controlled environment (231). Network Canvas is designed with ontological flexibility, allowing the researcher to freely define the nodes and edges in their interviews, their attributes, the sequence of the different interview stages and data collection tasks, as well as the way in which the interview tasks are explained to the participant (229,231).

4.3.3.2 Designing the Interview Protocol and Network Questions

Social networks are highly context specific (134). I therefore nested the network specific questions within a broader semi-structured interview allowed me to elicit link worker narratives about how link workers undertook their roles more broadly, the contexts within which they worked, as well as the ways in which they undertook the networking aspect of their roles (see Appendix 4 for the full interview protocol). These narratives provided data to understand the opportunities and constraints available to them by virtue of their networks. The network questionnaire included structured interactive ways of eliciting network information, as well as free-flowing semi-structured questions about the wider context of working as a link worker. A description of the different stages of the interview is described below and a diagram illustrating the flow of the interview its different stages is depicted in Figure 6.

The development of the interview schedules were informed by the existing literature on social prescribing, including findings from the meta-ethnography described in Chapter 3, as well as by the literature on the development of social network analysis interviews (221). These informed the overall structure, sequencing, and content of the network and qualitative interview questions. While PPI was a key feature of the overall project (see Chapter 2), specific PPI input was not sought for the development of this interview schedule. Instead, it was felt that insight from link workers themselves would be most valuable in helping to shape this interview schedule. Early conversations with practising link workers while this study was being conceptualised helped refine the focus and phrasing of the interview questions to ensure their relevance. I then piloted the schedule in the first five interviews, after which an additional name generator question was added relating to other link workers in participants' networks, as described later in this chapter.

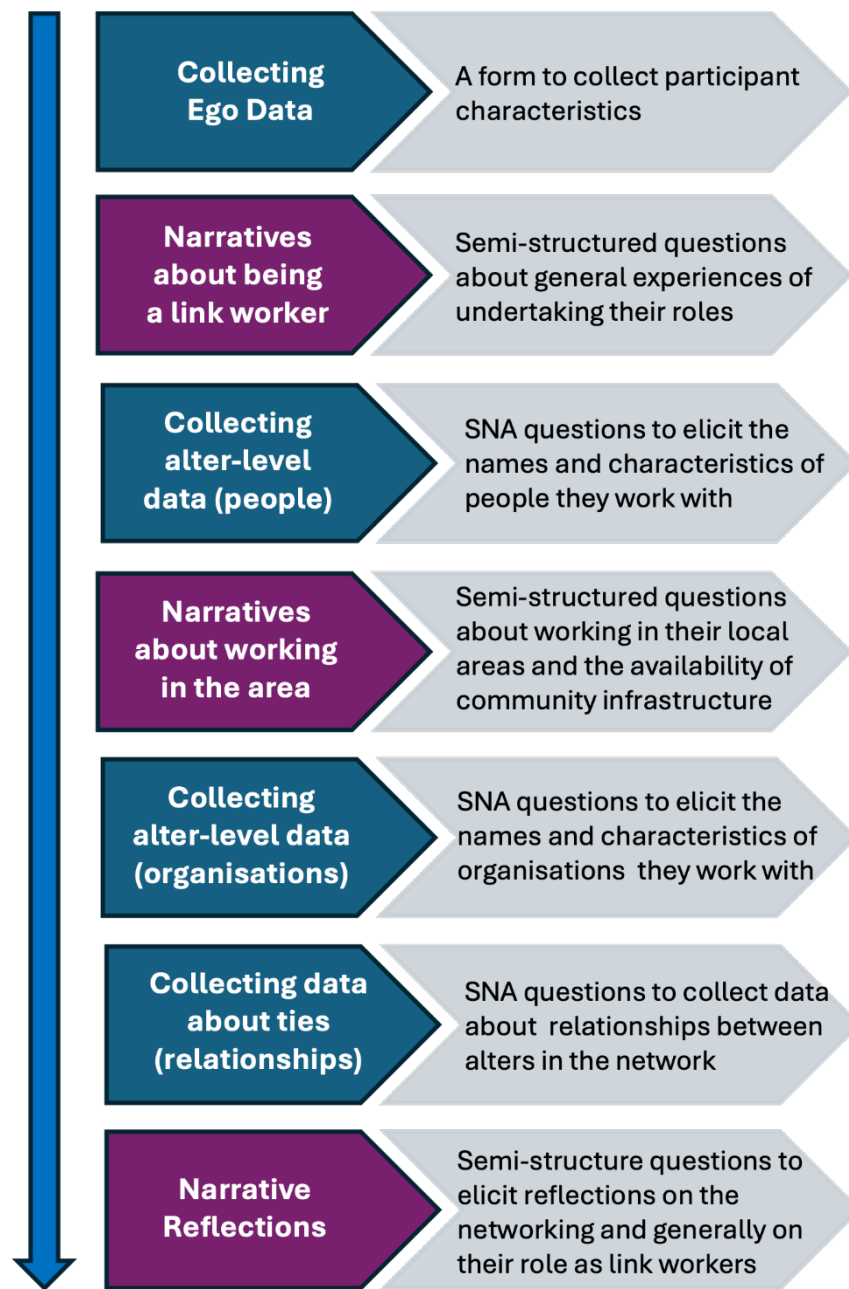


Figure 6: Flow diagram of the different interview stages. SNA stages are indicated in blue boxes and qualitative stages are indicated purple boxes.

4.3.3.3 Collecting Ego Level Data

The first stage of the interview collected ego-level data (i.e., the participant attributes of each link worker). The form (Figure 7) asked participants to provide the following: their age; their gender; their sex as assigned at birth; their ethnic background; the highest level of education they had

completed; the setting they worked in before they became a link worker; the amount of time they have been employed as a link worker (measured in months); whether they worked in an area with high, low, or mixed levels of social and economic deprivation; the kind of organisation they were employed by (Primary Care Network, Voluntary and Community Sector Organisation, or Other); whether they worked full-time or part-time; and the number of people they thought they currently have on their caseload.

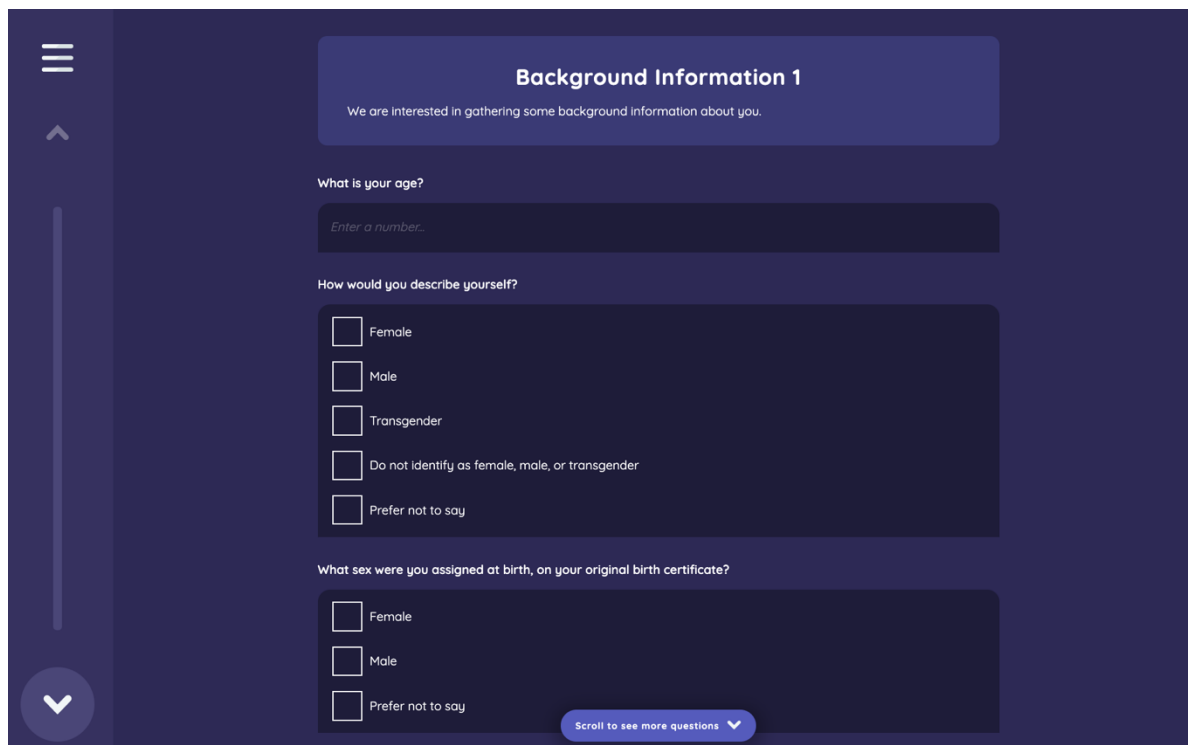
The image shows a mobile application interface for a survey form titled "Background Information 1". The form is set against a dark blue background. At the top, there is a header with the title and a sub-header: "We are interested in gathering some background information about you." Below this, the first question is "What is your age?", followed by a text input field with the placeholder "Enter a number...". The second question is "How would you describe yourself?", with five radio button options: "Female", "Male", "Transgender", "Do not identify as female, male, or transgender", and "Prefer not to say". The third question is "What sex were you assigned at birth, on your original birth certificate?", with three radio button options: "Female", "Male", and "Prefer not to say". At the bottom right, there is a button that says "Scroll to see more questions" with a downward arrow. On the left side of the screen, there is a vertical navigation bar with a hamburger menu icon at the top, an upward arrow, a vertical line, and a downward arrow at the bottom.

Figure 7: The Network Canvas form used to collect ego-level data

4.3.3.3.1 Collecting Alter-Level Data

4.3.3.3.1.1 Name Generators

Social connections were elicited via a set of name generators, which are survey items that ask respondents to name a certain number of other actors with whom they share a particular type of social relation (233). Name generators are used extensively in ego-centric network research and are reliable means of eliciting the alters with whom the ego has repeated and salient interactions (221). Choosing what name generator to use can have important implications for the validity, reliability, network data, and measures (221,233). Valid networks are ones that include all the individuals whose membership

affects the phenomenon of the study's interest and exclude those who do not from the perspective of the respondent (233).

The choice of name generator questions used in this study was informed by the insights gained from conducting the systematic literature review described in Chapter 3, through knowledge gained through meetings with key social prescribing stakeholders as described in Chapter 2, as well as through the knowledge that I have gained through working in social prescribing research since 2019 (2,4,25). The name generator questions were deployed in two main stages with one stage focusing on alters that were people, and the second focusing on alters that were organisations.

For eliciting the names of people, participants were asked the following name generator questions:

- 1) Tell me who the people are that you knew before this role, but that you are still in contact with about work?
- 2) Can you tell me the names of the important people that you have formed working relationships with since starting your role as a link worker?
- 3) Can you name any people that do the same job as you?¹
- 4) Tell me who you still need to form working relationships with to help you perform your role better?
- 5) Which people have you made referrals or signposted to in the last 6 weeks?
- 6) Which people have made referrals to you in the last 6 weeks?
- 7) Who do you go to for advice and support?
- 8) Which people do you work with to create new services locally?

To identify the organisations in link workers' networks, I asked them the following name generator questions:

- 1) Can you tell me the names of the organisations that you have worked with in the last two months?
- 2) To what organisations have you referred or signposted people to in the last 6 weeks?

¹ This question was only added to the protocol after piloting the interview schedule in the first five interviews. See main text for further discussion.

- 3) What organisations do you think you could refer someone but have not yet?
- 4) Which organisations make referrals to you in the last 6 weeks?
- 5) Which organisations do you work with to create new services locally?

The name generator questions were designed to capture as many of the link worker's professional network alters as possible. The use of multiple name generators can help provide a more reliable account of an ego's actual network (221,233,234). The questions recognised the key aspects of the link worker role, including making and receiving referrals, working to develop services locally (1), as well as exploring the support they receive which is known to vary considerably across settings (25).

Some of the questions were deliberately broad, for instance the question about naming 'the important people that you have formed working relationships with'. This was done to gain an understanding of what link workers themselves considered important and allowed me to generate narratives through probing questions asking them to explain why these people were important. Interview participants were asked to name their alters by first name only (with an additional initial if necessary) to help protect participant personal data (221).

The Network Canvas platform recognised that certain alters may need to be nominated in multiple name generator questions (221,233), for instance, an alter might be both an important work contact, as well as someone link workers make referrals to. Each name generator question therefore allowed the participants to select alters nominated in a previous name generator to be added to the latest question, by listing them in a side panel (Figure 8). After the participant listed alters for each name generator question, I made sure to allow a brief pause followed by the prompt 'Anyone else?', which can increase the probability of participant alter recall (235).

Question 3 asked participants to nominate anyone they knew that did the same job as them, i.e. was also a link worker. This question was only added to the protocol after the first five interviews when it became apparent that if a link worker nominated many other link workers, the eliciting ties stage of the interview would become quite burdensome for both the participant and the interviewer (see

section on *'eliciting ties between alters'* for a more detailed explanation). It also became apparent that having other link workers in their professional networks could be a variable of interest worth investigating further. This question was therefore added both to be able to attach a variable to these link worker colleagues as well as filter them from different stages of the interview.

Respondents could name as many people as they wanted to in each of the name generators. However, in order to help the network, and in turn minimise respondent burden (221), the name generator questions relating to referrals and number of organisations worked with were limited to a timeframe of 6-weeks and 2-months respectively. These time frames were chosen as they were considered to be able to adequately capture typical link worker activity in a way that was meaningful for the research questions, based on discussions with key social prescribing stakeholders.

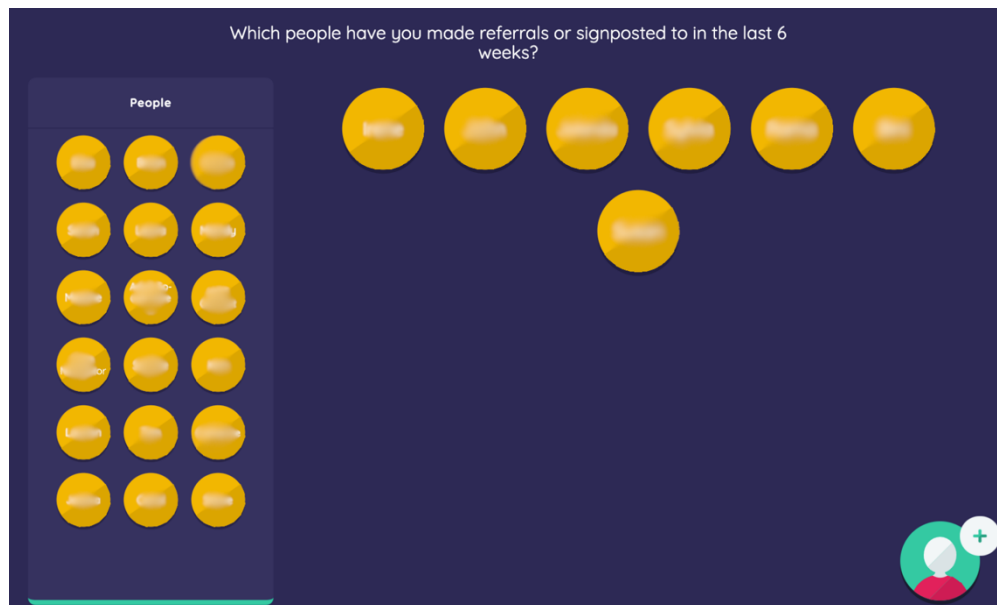
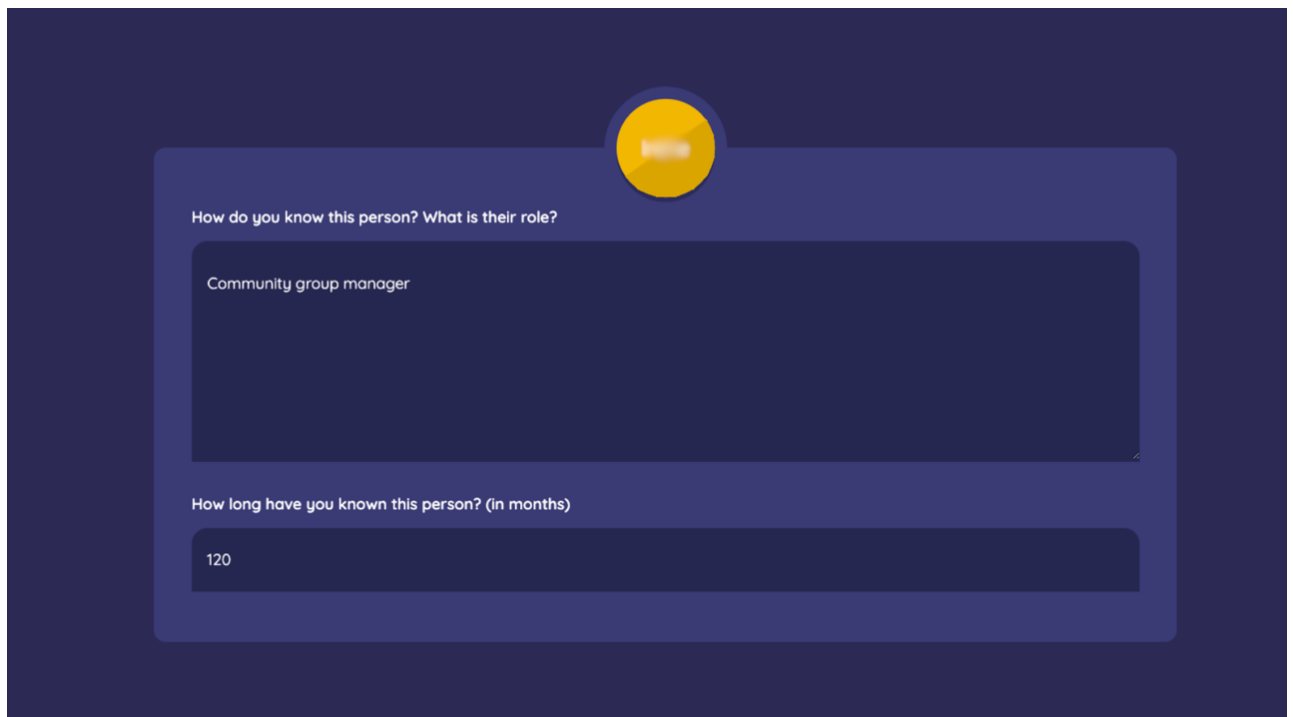


Figure 8: Name generator question in Network Canvas featuring a side panel listing alters that had been nominated in a previous name generator question. The names of alters have been blurred to protect participant anonymity.

4.3.3.3.1.2 Eliciting alter characteristics

Link workers were asked to provide information about each contact they nominated. These characteristics were elicited through a range of interactive interview stages, or name interpreters (221), which followed the name generator questions. The alter characteristics collected were: the sector in which the person or organisation was based, this was elicited through a ‘drag and drop’ activity where alters names were sorted into four different categories indicating their sector of work; how they knew this alter and how long they had known them for, elicited through a free text box entry; and their frequency of contact or in the case of organisations; and the frequency of referrals, also collected through a drag and drop activity. See Figure 9 and Figure 10, which display the different alter characteristic data collection activities.



The image shows a screenshot of a digital interface for data collection. At the top center, there is a yellow circular button with a white play icon. Below it, the interface is divided into two sections. The first section has the question "How do you know this person? What is their role?" and a text input field containing "Community group manager". The second section has the question "How long have you known this person? (in months)" and a text input field containing "120". The entire interface is set against a dark blue background.

Figure 9: Network Canvas activity for eliciting alter characteristics. Drag and drop activity where alters names were sorted into four different categories indicating their sector of work.



Figure 11: Network Canvas activity for eliciting alter characteristics. Drag and drop activity where alters names were sorted into four different categories indicating their sector of work.

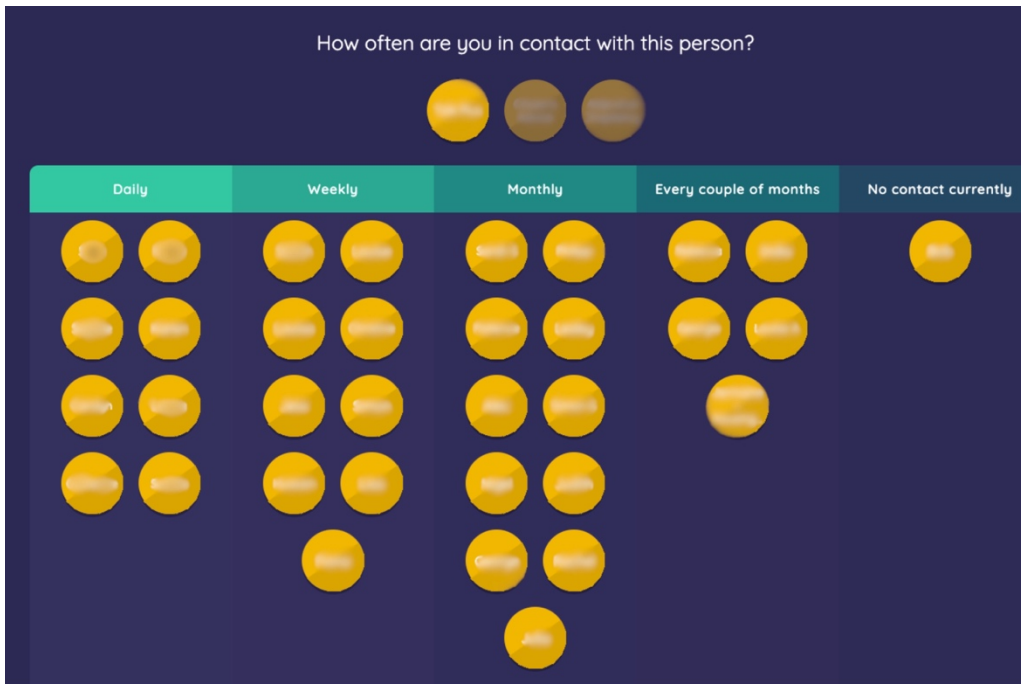


Figure 10: Network Canvas activity for eliciting alter characteristics. Drag and drop activity for the frequency of contact to a particular alter. The names of alters have been blurred to protect participant anonymity.

I collected data on frequency of contact for each alter as a potential indicator of tie strength. These data were not analysed quantitatively, as the primary focus of this study was to describe the structure and composition of link worker professional networks. This information, however, was used qualitatively, to help contextualise participants' accounts of their relationships, encouraging them to think about the perceived usefulness, trust and reliability of their different contacts. These dimensions were then captured in the qualitative analysis discussed later in this chapter.

4.3.3.3.1.3 Eliciting ties between alters

The final stages of the network interview involved asking participants about the relationships between the alters they identified in their networks. While some argue that it is not possible for egos to be able to report accurate alter-alter tie data (connections between the people in the respondent's network) (221), this proved valuable in establishing perceived network dynamics from each ego's perspective. This study was concerned with the ways in which link workers build and sustain their networks, and was fundamentally interested in what link workers' perceptions of their networks are.

Participants were asked to place the alters they had nominated on a sociogram—a graphic representation of their social network (232). Participants were walked through a series of prompts in Network Canvas through which they added alters onto the sociogram. First, they were asked to place

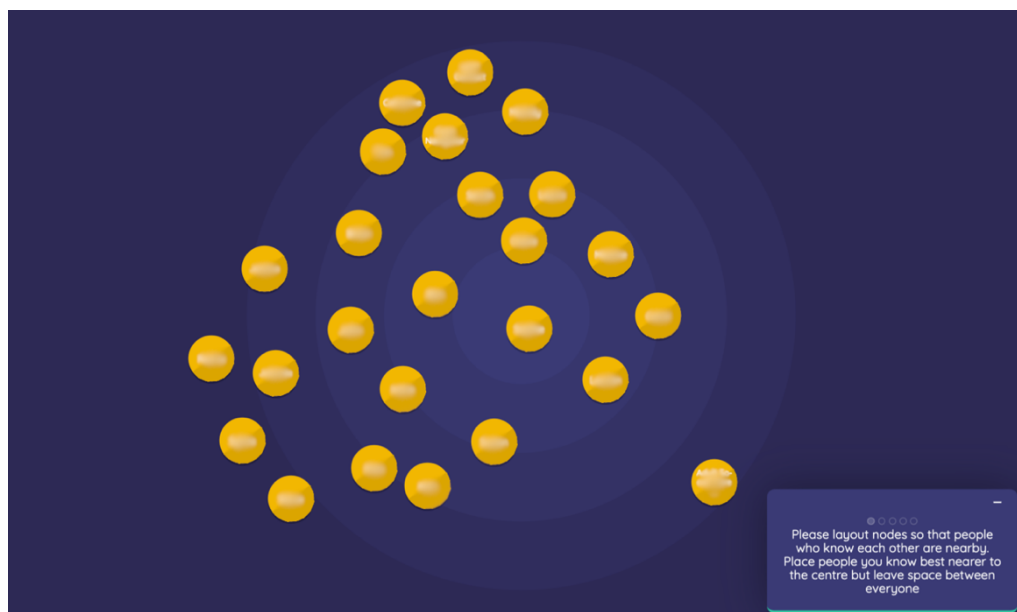


Figure 12: Sociogram placement of alters in Network Canvas. The names of alters have been blurred to protect participant anonymity.

each alter onto the sociogram, placing alters who knew each other close together, wherever possible (see Figure 12).

Then, they were asked to connect each of the alters based on the existence of the following relationships between them—if they worked together generally, if they go to each other for advice and support, if they worked together to help create service provision, and if they make referrals to each other (see Figure 13).

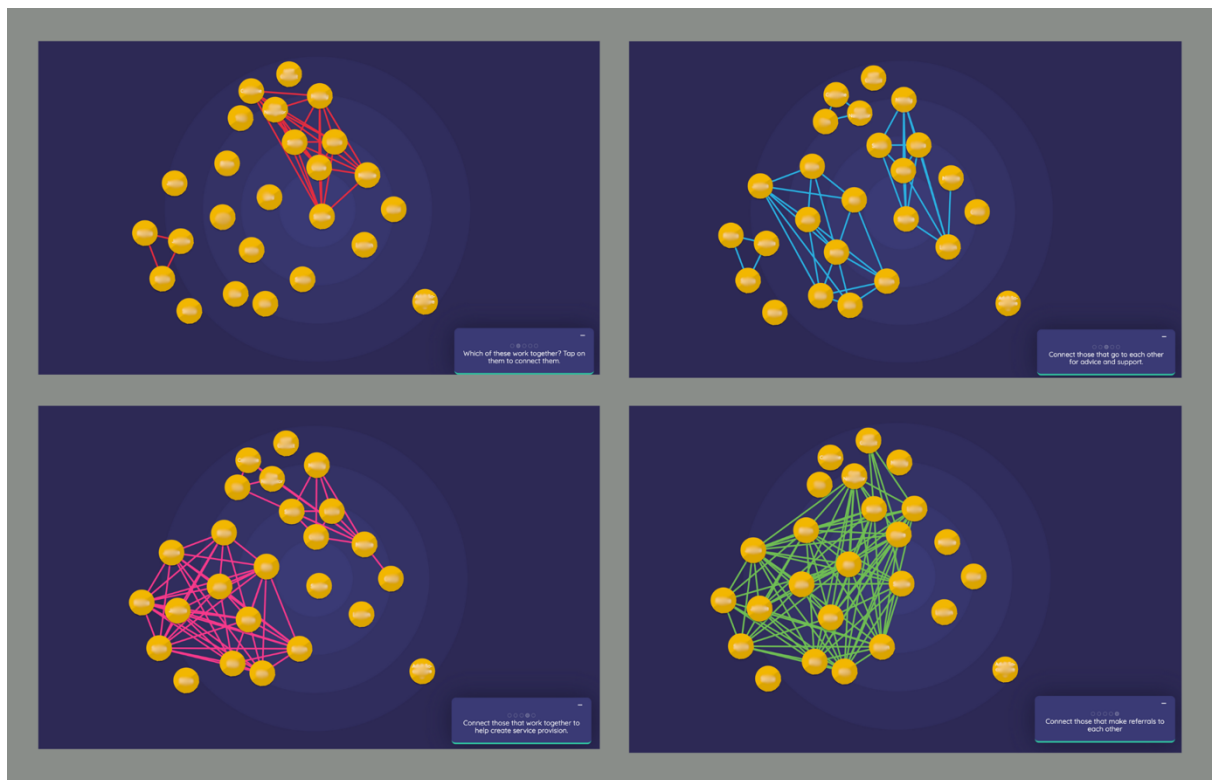


Figure 13: Sociogram tie elicitation activity. The names of alters have been blurred to protect participant anonymity.

Once all the alters who were people were placed onto the sociogram and their relationships drawn, participants were then asked to place the organisations in their network onto the sociogram. This was done with the following prompt: *'Please add organisations. Place them near people who are associated with the organisation (if present). Leave space between the nodes.'* Then, they were asked to connect the people and organisations by linking them based on the following relationships— if a person worked for an organisation, and any referrals between the people and organisations.

As mentioned in the name generator section, it became apparent that if a link worker nominated many other link workers, the sociogram stage of the interview would become quite burdensome. This is because each link worker in the network was likely to be connected to most if not all other alters nominated, necessitating manually connecting each link worker to every other node in the network. This proved to be both time consuming and burdensome for the participant and for me as an interviewer. I therefore made the decision to exclude other link workers nominated by the interviewees from the sociogram stage of the interview.

Excluding other link workers from the network analysis has implications for the analysis and interpretation of findings. The reported network metrics (average degree and subgroup cohesion), represent a conservative estimate of overall connectivity. If link workers were included the networks would likely appear larger and denser. To avoid overestimations of network fragmentation, the number of isolates reported in the networks accounted for the absence of link workers at sociogram stage of the interview. However, excluding other link workers in the network also allowed the research to focus on how ego (the responding link worker) builds networks across organisations rather than overrepresenting (through increased network metrics) the role that other link workers may play in professional networks. I was also able to explore correlations between the number of link workers nominated in a network and the total number of other contacts nominated. This exclusion therefore does not diminish the study's aim to explore how link workers connect with external professionals and organisations for the delivery of social prescribing. The collection of qualitative data also allowed me to explore the role that other link workers play in the networks ensuring that these relationships were still captured.

4.3.3.4 Administering the Social Network Interview

I conducted all the interviews online via Microsoft Teams between October 2022 and March 2023. I did this by sharing my screen with the interview participants and worked with them to add their responses to Network Canvas. I sent participants the network questions ahead of the interview so that they could familiarise themselves with the questions and begin the process of thinking about their networks (236). Participants were encouraged to “think aloud” while completing the network

tasks. They were asked to describe their reasoning for nominating alters as well as explain or clarify the relationships between them. This provided valuable qualitative context for interpreting network structures.

Conducting the interviews through Microsoft Teams facilitated participation from link workers based across England, making it feasible to include a geographically and organisationally diverse sample within a limited timeframe. It also allowed participants to join from their own workspaces, where they had access to organisational materials or contacts lists, which sometimes aided recall during network mapping. By sharing my screen on Teams I was able to guide participants through the Network Canvas interface collaboratively, creating an interactive experience similar to the in-person construction of socio-grams (232). However, conducting interviews remotely occasionally had some limitations such as minor interruptions due to drop in internet connectivity. The absence of physical presence may have had an impact on the building of rapport or reduced opportunities for informal conversation. Non-verbal cues may have also been harder to interpret in the context of the online interview while sharing my screen. However, existing research comparing in-person and online qualitative interviews has found no difference between the two approaches when considering conversational involvement or data quality (237).

Each interview lasted between 45 and 120 minutes and was usually completed in a single sitting during the link workers' normal working hours and usual place of work (for some this was at home and for others this was a GP practice or an office in a VCS organisation). However, for three participants, interviews were conducted across two sittings due to time constraints or unforeseen interruptions. In these cases, the second sitting took place within one week of the first. To help ensure continuity and consistency these participants were provided with a brief recap of their earlier responses before resuming the interview and network activities. Participants were offered a £10 voucher as a token of thanks for taking part in the study. All interviews were audio recorded and professionally transcribed verbatim.

4.3.4 Analysis

4.3.4.1 Organising network data

After collecting the network data in link worker interviews, I cleaned and compiled them into Microsoft Excel using Python. For the quantitative analysis, I calculated descriptive statistics of ego and alter attributes. I used the *Networkx* package in Python to calculate network measures. Network measures have specific sociological meanings, meaning that certain mathematical or structural features reflect particular social dynamics. Each of these measures therefore contribute to our understanding of the ways in which a specific network develops and become structured (238). I employed a combination of compositional and structural cohesion metrics to provide a comprehensive analysis of the link worker networks. These are described in detail later. Using a combination of metrics allowed me to triangulate my analysis for a multidimensional understanding of link worker networks.

Because I added an additional question after interviewing the first five out of the 21 link workers (asking them to nominate other link workers in their network), I analysed the network data collected before and after adding this question. My purpose with this analysis was to determine if adding this question had a significant impact on the total average number of link worker alters nominated as well as the total number of overall alters nominated (and if, for analysis purposes, the two groups could reasonably be treated as coming from the same population). For this analysis, I used a two-tailed Mann-Whitney U test, a nonparametric statistical test that is used to compare the differences between two independent groups with small sample sizes ($n < 30$) and when data are unlikely to be normally distributed (239). The significance level was set at $\alpha = 0.05$.

4.3.4.1.1 Network Composition Measures

Network Size – the total number of alters in an ego’s network. This captures the overall scale of each ego’s network.

Network composition – the characteristics and attributes of the alters in an ego’s network. These are calculated using descriptive statistics across variables of interest, such as area deprivation, or

employing organisation. These statistics provide an overview of the characteristics of the people (alters) to whom link workers connect.

4.3.4.1.2 Network Structure and Cohesion Measures

Average degree – a measure of overall network cohesion or connectivity. It measures the average number of connections per node in a network (221). Networks with a higher average degree tend to be more robust, meaning that if nodes were to be removed from the network, the network would likely remain well connected. Having a higher average degree may also help information flow and collaboration through the network to run more smoothly (153,221).

Number of isolates and proportion of isolates in the network – isolates are alters who do not have connections to anyone else in the network other than ego (221). Networks with a high numbers or proportions of isolates in them can take considerable time and effort to maintain and can be more fragile (221).

Subgroup Detection – identifying cohesive subgroups or clusters of nodes (members) in a network that have strong internal connectivity. Large and cohesive subgroups within networks can be indicators of overall network stability (240).

I employed an analysis (K-core decomposition) that identifies cohesive clusters (tightly connected groups of nodes) or subgroups within each network. This analysis identifies three key things in each network.

First, it identifies the highest (maximum) k value—this reveals the most densely connected cluster in the network. If the highest K value of a network was 7, it would mean that to be a part of that most densely connected cluster, nodes would need to have at least 7 connections to the other nodes in that same cluster.

Second, it tells us the size of the most connected cluster telling us how many members of the network belong to the most densely connected cluster.

Third, the analysis also tells us the distribution of all of the network members across different levels of connectivity in the network. Not all nodes in the network will be members of the most densely connected cluster, but they may be part of less densely connected portions. This is usually reported as {cluster K value : number of members}.

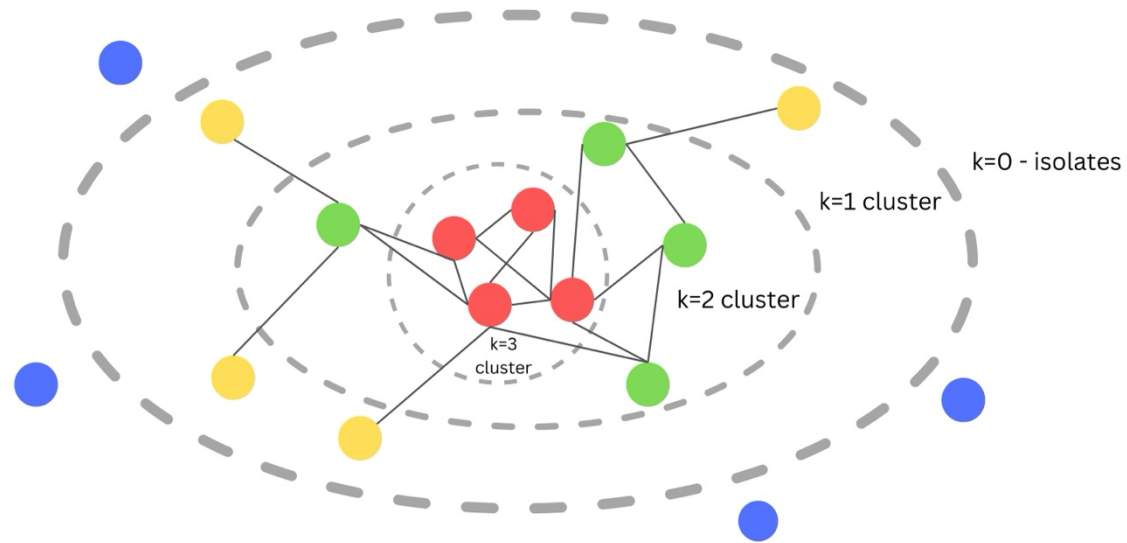
For example {1:4, 2:5, 3:2, 4:8}—this means that four nodes in the network have at least one connection (but fewer than two), five nodes have at least two connections (but fewer than 3), two nodes have at least three connections (but fewer than 4), and eight each have at least four connections to others in the most densely connected cluster (subgroup). In this example, the network has a total of 19 nodes (4+5+2+8), with the k=4 cluster being the most densely connected portion of that network. A visual illustration of this analysis can be found in Figure 14.

In the context of link worker networks, subgroups/clusters may represent organisational boundaries. For example, nodes representing staff within a PCN might form a distinct core due to their likelihood to have numerous relationships and interactions.

4.3.4.2 Qualitative Interview Data

Qualitative interview data was managed and analysed in NVivo 12 (241). For the analysis of the qualitative interview data, I employed a reflexive thematic approach (127). The first step in this process involved familiarising myself with the data by reading through the interview transcript and looking for points of analytic interest. I then inductively developed initial codes to help capture, describe, and characterise micro-differences in the dataset. After this initial coding, I then clustered these codes together into broad patterns of meaning, allowing me to develop themes which described link workers' experiences of building and sustaining their networks and key contextual factors that shape these processes. I undertook the coding and analysis of the qualitative data independently. I regularly shared the data and discussed the codes and themes I was developing with my supervisory team to enhance the rigour of my analysis and reflexivity. I also presented my emerging findings at a stakeholder engagement workshop (previously discussed in Chapter 2) which included members of the public as well as link workers, social prescribing researchers, and representatives from the VCS. In this workshop the idea that link workers engage in “firefighting” (working to tackle

emergencies relating to basic needs such as housing, finances, food, and heating) emerged, and informed my analysis of link workers spanning systemic gaps (see 4.4.5.2).



<p style="text-align: center;">Analysis</p> <p>Max k = 3 - represented by the red nodes which form the most densely connected cluster (subgroup) in the network.</p> <p>Max k-cluster size = 4 - the biggest subgroup (with max k=3) in the network has 4 nodes in it.</p> <p>Distributions = (0:4, 1:12, 2:8, 3:4): 4 nodes in this network are isolates (purple nodes) and for them k=0. 12 nodes in the network belong in the k=1 cluster, 8 nodes (green and yellow nodes) belong in the k=2 cluster 4 nodes (red nodes) belong in the densest k=3 cluster</p>	<table border="0"> <tr> <td style="text-align: center; vertical-align: middle;">●</td> <td style="padding-right: 10px;">Isolates (k=0)</td> <td style="text-align: center; vertical-align: middle;">●</td> <td style="padding-right: 10px;">1- Cluster (k=1)</td> </tr> <tr> <td></td> <td style="padding-right: 10px;">Nodes with no connections to others in the network</td> <td></td> <td style="padding-right: 10px;">All nodes have at least 1 connection in this core</td> </tr> <tr> <td style="text-align: center; vertical-align: middle;">●</td> <td style="padding-right: 10px;">2- Cluster (k=2)</td> <td style="text-align: center; vertical-align: middle;">●</td> <td style="padding-right: 10px;">3- Cluster (k=3)</td> </tr> <tr> <td></td> <td style="padding-right: 10px;">All nodes have at least 2 connections in this core</td> <td></td> <td style="padding-right: 10px;">All nodes have at least 3 connections in this core</td> </tr> </table>	●	Isolates (k=0)	●	1- Cluster (k=1)		Nodes with no connections to others in the network		All nodes have at least 1 connection in this core	●	2- Cluster (k=2)	●	3- Cluster (k=3)		All nodes have at least 2 connections in this core		All nodes have at least 3 connections in this core
●	Isolates (k=0)	●	1- Cluster (k=1)														
	Nodes with no connections to others in the network		All nodes have at least 1 connection in this core														
●	2- Cluster (k=2)	●	3- Cluster (k=3)														
	All nodes have at least 2 connections in this core		All nodes have at least 3 connections in this core														

Figure 14: Visual illustration of k-core decomposition analysis.

4.3.4.3 Integrating the Network Data and Qualitative Components

After I analysed the quantitative network data and qualitative interview data separately, I then integrated these data to gain a more complete understanding of how link workers construct and navigate their networks (242).

I constructed a joint-display (243,244), where I listed key findings from each of the different methodological components side by side. In the joint-display, I organised the findings according to the two analytical dimensions of interest in this study—area deprivation and employing organisation, as well as an additional column to capture crosscutting findings. For each dimension I listed the key findings from the quantitative and qualitative components of the study in a way that allowed me to explore how different concepts in the dataset related to each other. I sought to identify instances of convergence where network findings corroborated qualitative findings, or where qualitative findings explained network patterns. I also explored if there were any instances of divergence that might further interpretation. Displaying and comparing the data side-by-side in this way allowed me to integrate them in a way that produced a novel understanding of link worker networking.

4.4 Results

4.4.1 Participant (Ego) Characteristics

I interviewed twenty-one link workers. Most identified as White British (n = 14, 66.7%); the remaining participants identified as Other White (14.3%), Mixed – White and Black Caribbean (4.8%), African (4.8%), White Irish (4.8%), and Pakistani (4.8%). Participants were aged between 24 and 62, with a mean age of 41. Most link worker interviewees identified as female (n = 18); only three identified as male. Interviewees varied in terms of the amount of time they had been working as link workers, ranging from four months to nine years (median = 2 years). Fifteen interviewees worked in areas with high levels of social and economic deprivation; three worked in areas with low levels of disadvantage; and three worked in areas with a mixture of high and low levels of disadvantage. Fourteen interviewees were employed by PCNs, five were employed through

voluntary and community sector organisations, and two were employed by ‘other’ organisations (in these cases, directly through the GP practice rather than the PCN). In terms of their previous employment background, before undertaking the role of a link worker, eight had previously worked in VCS organisations, six had previously worked in healthcare, and seven had worked in “other” organisations. Most interviewees (n = 20, 95%) had achieved a college or university level education or higher.

Fourteen of the interviewees were employed as link workers on a full-time basis. The number of patients on each interviewee’s link worker caseload varied between 12 and 150 patients (median = 31). Caseload data are reported in absolute terms as reported by participants rather than by full-time equivalent (FTE) or PCN size. While I collected data on whether link workers were employed full-time or part-time, I did not collect precise FTE figures. There is also significant variation in terms of the number of link workers employed by different PCNs and by different GP practices nationally (85). Caseload reported here therefore reflect individual workload rather than workload adjusted by FTE or PCN size. Caseload comparisons should therefore be interpreted cautiously, recognising that differences may partly reflect variation in local workforce composition.

Participants varied geographically, with most regions of England being represented in the sample. Table 5 summarises participant characteristics. Despite efforts to ensure representation across the sample as described previously in section 4.3.2, link workers in affluent and rural areas were comparatively few, and those not connected to national professional networks may have been less likely to encounter the study advertisement. This may have resulted in underrepresentation of link workers working in more isolated practices.

Table 5: Participant characteristics

ID	Age	Gender	Ethnic background	Highest Education	Time in Post (months)	Region	Area Disadvantage (according to IMD of GP Practice)	IMD of GP Practice	Employing Organisation	FTE
LW01	24	F	White British	College or University	5	Southeast	high	1	VCS	Full time
LW02	61	M	White British	Postgraduate	9	East	high	2	PCN	Full time
LW03	27	F	White British	College or University	24	Southwest	mixture	3	VCS	Full time
LW04	24	F	White British	Postgraduate	11	Northwest	low	8	PCN	Part time
LW05	24	F	Mixed - White and Black Caribbean	College or University	20	London	high	2	PCN	Full time
LW06	27	F	White British	Higher Secondary	17	Southwest	high	1	PCN	Full time
LW07	55	F	White British	College or University	23	Northeast	high	1	PCN	Full time
LW08	34	F	White British	Postgraduate	30	Southeast	high	3	PCN	Full time
LW09	32	F	White British	Postgraduate	24	Southwest	high	1	PCN	Part time
LW10	49	F	Pakistani	College or University	37	Northwest	high	1	PCN	Full time
LW11	35	F	White Irish	Postgraduate	30	Northwest	mixture	3	PCN	Full time
LW12	47	F	White British	College or University	10	London	low	7	VCS	Part time
LW13	47	F	African	Postgraduate	12	Northeast	high	1	PCN	Full time
LW14	40	F	White British	Higher Secondary	36	Southwest	high	1	PCN	Full time
LW15	25	F	Other White	Postgraduate	4	Southeast	high	2	PCN	Full time
LW16	37	F	Other White	Postgraduate	108	London	high	2	Other	Part time
LW17	53	M	White British	College or University	36	Northwest	high	1	PCN	Full time
LW18	51	F	White British	Postgraduate	34	Northwest	high	3	PCN	Full time

ID	Age	Gender	Ethnic background	Highest Education	Time in Post (months)	Region	Area Disadvantage (according to IMD of GP Practice)	IMD of GP Practice	Employing Organisation	FTE
LW19	62	F	White British	College or University	33	West Midlands	low	7	Other	Part time
LW20	37	M	Other White	Postgraduate	24	Southwest	mixture	5	VCS	Part time
LW21	61	F	White British	Postgraduate	18	East	high	1	VCS	Part time

4.4.2 Establishing a single link worker sample

As described in the analysis methods, I added a name generator question after interviewing the first five link workers (asking them to nominate other link workers in their network). I used a two-tailed Mann-Whitney U test to compare both the total number of alters nominated by each link worker before and after adding this question and the total number of link workers nominated by each link worker before and after adding this question.

To control for the fact that the first five link workers interviewed were not specifically asked to nominate other link workers in their network, I conducted a two-tailed Mann-Whitney U test. The test compared the distribution of the total number of alters nominated and the distribution number of link workers nominated between two groups: those were not specifically asked to nominate other link workers ($n = 5$) and those who were ($n = 16$) (Table 6).

There were no significant differences in the total number of alters each participant nominated before and after adding this question ($Z = -1.239$ $p = 0.215$) or in the number of link worker alters each participant nominated ($Z = 1.833$ $p = 0.067$) see Table 7 for full statistics. Given that the additional question did not significantly impact the total number of alters nominated or the number of link workers alters they nominated, I was able to treat the two groups (before and after adding the question) as coming from the same population for analysis purposes.

Table 6: The Mann-Whitney U Test

		Ranks		
	LW Question	N	Mean Rank	Sum of Ranks
Total Number of Alters	No	5	8.00	40.00
	Yes	16	11.94	191.00
	Total	21		
LW Alters Nominated	No	5	6.60	33.00
	Yes	16	12.38	198.00

Total	21		
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Table 7: The Mann-Whitney U Test Statistics

Test Statistics^a

	Total Number of Alters	LW Alters Nominated
Mann-Whitney U	25.000	18.000
Wilcoxon W	40.000	33.000
Z	-1.239	-1.833
Asymp. Sig. (2-tailed)	.215	.067

4.4.3 Network Size and Composition

Across the 21 networks, there was a strong positive correlation between the number of link worker colleagues a participant nominated and the total number of non-link worker alters in their network ($r = 0.6749$). There was also a strong correlation between the amount of time the link worker had been in post and the total number of alters in their network ($r = 0.782$).

4.4.3.1 Summaries by Deprivation

Overall, link workers working in areas with high levels of deprivation had a higher median number of patients on their caseload (median = 42) compared with those working in areas with low (median = 27) and mixed levels (median = 17) of disadvantage. The median network size of link workers (total number of alters nominated) was highest for link workers working in areas with high levels of disadvantage (median = 55) compared with those working in areas with low (median = 43) and mixed levels (median = 45) of disadvantage.

The median number of alters per patient was similar between areas with high and low levels of deprivation but was higher in areas with a mixed levels of deprivation (high = 1.3; low = 1.6; mixture

= 2.6). This suggests that link workers do the same amount of ‘networking work’ regardless of caseload. See Table 8 for full summaries.

Table 8: Summary of link worker median network composition by area deprivation.

Area Deprivation	Median Total Alters	Median LW alters	Median Caseload (number of patients)	Median Alters per Patient on Caseload
High	55	7	42	1.3
Low	43	5	37	1.6
Mixture	45	5	17	2.6

Across all three areas of deprivation, the largest proportion of alters were individuals from the VCS (47–70%) (Figure 15). This was expected given that most social prescribing activities are provided by this sector (1).

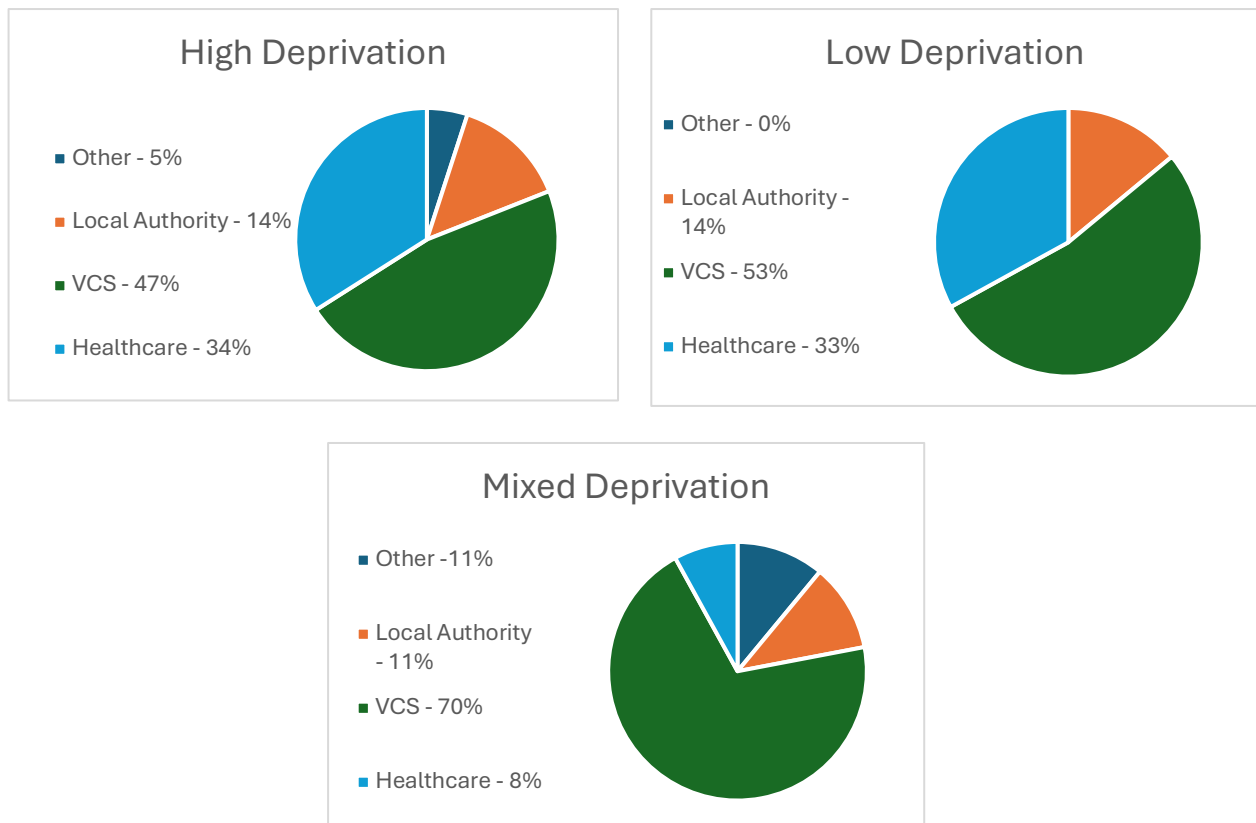


Figure 15: Pie charts displaying the average proportion of types of link worker alters by area deprivation

4.4.3.2 Network Size and Composition by Employing Organisation

Link workers employed by PCNs had a median of 43 patients on their caseload compared to link workers employed by the VCS (median 22 patients). Those employed by ‘other’ organisations (directly employed by GP practices) had the highest caseloads, at a median of 64 patients on their caseload.

The median network size was also highest for link workers employed by ‘other’ organisations (GP’s) (median of 88 alters) compared with link workers employed by PCNs (median of 49 alters) and those employed by the VCS (median of 45 alters) (see Table 9).

Link workers employed by PCNs and ‘other’ had a similar median number of interactions per patient (1.1 and 1.4 respectively), whereas those employed by the VCS had a slightly higher median number of interactions per patient (median of 2) (see Table 9).

As we saw across the statistics for area deprivation, across all three types of employing organisation, the largest proportion of alters were made up of individuals from the VCS (45–62%). However, those employed by the VCS had considerably fewer connections into healthcare compared to those employed by PCNs or ‘other’ organisations (see Table 9).

Table 9: Summary of link worker network composition by employing organisation.

Employing organisation	Median Total Alters	Median LW alters	Median Caseload (number of patients)	Median Alters per Patient on Caseload
Primary Care Network	49	6	43	1.1
Voluntary Care Sector	45	40	22	2.0
Other (GP’s)	88	13	64	1.4

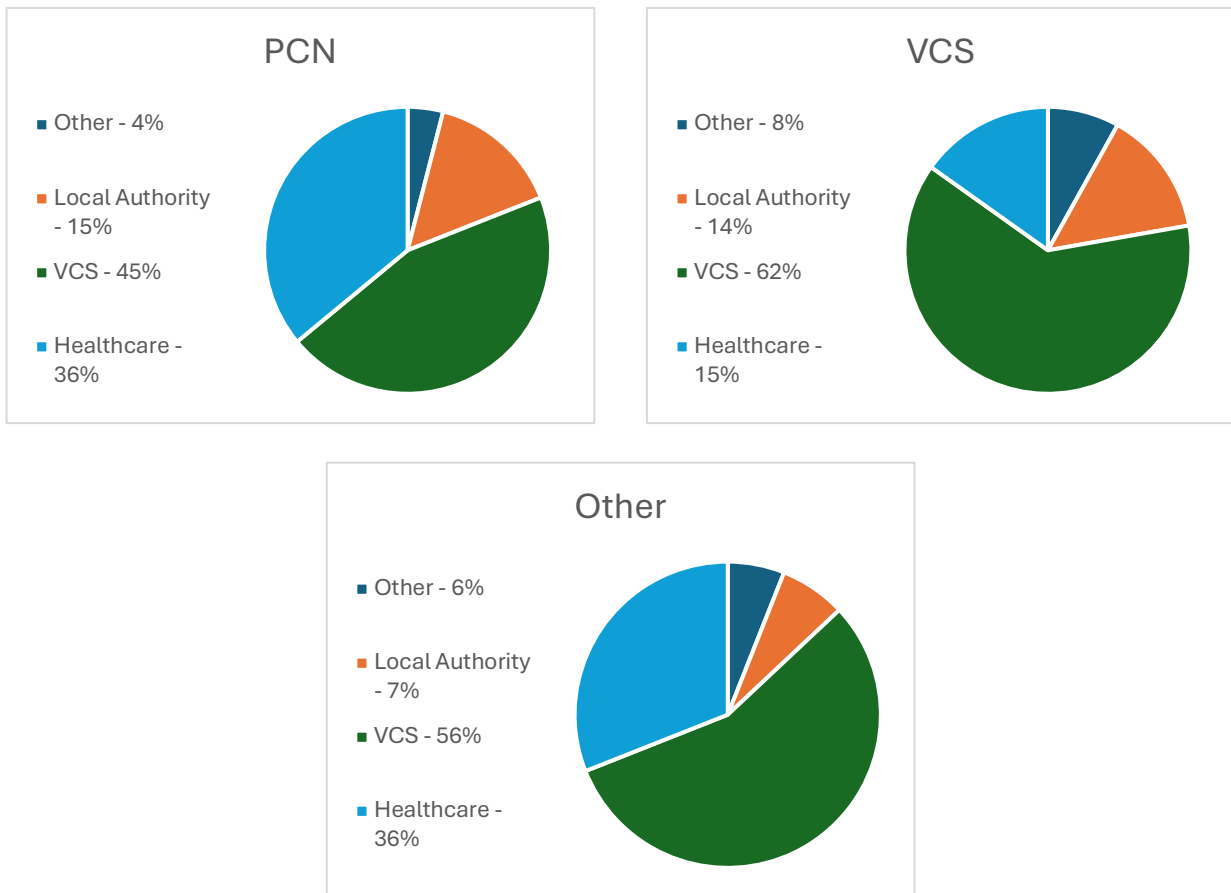


Figure 16: Pie charts displaying the average proportion of types of link worker alters by employing organisation.

When looked at by level of deprivation, the median average degrees (average number of connections per node) were higher for the networks of link workers working in areas with high levels of deprivation (median = 7.4 degrees/connections per node) compared with link workers working in areas with low (median = 6.2 degrees/connections per node) or mixed levels of deprivation (median = 3.5 degrees/connections per node). A higher median degree suggests greater connectivity and denser networks (153).

The median number of isolates and percentage of nodes in the network that were isolates, however, were higher in areas with mixed and high levels of deprivation than in areas with low levels of deprivation, which tended not to have many isolates in their networks (see Table 10).

Table 10: Summary of median network measures by area deprivation.

Area Deprivation	Median average degree	Median number of isolates	Median percentage of isolates
High	7.4	8	12%
Low	6.2	0	0%
Mixture	3.5	14	29%

When looked at by employing organisation, median average degree of link worker networks was higher for link workers employed by PCNs (median degree = 7.4) compared with link workers employed by VCS (median degree = 6.1) or ‘other’ organisations (GP’s, median degree = 4.2). The median number of isolates and percentage of isolates was lower for link workers employed by PCNs compared to link workers employed by VCS and ‘other’ organisations (see Table 11 for details). This suggests that link workers employed by PCNs had more cohesive and less fragmented networks overall.

Table 11: Summary of median network measures by employing organisation.

Employing Organisation	Median average degree	Median number of isolates	Median percentage of isolates
PCN	7.4	4	7%
VCS	6.1	14	27%
Other	4.2	26.5	25%

4.4.4.1 Subgroup Detection (K-Core Decomposition Analysis)

4.4.4.1.1 Subgroup Detection by Area Deprivation

The analysis of networks in high deprivation areas showed a mix of both weaker and stronger connectivity. For example, the maximum k values ranged from 3–20 with a median max k = 7 (Table 12). Maximum k is measure of the most tightly connected subgroup/cluster within a network. A max k of 7 means there was a subgroup of 8 nodes that each were connected to all 7 other nodes in the subgroup.

The broad range of max k sizes networks in areas of high deprivation suggested a wide range in the connectivity of different link worker networks in these areas. For example, LW10 had a low max k

(max $k = 3$) indicating that their network is only modestly inter-connected. LW13 on the other hand had a high max (max $k = 11$), indicating a much more highly inter-connected network. The size of these biggest clusters also varied. For example, LW10 had a low max $k = 3$ with a relatively high largest cluster size of 12 nodes (46% of the network), indicating a group with modest connections. LW13 on the other hand had a high max $k = 11$ with a high largest cluster size of 18 nodes, suggesting a well-connected and cohesive sub-group within the overall network (see Figure 17) The variability in subgroup sizes and levels of connectivity suggests that link worker networks in areas with high levels of deprivation can differ widely in how cohesive they are.

In contrast, link worker networks in areas with low levels of deprivation generally had moderate max k values, $k = 4$ and $k = 7$ (levels of connectivity). These networks generally also had a smaller number of nodes in the largest clusters. For example, LW04 had a max $k = 4$, and 7 nodes in this largest cluster, and LW12 had a max $k = 7$, and 8 nodes in this largest cluster. This suggests these networks are cohesive but may not have as intense connectivity as those in high deprivation areas with high max k scores up to 20.

Networks in mixed deprivation areas had both sparse and dense networks, with both low and high max k values. For example, LW03 with max $k = 2$ and LW20 with max $k = 10$. This may reflect the varied demands that may exist in these areas.

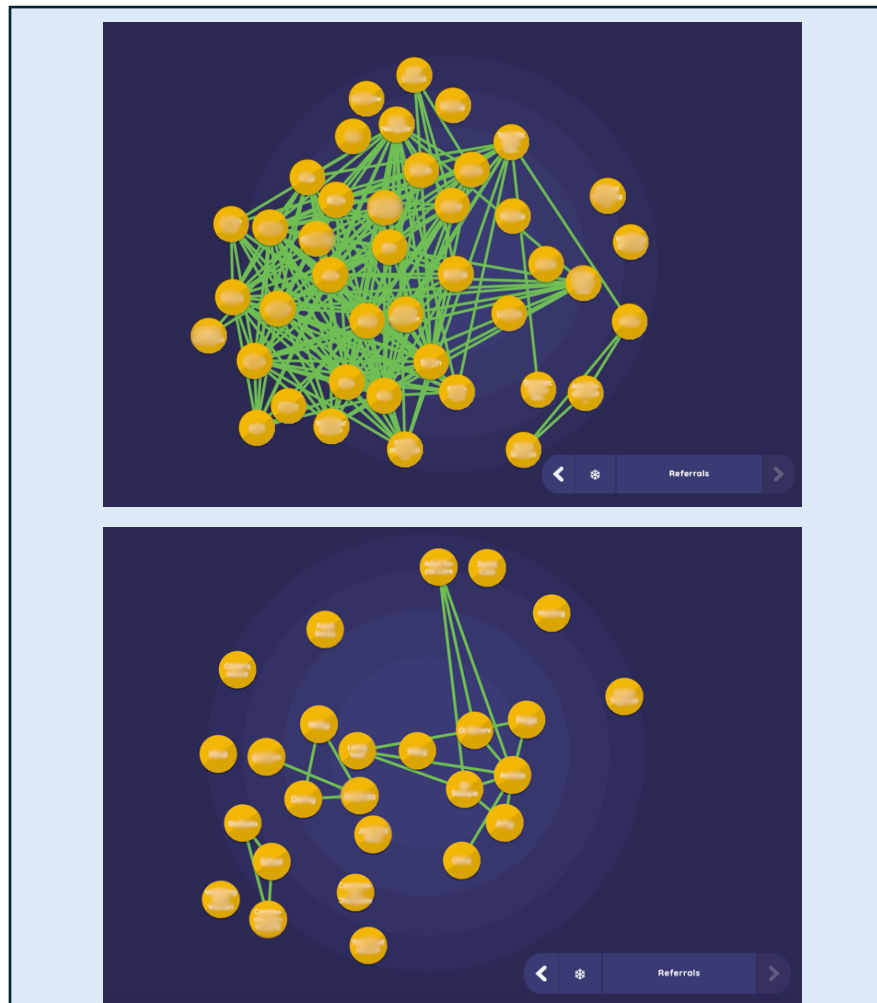


Figure 17: Differences in k-cores between LW13 (top image) and LW10 (bottom image)

4.4.4.1.2 Subgroup Detection by Employing Organisation

Link workers employed by PCNs generally had higher max k values ranging from max $k = 3$ to max $k = 20$. LW17, with max $k = 20$ was an outlier in this group, though the median max k of 6 indicated some highly inter-connected groups across the PCN-based link worker networks. LW17 reflected on the fact that the PCN they worked in had bought into the concept of social prescribing and that the wider local service provision infrastructure operated in a joined-up and cohesive way and felt that this reflected in the highly interconnected network map.

On the other hand, link workers employed by VCS organisations had networks with max k values ranging from 2 to 10 (median max $k = 7$), suggesting that VCS-employed link workers may have

more limited/moderate connectivity within their networks compared to those employed by PCNs. These networks also had moderate maximum subgroup sizes Table 12.

For the two link workers employed by 'other' organisations max $k = 5$ and max $k = 9$ with max subgroup sizes of 11 and 14. These metrics indicate moderate levels of connectivity and cohesion in these networks, placing them in the middle ranged when compared to the networks of link workers employed by PCNs and VCS organisations.

Overall, link workers employed by PCNs tended to have networks with higher max k values and larger core sizes, which are indicative of stronger connectivity and may signal higher levels of collaboration. These higher numbers may be driven by the fact that PCN alters (e.g. GP surgery staff and PCN management staff) formed distinct cohesive cores within these networks. The networks of link workers employed by VCS organisations had lower max k values with moderate maximum subgroup sizes. This may reflect the fact that VCS organisations tend to focus on specific areas or community services, rather than being deeply integrated and interconnected with broader healthcare systems.

Table 12: Subgroup analysis reporting max k (the connectivity in the most densely connected cluster in the network) alongside cluster sizes and distributions as well as network size and network isolates.

ID	Area disadvantage	Employing Organisation	Network Size	Number of Isolates	Percentage of Isolates	Max k	Number of nodes in the largest subgroup	Distribution of nodes in different subgroups
LW01	high	VCS	56	15	26,8	4	6	{1: 18, 2: 12, 3: 4, 4: 6}
LW02	high	PCN	32	13	40,6	4	8	{1: 4, 2: 5, 3: 2, 4: 8}
LW03	mixture	VCS	34	14	41,2	2	7	{1: 13, 2: 7}
LW04	low	PCN	25	0	0,0	4	7	{3: 18, 4: 7}
LW05	high	PCN	67	2	3,0	6	7	{1: 24, 2: 8, 3: 6, 4: 1, 5: 10, 6: 7}
LW06	high	PCN	54	18	33,3	6	9	{1: 8, 2: 2, 3: 6, 5: 11, 6: 9}
LW07	high	PCN	68	6	8,8	5	6	{1: 27, 2: 15, 3: 4, 5: 6}
LW08	high	PCN	48	2	4,2	8	9	{1: 9, 3: 9, 4: 10, 5: 2, 8: 9}
LW09	high	PCN	35	2	5,7	6	7	{2: 13, 3: 1, 4: 2, 5: 6, 6: 7}
LW10	high	PCN	33	8	24,2	3	12	{1: 3, 2: 3, 3: 12}
LW11	mixture	PCN	48	14	29,2	5	6	{1: 4, 2: 5, 3: 8, 4: 3, 5: 6}
LW12	low	VCS	45	0	0,0	7	8	{1: 10, 2: 5, 3: 10, 4: 5, 6: 1, 7: 8}
LW13	high	PCN	42	2	4,8	11	18	{1: 1, 2: 5, 3: 0, 4: 1, 5: 2, 6: 1, 8: 5, 9: 1, 10: 6, 11: 18}
LW14	high	PCN	71	0	0,0	9	12	{1: 1, 3: 10, 4: 33, 7: 12, 8: 0, 9: 12}
LW15	high	PCN	49	18	36,7	9	10	{1: 15, 2: 1, 3: 3, 9: 10}
LW16	high	Other	133	47	35,3	9	14	{1: 38, 2: 10, 8: 1, 9: 14}

ID	Area disadvantage	Employing Organisation	Network Size	Number of Isolates	Percentage of Isolates	Max k	Number of nodes in the largest subgroup	Distribution of nodes in different subgroups
LW17	high	PCN	66	8	12,1	20	24	{1: 7, 2: 1, 3: 1, 13: 14, 14: 1, 19: 2, 20: 24}
LW18	high	PCN	55	1	1,8	7	8	{2: 16, 3: 17, 4: 6, 7: 8}
LW19	low	Other	43	6	14,0	5	11	{1: 7, 2: 11, 3: 1, 4: 2, 5: 11}
LW20	mixture	VCS	45	8	17,8	10	12	{1: 10, 2: 2, 4: 1, 5: 7, 10: 12}
LW21	high	VCS	57	17	29,8	8	14	{1: 2, 3: 2, 4: 4, 5: 4, 6: 1, 7: 3, 8: 14}

4.4.5 Qualitative Results

The qualitative data made it clear that link workers undertake complex relational work spanning across healthcare and community settings.

Link workers can be conceptualised as ‘boundary spanners’—individuals who connect otherwise separate organisational domains, facilitating the flow of information and resources across boundaries (245,246). In this role they occupy a liminal space (a position on or at both sides of a threshold (247)) between formal healthcare structures and more informal community networks. In this boundary spanning positions link workers navigate clinical and community orientations care. These differing, and often competing, orientations to care shape the extent to which the networking work that link workers undertake is appreciated, as well as the opportunities available to them for building cohesive cross-sectoral networks.

As well as being boundary spanners, spanning the different domains of healthcare and community, link workers also span systemic gaps—structural deficiencies and fragmentation in the provision of healthcare and community services provision as well as the structural barriers shaping accessibility to social prescribing activities.

To navigate the challenges of spanning systemic gaps and the liminality of their boundary spanning role, link workers develop relational knowledge and interpersonal trust about and within their networks. This knowledge can determine referral decisions and helps ensure link workers can provide supportive and responsive person-centred care. Link workers also form communities of practice, working collaboratively with other link workers in their localities sharing knowledge, experience and workload. Communities of practice can help mitigate some of the challenges associated with operating in the liminal space between healthcare and community and the emotional labour of building and sustaining networks. In the following sections I explore these concepts in detail under the following themes ‘Spanning Boundaries’; ‘Spanning Gaps’; ‘The Unrecognised Social Labour of Networking’; ‘Relational Knowledge that Mitigates System Uncertainty’; and ‘Community of Practice Among Link Workers’.

4.4.5.1 Spanning Boundaries

The introduction of social prescribing and the link worker role represents recognition of the wider determinants of health and a shift towards a more holistic view of health and wellbeing in the healthcare system (44).

To provide holistic care, link workers need to span organisational boundaries, working at the intersection between healthcare and the community. However, link workers discussed tensions between medical and social models of care and needing to navigate a hybrid space. Link workers are often employed and working with healthcare structures with medical models of care yet are oriented toward community-based and non-clinical support with social models of care. These tensions played an important role in shaping link worker identities and impacted how they chose to undertake their roles and build their networks.

Some link workers resisted clinical identities, highlighting that their role was to work holistically and collaboratively with patients, rejecting the authoritarian and prescriptive approaches they associated with clinical professions and a medical model of care. These link workers preferred to situate themselves within community settings, including face to face, rather than in medical practices, highlighting that this provided them with networking opportunities with groups and community organisations.

“Because one, it’s not a clinical role and I think people are less likely to engage if they think it is because people, certainly in my experience, they very often perceive doctors, nurses, even physios, definitely pharmacists, as people who tell them what to do, whereas as social prescribers we’re not that kind of a person and we certainly don’t want to be perceived as that, what we want to do is give people autonomy and work with them to see what they want. So, if you can remove that clinical aspect, that sitting in a bare room, and I think that kind of goes hand in hand with something a little less formal and just that more casual, like meet them in a community centre, meet them in a coffee shop, meet them in a library, something that is a bit more personal.” (LW11, mixed deprivation area, PCN-employed)

“The PCN try to get me coming into practice a little bit more and I said no, I just said it wasn’t a good use of my time. Again, I think it’s just through networking, if you’re out and about you hear about what’s going on a bit more, people know where you are, they know to

tell you what's going on, they know to tell you when something is starting up and you just sort of hear it by word of mouth. If I know I have a couple of hours free of an afternoon I'll just go off, drop into a community centre, or drop into somewhere where I haven't been in a while." (LW11, mixed deprivation area, PCN-employed)

Working in this way also allowed link workers who based themselves outside a medical practice to position themselves as community allies rather than as clinical or institutional figures. This could help them to bridge a divide that they noted can sometimes exist between formal institutions and communities in marginalised areas, where external authorities can be viewed with caution or suspicion (13,248).

"I have found it's proving to be a little bit difficult because of the trust side of things. When I have been to a couple of the community groups, they don't know me and I felt that they were a little bit just standoffish. So, I have to build that rapport initially, which is gonna take a little bit of time. And then - I think they were just a bit wary. Who is she? You know, where's she come from? Is from the council? So even though I did introduce myself but I think they were just still a little bit. They don't really like outsiders because these community groups have been running for many, many years so yes." (LW10 high disadvantage area, PCN-employed)

However, needing to adopt approaches outside of a medical model in order to be able to successfully build relationships and networks in a community led to some link workers feeling like they do not belong in primary care settings. Some described how their PCN colleagues had a general lack of understanding of what their role entailed, or reported feeling isolated in their practice.

"I mean, it's the medical model, isn't it, which most of our PCN colleagues are working to and it's difficult to know sometimes what their understanding is of what we do. But very much within the community, 100% we feel valued and are active members of that community." (LW18, high deprivation area, PCN-employed)

"Where I work it's very clear that we are additional roles. I know it's not necessarily a working environment but none of us are invited for example to any Christmas events that are happening within the surgeries because they don't want to pay for us because we're an additional role." (LW04, high disadvantage area, VCS-employed)

4.4.5.2 Spanning Systemic Gaps

As well as spanning organisational boundaries and orientations to care, link workers also spanned systemic gaps, working to address structural failures in healthcare and community services provision. Link workers in mixed deprivation areas in particular described differences and inequities between affluent and more deprived areas, highlighting systemic gaps in life expectancy and in health outcomes.

“In the higher economic areas I get a lot of referrals for people in their late 80’s or early 90’s but in the other areas people don’t live that long, so what would be considered as an older person is like someone in their late 60’s or early 70’s, people don’t live past that. We see high instances of people with like COPD, type two diabetes, heart failure and you tend not to see as much of that in the other areas.” (LW11, mixed deprivation area, PCN-employed)

The realities of working with people experiencing deprivation meant that link workers encountered systemic barriers that limited their ability to engage with social prescribing. Link workers drew attention to the fact that patients experiencing instability in their most basic needs (such as housing or food) may not be able to engage with the community activities (such as family activity days) that some organisations seek to provide. They also highlighted how that limited affordability of community activities and limited availability of crucial mental health support could limit patients’ ability to engage with and complete social prescribing referrals.

“I think it’s the patients who already have a good start, they already have a car, for example, they’re a lot more likely to engage and therefore get more out of it, but when you’ve got somebody who is, you know, you’re supporting them to find somewhere to live, they’ve been homeless or sofa surfing for months, their basic needs are not even being met, they’re not getting food, they’re not getting sleep, they don’t have any money, so I think that they’re not likely to engage with any community support in the first place because they’re not in a situation in life where they can spend time on that because they need to spend all their time on surviving and feeding their children, for example.” (LW15, high deprivation area, PCN-employed)

“To get a family to engage with something like that is just not going to happen, we try to help people with homelessness and debt advice and the benefits system and doing something

nice like a family project together is just not on their radar. So yeah, sometimes there is a mismatch between community services thinking they can offer nice things and get us to just send loads of people their way.” (LW16 high deprivation area, Other employed)

“The leisure centres, you would need to pay to go and do those things but they are there, those things are there, it’s just really difficult for our population who are on such a low income to be able to afford to go and do those things.” (LW08, high deprivation area, PCN-employed)

Link workers also noted gaps in formal healthcare service provisions, highlighting how the inverse care law (220) shaped their experiences of their roles. They commented on the difference in distribution of link workers between more affluent areas and more disadvantaged areas, highlighting a perception that affluent areas seemed to have a higher number of link workers with smaller caseloads.

“We work with in the region and our area is by far the most deprived area... We have two social prescribing link workers and then at the other end of the borough there’s (town) which as well, very well known as an affluent part of the area, and they’ve got three social prescribing link workers. [laugh] So it can be quite frustrating. We are fighting really, really hard to try and get another social prescribing link worker because there is definitely a need and I think that’s reflected in the sheer number of case...the caseload that we have compared to other colleagues in the area.” (LW18, high deprivation area, PCN-employed)

One link worker serving a more affluent area even commented on not having enough work to go around their recently expanded link worker team.

“We employed two more and that’s now gone up to six of us in the team. We now probably don’t have enough referrals to go round all six of us, which has been helpful for me because it’s given me a breathing space but I think the newcomers get a bit frustrated and, you know, they wanna jump in and learn the role and be busy but we’re working that out.” (LW19, low deprivation area, Other-employed)

Systemic gaps also existed in the provision of key services such as mental health support, as well as in the provision of basic needs such as housing and food. While link workers did what they could to support patients while they waited for support, this could leave the link workers dealing with issues they did not have adequate training for (such as providing mental health support). Link workers also

expressed challenges supporting patients with housing needs, highlighting the frustration of being unable to change the realities of long waiting lists for housing.

“You know, with the homelessness, the team at the local authority, they’re swamped. So, I think the only other one really is housing. You know, we kind of tried not to, unless it’s incredibly urgent because we know the absolute direness of the housing situation. You know, we do what we can, but in terms of putting in, you know, extra phone calls for this, that and the other to change very, very little. We don’t tend to try and like go there if we can. It’s more kind of citizens advice in managing their well-being in-between, like housing decisions so.” (LW09, high deprivation area, PCN-employed)

“I was never trained how to speak to someone who’s got really, really poor mental health and I figured it out myself and looked at protocols and things like that but when you’ve still got someone on the other end of the phone that’s on their knees and you’re like, oh it’s a seven month wait...—what do we do?” (LW04, low deprivation area, PCN-employed)

“So yeah, I appreciate that social prescribing is quite often meant to be more the social support, linking patients to activities and community groups, but yeah, I’m finding that I’m spending most of my time doing letters to housing or talking to housing or trying to prevent our patients from becoming homeless basically.” (LW15, deprivation area, PCN-employed)

“I’d say yeah, the issue can sometimes be if a service doesn’t exist, then you can’t refer a patient into it because I think when you do your social prescribing training, or at least the NHS one I did, obviously it has to be very positive because it talks about how you’ll meet a patient, you’ll have built up your library of what is out there in your head or physically you’ll have a note of what is going on and then it is just a case of linking them into it or if they need more support, going with them and doing that, but yeah, I’m finding it’s quite difficult to find the kind of things that people need.” (LW01, high deprivation area, PCN-employed)

Link workers noted that in the face of systemic underfunding and gaps in services provision, some of the communities they worked in had a history and culture of coming together to weather the adversity. They discussed examples of voluntary and community organisations coming together to provide support for mental health, bereavement, or foodbanks. Working collaboratively could allow different community actors to mobilise resources, allowing them to compensate for and mitigate the effects of systemic underinvestment.

“One of the real benefits of our area and maybe it is because we’re deprived, you know, quite a deprived area but there is really strong networking and support from all the various different organisations. So there’s always organisations to turn to. Whether they’ve got the funding or resources might be a different matter, but that is - that’s why I’m still in the job, to be honest.” (LW18, high deprivation area, PCN-employed)

“There are lots of churches, many, many churches, all of whom are very, very active in the community, putting on additional services for people in the community. It’s I would say it was quite a tight knit community despite poor housing. Everybody supports each other and helps each other out a lot. There is a high need for things like foodbanks, there are several organisations in the area that supply food.” (LW07, area with high deprivation, PCN-employed)

In their roles connecting primary care to the community and referring patients, link workers could become central figures in these collaborative efforts, serving as intermediaries possessing an understanding of the structural gaps and of the challenges faced by patients. In their role they could act as facilitators of these joined-up approaches. However, one link worker also noted that acting as a link for the wider ‘ecosystem’ could entail significant role stress.

“So I think initially when we started we’d made so many connections about social prescribing and we’ve found out and linked and connected with a lot of services, so we are that main point of contact now and the link between primary care and voluntary organisations..I actually run now something called the [town] Network Group which is forming a more joined-up approach between services and that’s for voluntary and statutory service so that we can all share and utilise and link everyone who is part of different organisations together to be able to utilise each other’s skills, knowledge, but also is a platform for us to be able to share what offerings we have in order to support the community.” (LW14 high deprivation area, PCN-employed)

“So we liaise directly with a very wide range of service providers, both statutory and within the local community. I would say housing at the moment is the biggest priority. So I’ve got - so I’m a part of various different panels, and within that there’s all the local statutory services, so the police and housing and social services, local mental health team. And so we will bring cases and share and discuss and try and work together to unravel.” (LW18, high deprivation area, PCN-employed)

“I think again, a bit of a strain on the social prescribing role because again, you’re not just linking that person into activities but then you’re sort of acting as a link for the whole kind of eco system of cultural providers or anything that you might refer to.” (LW01, high deprivation area, PCN-employed)

4.4.5.3 The Unrecognised Social Labour of Networking

Building and maintaining relationships, learning about community resources, and establishing trust with community groups were each described as taking considerable time and effort, knowledge, adaptability, and persistence. Often this broader work needed to be undertaken in addition to large patient caseloads, particularly in those areas with high levels of social and economic disadvantage. However, link workers expressed that this essential community integration work was sometimes undervalued under the medical model, going dismissed or unrecognised (and in some cases even met with bitterness), by clinical practice staff.

“I sometimes feel like it’s not appreciated, particularly around management and feeling like they don’t understand the extra work that we have to put in outside of casework and managing caseload and on top of that that we have to keep up to date with new services, keeping those relationships open. (LW05, high disadvantage area, PCN-employed).”

“The surgery staff overall struggle to kind of accept it... our workload is often seen as easier, you don’t have as many patients, we get to go out into the community, we get to have lunch meetings, we have a lot of benefits that they don’t have, and I think there’s quite a lot of bitterness... I kind of understand that yeah, the surgery staff don’t really appreciate how much work goes into networking and finding out about the services, but it’s because their role is different.” (LW15, high disadvantage area, PCN-employed).

“We’re often told, oh don’t do extra work because it won’t get noticed or, do what you need to do and obviously do things that you want to do, like looking for things because we want to do it but they’re like, oh don’t stay longer than you need to because you won’t get appreciated.” (LW04, low disadvantage area, PCN-employed)

Working within frameworks that prioritise individual health outcomes, link workers could find themselves struggling to prioritise the networking aspect of their role over their patient caseload.

“Feeling like they don’t understand the extra work that we have to put in outside of casework and managing caseload and on top of that that we have to keep up to date with new services, keeping those relationships open” (LW05, high disadvantage area)

“Before when I was working part time it was difficult because all I could do was what work on the referrals and as you know the referrals are your main priority. Community groups they’re okay when you’re doing it as long you’ve boxed off all your referrals. But I can’t go and sit in the community groups for hours on end.” (LW10, high disadvantage area, PCN-employed)

LW17 however highlighted that the general lack of capacity within primary care may be another reason for its hesitance in embracing alternative models of care. They describe how they were able to use their role to broker relationships between the healthcare and community sectors and that this successfully increased the acceptance of community-based working within their PCN. Due to the recognition and support he received from his PCN they were then able to better help facilitate whole system collaboration through the construction of a robust and cohesive cross-sectoral network. It is however worth noting that this link worker worked in an area in the UK widely held up as an exemplar of devolution and whole system working for tackling health inequities.

“One thing I have much noticed, is, that there wasn't really a great deal of community involvement in primary care. And that's nothing to do with primary care's reluctance, it's just they didn't have the capacity to connect with community services. And I think there's also the culture of primary care didn't lend itself to that community approach... I'm saying that in the kindest way but it's developed out the service hugely now that there is somebody within the service to connect those...the community services and the most interesting thing for me is, I'm assigned GP practices and I go and speak to a GP and say can I connect this person with this service and they'll just say, yes absolutely. Whereas prior to that you couldn't get to the GP to ask that question and that's the key difference...” (LW17, high deprivation area, PCN-employed)

“The PCN and that I’m in now, I can go and speak to the chair of the PCN and say, this is what we’re doing. This is the project proposal [community project] and they’ll just support it.... It works fantastically. I think there's a really sort of clear understanding in the borough around the diversity of support that's required to support people. So, I think it seems to be that sort of - a quite strong understanding of the social aspects of support and the depth of services that are out there.” (LW17, high deprivation area, PCN-employed)

4.4.5.4 Relational Knowledge that Mitigates System Uncertainty

In their work to establish cross-institutional networks, link workers highlighted the importance of developing and maintaining interpersonal trust and relational knowledge. Relational knowledge—knowing the staff at referral organisations, understanding their waiting lists, and being aware of the services offered, enhanced link workers' ability to provide patients with appropriate forms of support. Developing personal connections, trust in people (rather than organisations or systems), could help link workers to navigate complex, and sometimes bureaucratic, service landscapes by enabling direct, relational referral processes that formal systems often cannot replicate.

“I think it's also how important relationships are when you're referring to organisations. So quite often it's because you know the person that works there and you know how it works and you've built that up with them and you know how long the waiting time is or you know what services they provide and if you don't it can feel like you're just sending someone off and you don't hear back from them.” (LW01 high disadvantage area, VCS-employed)

“There are lots of people at the Job Centre, but you build up a relationship with one particular person. He understands me, I understand him. You know, I don't necessarily need to be particularly polite. I can send him an email and say, what's this you know, without all the small talk.” (LW07, high deprivation area, PCN-employed).

The relational knowledge link workers developed could also influence their choice of onward referrals, often choosing to repeatedly rely on familiar and reliable services. This reflects a practical response to the uncertainties of service provision highlighted in Chapter 3, where local infrastructure quality and availability can be inconsistent. When external structures are unpredictable, link workers created their own trusted networks within the broader system, prioritising service that deliver consistently for them and the people they support.

“I suppose just to me it shows that I'm, which I kind of knew, you tend to use the same services all the time but some of that is down to like reliability, the ones that you know are going to come true, both for you and for the service user.” (LW11 area with a mixture of deprivation, PCN-employed)

“It's challenging being a social prescriber, especially in this current climate with the cost of living, especially in the borough that I work in, we get a lot of housing referrals, frustrations

from patients that there aren't enough services to link them to or sometimes they've been passed around multiple services before we get to them. So they sometimes feel like a bit of a lost cause or are just frustrated at the system by the time they get to us, so I think it can be quite frustrating at times but it's also rewarding when you are able to support someone with something they've been struggling with for a long time as well.” (LW05, high deprivation area, PCN-employed)

4.4.5.5 Community of Practice Among Link Workers

Link workers discussed working collaboratively both formally and informally with other link workers in their localities. Through informal communication channels, such as WhatsApp groups, or through daily interactions, link workers were able to exchange practical insights, service recommendations, and emotional support.

“It was a very sharp learning curve in my job, I'm very grateful that I work in quite a big team of about, you know, 10 or 12 other mostly ladies, one gentleman, and they've been working for the VCS organisation for up to ten years in this area, so there's a big fountain of knowledge and expertise.” (LW12, low disadvantage area, VCS-employed)

“All of us really. If we come across an organisation that we might not have heard of before or we think it will be useful, we might send an email out saying, oh, I've found this organisation and I've added it to the database.” (LW05 high disadvantage area, PCN-employed).

“You know, somebody will mention something starting up and so you get in contact with them. The link workers I said I usually have daily contact with. There's usually one of us that sends out a request. You know, I've got an elderly gentleman who's recently lost his wife. What's the best bereavement service to refer him to? So, there's always sort of questions like that and everybody will chip with their suggestions. So, you learn an awful lot from things like that.” (LW07 high disadvantage area, PCN-employed).

The teamwork and knowledge-sharing link workers engage in suggests that they operate as a ‘community of practice’ (249). Communities of practice are formed by people who engage in a process of collective learning in a shared domain (social prescribing, in this case) and develop collective expertise in doing so (249). By pooling knowledge and experiences, link workers who connect with other link workers may mitigate some of the isolation that might otherwise come from

operating in clinical settings, as well as share the emotional labour of building networks. The network data highlighted a strong correlation between the number of link workers in a respondent's network and the overall size of their network.

“So, although we’ve got completely separate patient workloads, we do share all the training and all of that, like the knowledge. So, I work independently but I have the access to our team if I need that sort of team support.” (LW15 high disadvantage area, PCN-employed)

“I mean just so you know I’m a big advocate of the way that we work at [community organisation], as in we work all in a team of social prescribers in a VCS and I think if I’d been working on my own in a GP practice, I definitely would have left the role, without a doubt. Because I found it really demoralising working in the surgery. It was very isolating, not a nice environment anyway just because of the room where I was, and they didn’t talk to each other, the different surgeries, everyone was very busy.” (LW12, low disadvantage area, VCS-employed).

4.4.6 Integration of Network and Qualitative Data

The network and qualitative data from these interviews with link workers reveal the role they play as boundary spanners who navigate the intersection between clinical and community spaces. The data highlight how different philosophical orientations to care in clinical and community settings shape the social labour involved in building and sustaining networks, as well as the structural challenges posed by organisational contexts and area deprivation (see Table 13 for the joint displaying showing the integration across qualitative and quantitative study components).

In addition to their role as organisation boundary spanners, link workers act as spanners of systemic gaps, working to compensate for structural and systemic gaps in the provision of healthcare and community services. Link workers in areas with high levels of deprivation managed larger networks with higher overall connectivity, but also with a high number of isolates. They described needing to develop and maintain large cohesive networks to serve the needs of large and complex caseloads, as well as dealing with variability in the availability and consistency of services. These networks then shaped the link workers' referral choices, with link workers often relying on trusted, stable core groups to help them navigate an overstretched and sometimes unpredictable service landscape. In

deprived areas communities may need to come together to share resources and provide services for themselves in the face of systemic underinvestment in community infrastructure.

Where link workers are employed may shape the structure and effectiveness of their networks. PCN-employed link workers generally had higher connectivity and fewer isolates, suggesting that they have been able to build more cohesive networks that bridge healthcare and community sectors. In contrast, the networks of VCS-employed link workers were overall less connected and contained more isolates. The qualitative data suggest that philosophical tensions between the social and medical models of care are relevant here. VCS-employed link workers may be more deeply embedded in the community but may have limited access to healthcare resources. Link workers employed by the VCS may be perceived as being outsiders in healthcare settings, impeding their ability to connect into clinical networks. While both PCN- and VCS-employed link workers may experience isolation (due to the liminal space they occupy at the intersection of healthcare and the community), PCN-employed link workers are officially members of clinical teams. This membership may afford them easier access to healthcare networks without them needing to worry about their official status within healthcare being compromised when they need to step outside of healthcare settings to network with community organisations.

Across both high and low deprivation contexts, link workers form communities of practice (249) which help them to collectively meet some of the challenges of spanning organisational boundaries and systemic gaps. These link worker communities of practice provide mutual support, knowledge-sharing, and a collective strategy for coping with the demands of link workers' roles. Interconnected link workers can share the burden of caseloads across their communities of practice, as well as share knowledge and approaches to network building and community capacity development. The network data showed a positive correlation between the number of link worker colleagues nominated in a network and the overall network size (controlled for the number of link workers), demonstrating the practical impact of what link workers described—that they collaborated across their communities of practice to build strongly interconnected networks and to share relational knowledge. These communities of practice may be particularly important in areas with high levels of disadvantage

where caseloads are higher and where more networking work may be both necessary to meet patients' needs and harder to find the time to prioritise.

Table 13: Joint-display of the integration of network and qualitative findings.

Network Context	Quantitative Network findings	Qualitative findings	Integration
Deprivation	<p>High deprivation areas overall had larger networks and displayed higher levels of connectivity.</p> <p>These networks however also had a significant number of isolates indicating a mix of densely connected cores and disconnected alters.</p> <p>Caseloads were much higher in areas of deprivation suggesting a higher workload for link workers both in terms of networking and working with patients.</p> <p>Low deprivation areas had lower connectivity overall and the lowest proportion of isolates.</p> <p>Areas with mixed-levels of deprivation had more alters per patient compared to areas with high or low levels of deprivation.</p>	<p>Link workers span organisational boundaries and orientations to care.</p> <p>Link workers span systemic gaps, contending with unequal service and community resource distribution.</p> <p>In deprived areas communities may come together to provide services for themselves. The social labour of networking is intensified in contexts of high caseloads (in areas with high levels of deprivation).</p> <p>Link workers develop relational knowledge about their networks which informs their referral choices.</p>	<p>Caseload work is often prioritised over networking in medical settings. Link workers in contexts of deprivation may work harder to maintain large and cohesive networks to serve large populations of patients.</p> <p>In deprived areas link workers develop large well-connected networks which help them navigate system gaps. These dense networks help them span systemic gaps in formal services provision.</p> <p>Link workers rely on connected networks with dense cores to navigate service variability. In contexts of service instability and variability link workers stick with known trusted organisations.</p>
Employing Organisation	<p>Networks of PCN link workers displayed higher levels of connectivity and cohesion. They had the lowest number and proportion of isolates and high max k values.</p> <p>Networks of VCS link workers had lower measures of connectivity compared to PCN link workers. Their networks also contained a higher proportion of isolates, and lower max k values compared to PCN networks. They also had fewer alters in the healthcare sector (only 15% of alters, compared to 36% in PCNs).</p>	<p>The social labour required to build and maintain networks can be undervalued/unrecognised under more medical models of care. Caseload is prioritised.</p> <p>Link workers sometimes feel isolated in clinical settings due to the liminal nature of their roles. This may be particularly true for link workers employed by the VCS who may who do not have official membership in clinical settings.</p>	<p>Link workers employed by PCNs may be more able to bridge across healthcare and community spaces. By virtue of being employed directly by clinical organisations, they can make connections within clinical settings while also bridging across to the voluntary and community sector. Link workers employed by the VCS may be more likely to be considered outsiders making it harder for them to bridge into healthcare settings, resulting in a smaller number of network alters in healthcare settings.</p> <p>Where PCNs embrace a more community focused way of working, link workers based in those PCNs are able to construct robust networks spanning both clinical and community settings.</p>

Network Context	Quantitative Network findings	Qualitative findings	Integration
			This may reflect VCS organisations' more community-focused structure, where link workers may operate with fewer connections to the broader healthcare network.
Additional factors	There was a strong positive correlation between the number of link worker colleagues a participant nominated and overall network size ($r = 0.6749$). There was also a strong positive correlation between the time employed in a given role and overall network size.	Link workers form communities of practice where they can share knowledge and experiences as well as the burdens of caseload and labour of networking. Link workers develop relational knowledge about their networks which helps inform referral decisions.	Working collaboratively with other link workers may be a key strategy in supporting link workers to build stable and cohesive networks as well as mitigate some of the challenges of liminality in boundary spanner roles.

4.5 Discussion

In this network study I sought to explore how link workers build and sustain professional networks for the delivery of social prescribing in the context of area deprivation and different employment sectors.

In this study I have shown the boundary spanning (245) role link workers undertake and the liminal position this puts them between healthcare and the community. Boundary spanners can be conceptualised as liminal agents—existing at and across the intersections of different communities or organisations, and in doing so, blurring categorisation as being part of one or another or being ‘betwixt and between’ (247). The concept of liminality as a theoretical concept has its roots in anthropological studies of rites of passage (250) but has been applied across different disciplines, including the study of healthcare roles (251,252).

A defining feature of occupying liminal positions is a sense of ambiguity and uncertainty resulting from not having a fixed or fully developed identity (251). In Chapter 3, I highlighted that ambiguity can be a significant source of role stress for social prescribing link workers. However, the uncertainty of liminal spaces can also afford agents operating in those spaces opportunities to disrupt established practice and influence change because they present multiple or new ways of knowing or doing (253). In this study, link workers’ social labour of building and sustaining social prescribing networks was not always recognised in medical orientations to care in clinical settings. However, their liminal position also allowed them to adopt more social models of care and to create links and built trust with community groups. Other studies of social prescribing link workers have also established that link workers experience challenges of liminality in their boundary spanning positions (254)

Communities of practice were also identified as a key factor in link workers' ability to effectively perform their boundary spanning roles. Forming these communities of practice (249) could provide an essential support system, facilitating rapid information exchange, and allowing link workers to pool insights, discuss challenges, and identify effective referral options, allowing them to develop broad and effective networks. Such communities of practice might also help link workers to develop

more refined senses of shared identities (249), highlighted as an area of stress in Chapter 3. This potential of peer support to mitigate some of the challenges of liminality has also been highlighted by Tierney and colleagues (255).

Existing literature on social prescribing has alluded to the boundary spanning role the link worker plays (9,119,255), this chapter makes an important contribution by demonstrating that link workers also act as spanners of systemic gaps. In Chapters 1 and 3 we saw that one of the challenges of social prescribing in socially and economically disadvantaged settings may be that link workers struggle to build cohesive and sustainable networks in these areas (25). However, the network data in this chapter suggest that link workers working in areas with high levels of deprivation can (and do) build and maintain large, dense, cohesive networks. Qualitative data highlight that in the face of deprivation or poor service provision, people and communities may band together to support themselves. Having more densely connected networks may be a necessity in environments where access to and availability of community resources may fluctuate due to funding cuts, policy changes, and social challenges (256). Link workers in these settings may therefore need to rely on trusted social pathways they create in their networks rather than formal institutional pathways (which may be subject to fluctuation and instability) to provide responsive, person-centred care. While networking is a key and necessary component of the link worker role in every setting, in disadvantaged settings link workers may need to further compensate for lack of resources through intensive relational work developing networks (in addition to their larger caseloads). Networking however involves significant amounts of relational labour which, as discussed earlier in this chapter, may not always be recognised or appreciated in clinical settings.

It is worth noting that while establishing trusted social pathways helps link workers in deprived areas to provide responsive person-centred care, there is a danger that an over-reliance on the same individuals or organisations may work to create bottlenecks: overwhelming them with referrals without providing them with additional support or funding (119). One study looking at how holiday clubs provide resources to those experiencing social and economic disadvantage in the United Kingdom found that holiday club staff and volunteers used their personal and professional networks

to acquire resources such as food and activities to support the holiday club (257). This meant that some clubs were highly dependent on these staff to successfully broker the resources needed to run the clubs (257).

Existing literature highlights that the relationship between social networks and social and economic deprivation is complex (258). Networks can provide important emotional, material and financial support. Indeed, in areas with high levels of deprivation, organisations serving populations experiencing poverty may maintain larger networks compared to organisations in more affluent settings (259). This may be for a number of reasons, including: how central government funding is distributed in response to need; the presence of professional norms which may encourage networking in these settings; or because of a need to be able to respond to numerous and complex needs of people experiencing social and economic disadvantage (259).

National data shows that, when adjusted for the higher needs of local patients, PCNs in the most deprived pentile of England employ six fewer (43.5 compared with 49.7) full-time equivalent ARRS staff per 100,000 patients compared with those in the least deprived pentile (260). This is visible in the employment of social prescribing link workers, with fewer link worker being employed in PCNs with high levels of social and economic need (85). The lower rate of employment of link workers in areas with high levels of deprivation may have implications for their ability to form communities of practice, which as discussed above, appears to be a key enabler of their ability to effectively perform their boundary spanning, networking roles.

Another key finding from this study is that link workers' organisational context may have a significant effect on the structure of their networks. PCN-employed link workers generally had higher connectivity and fewer isolates, enabling them to build more cohesive networks that bridge healthcare and community sectors. In contrast, VCS-employed link workers operated within networks that were overall less connected and contained more isolates and had fewer alters outside of the VCS. While link workers in both organisational contexts discussed not being fully part of clinical settings, the network data suggests that being employed by a PCN may help facilitate the creation of larger and more cohesive networks. One explanation for this is that membership in a PCN

gives link workers access to the already established cohesive network that is a PCN (260). Link workers directly employed by PCNs may have easier social access to these clinical networks by virtue of the perceived membership afforded by their formal employment status (261).

The finding that link workers in areas with mixed levels of deprivation had a higher median number of alters per patient (2.6) compared to those in areas of high (1.3) or low (1.6) deprivation is a somewhat unexpected pattern. One explanation for this may be the small sample size of link workers working in areas with mixed levels of deprivation ($n = 3$) in this study which may not be representative of the broader population of link workers serving these areas. Another possible explanation may be that these link workers serve a patient population with a diverse range of needs, meaning they may need to have more alters in their network to help them meet these needs.

4.5.1 Strengths and Limitations

This study is the first to use a social network analysis approach to explore the ways in which link workers build and sustain their networks for the delivery of social prescribing. By taking a mixed-methods approach and combining network measures with qualitative data, I have been able to produce a multidimensional account of how link workers undertake their networking work. The qualitative data I collected allowed me to situate these patterns within link workers' lived experiences. Taking an SNA approach allowed me to visualise link worker networks and enabled the systematic exploration their network composition and diversity as well as how different contexts may shape patterns of connection. Several participants also highlighted that taking part in the network mapping activities prompted them to reflect on their own practice and allowed them to identify strengths, gaps, and potential opportunities in their networks.

This study was an exploratory study which aimed to begin to characterise, define, and generate hypotheses about an unresearched topic. This study had a relatively small sample size and had a comparative underrepresentation of link workers working in more affluent areas and rural areas. Furthermore, the link workers included in this sample are ones who responded to an advertisement in a newsletter. These may be link workers who are particularly well engaged or connected and

interested in research. This potential for selection bias may have skewed the sample towards link workers who are more likely to engage in networking and collaboration activities.

Conducting the interviews online broadened the reach and feasibility of the study, however, it may have also shaped the data that was collected. Undertaking the interviews virtually likely made participation more convenient for working professionals, however it may have had an impact on rapport-building and my ability to interpret non-verbal cues compared to a face-to-face interview. Furthermore, a small number of interviews were conducted across two sittings which may have introduced some minor variation in how participants recalled their professional networks. To mitigate these potential factors, I ensured to conduct the second interview sitting as soon as possible after the first and participants reviewed their responses before continuing the interview. The structured interview prompts and the consistent approach I took as an interviewer helped to ensure comparability across interviews.

In the sociogram stage of the interview (eliciting alter-alter ties) I did not collect data regarding the alter-alter ties of other link workers. While my decision to exclude them was made to reduce respondent and interviewer burden, it has implications for the interpretation of the network metrics. Measures of connectivity (average degree, density, and subgroup cohesion) are likely conservative estimates, as the inclusion of other link workers would have increased the overall density of the network. Focusing on how the ego (the responding link worker) builds connections provides a clear picture of how link workers establish and sustain networks for social prescribing across different sectors and settings. Furthermore, the rich qualitative data helps to mitigate this limitation by highlighting the importance of other link workers in forming communities of practices. However, because this qualitative analysis highlighted the significance of peer collaboration and the formation of communities of practice, the exclusion of these additional link worker ties in the sociogram stage limited the ability to visualise communities of practice within the network data, although these relationships were captured in the qualitative analysis.

A further limitation of this study relates to constraints associated with collecting ego-centric network data. Ego-centric network studies rely on self-reported network data or observations from

participants which may lead to biases such as over or underreporting alters and ties (221). The multiple name generator questions were designed to help elicit as many relevant professional alters as possible. However, it is also possible that more informal ad-hoc alters may have been missed, leading to underestimations of the network's true size. Conversely, ties between alters may have been over or under reported both due to not fully knowing what the relationships between others might be, or due to the burden of connect alters on a sociogram. Future research could improved the accuracy of ego-centric social network data by triangulating participant-reported ties through other methods such as organisational records or peer validation, or by collecting network data from multiple respondents (221).

Ego-centric networks can be understood as cognitive social structures (224)—they are maps in the link workers' minds about the opportunities available to them through their networks. It is important to understand these mental models as they give us insight into how link workers' perceptions of the system around them shape their practice and therefore the delivery of social prescribing. This study also only explored link worker networks at one point in time, meaning that it was not able to detect how these networks may change with the short-term nature of some community-based projects.

4.5.2 Reflexivity

My background as an anthropologist and health services researcher with experience and expertise in social prescribing research allowed me to critically engage with the organisational and broader system level dimensions of social prescribing. However, interviewer characteristics have been shown to influence the network interview process and the size of the network elicited during the interview (262,263).

My background introduced certain starting assumptions with which I approached this study. For example, I anticipated that link workers working in areas with high levels of social and economic deprivation may struggle to build and sustain social prescribing networks. This expectation may have guided my focus towards looking for themes and patterns in the data to add to this hypothesis. To help mitigate this possible source of researcher bias, I ensured that the questions in my interview topic guide remained as open and value free as possible, attempting to avoid words that could lead

participants into giving me specific answers. I asked network questions in a structured and standardised way to minimise variability across the interviews (262). Throughout the research process participants highlighted not only the challenges of working in areas with high levels of deprivation but also the opportunities for collaboration and adaptability these environments provided. It therefore became apparent that my initial assumption that link workers in deprived areas would have smaller and less dense networks was overly simplistic, and a more nuanced understanding of how deprivation may shape social prescribing processes was necessary.

My focus on deprivation and its impact on networking may have inadvertently foregrounded challenges and tensions at the expense of highlighting participants' successes and innovations. While this emphasis aligns with the broader goal of addressing health inequities, it also reflects values and priorities I brought to the research.

To help address some of my biases I adopted several strategies. I engaged in regular meetings with my research supervisors to discuss my findings and my positionality. I employed an iterative analysis process, often revisiting data to ensure that my emerging ideas about the data reflected the data itself rather than my own assumptions. I also presented my emerging findings at conferences, a stakeholder engagement workshop and at PPI group meetings to provide opportunities for feedback on my emerging interpretations (see 4.3.4.2 and Chapter 2 2.9.1).

It is worth noting that as an experienced social prescribing researcher, I may have been able to illicit larger network sizes from respondents than a researcher with less experience (262).

4.6 Implications

This study has implications for policy and practice. There is a need to formally recognise the boundary and gap spanning work that link workers undertake. This could involve giving link workers the autonomy and protected time to engage with community groups or provide professional development opportunities that support their networking work.

A key finding of this study was the link workers form communities of practice which can support them in their liminal positions as spanners of gaps and boundaries. Encouraging and supporting

team-based structures such as peer support networks, resource-sharing platforms, and collaborative training opportunities may improve link worker resilience and help build and sustain their collective knowledge to improve service delivery.

The data from this chapter supports Tierney and colleagues' assertion (255) that entry rituals could support link workers for preparing for and managing their liminal state. Examples of rituals could include a comprehensive induction, invitations to team meetings, having clear supervision structures that consider their wellbeing. This may be particularly important for link workers employed by VCS organisations who may be particularly vulnerable to feeling like outsiders in clinical settings.

4.7 Conclusion

In this chapter, I employed a social network analysis approach to explore how link workers build and sustain their professional networks for the delivery of social prescribing. This work has highlighted that link workers act as boundary spanners and as spanners of systemic gaps, navigating the liminal space between healthcare and community systems. In these roles, link workers build professional networks and communities of practice that allow them to provide person-centred care. Area deprivation and organisational settings shape the ways in which link workers are able to build and sustain their networks. Link worker networks may evolve in response to changing community needs, organisational contexts, and community resource availability. In the next chapter I take a longitudinal approach to conduct in-depth case studies of how link workers navigate their boundary and gap spanning roles and how their networks may develop and shift over time.

Chapter 5: Longitudinal Case Studies

5.1 Chapter Introduction

In Chapter 4, I demonstrated that link workers act as boundary spanners of systemic gaps, navigating the liminal space between healthcare and community systems. In doing so, link workers build professional networks and communities of practice that allow them to navigate the immediate demands of their roles. The ways in which link workers undertake their roles and build their networks are shaped by the broader socioeconomic and organisational contexts within which they work. In this chapter, I use a longitudinal case study approach to explore how link workers navigate their roles as spanners of systemic gaps.

5.2 Aim and Research Questions

In this chapter, I use a case-study approach (159,160) to explore how link workers in areas with high levels of social and economic disadvantage navigate their positions as spanners of systemic gaps, build professional networks and deliver social prescribing for the benefit of patients.

In this chapter I aim to answer the following thesis research questions:

Thesis Question 3: How do link workers build and sustain relationships for the delivery of social prescribing in areas with high levels of socioeconomic deprivation?

Thesis Question 4: How do these networks and relationships change over time?

Thesis Question 5: What support and resources do link workers need to successfully undertake this networking work?

Thesis Question 6: How do link workers impact patients experiencing socioeconomic disadvantage through social prescribing?

5.3 Methods

5.3.1 Study Design and Approach

Case study research facilitates in-depth, multi-faceted exploration of complex issues in real-life settings (159,160,264). It helps to understand and explain causal links and pathways in policy initiatives or service developments by capturing information on ‘how,’ ‘what,’ and ‘why’ questions (159). Stake has defined three main types of case studies: intrinsic, instrumental, and collective (160). These three types are not necessarily mutually exclusive, with case study designs incorporating more than one approach (159).

Intrinsic case studies are used to learn about a specific and unique phenomenon and are concerned with the particularities of the case in question. They are undertaken when a case is of interest in its own right, rather than because it represents other cases or because it illustrates a particular issue (159,160).

Instrumental case studies, on the other hand, use a particular case to gain insight into a broader phenomenon or issue (159,160). The instrumental approach can facilitate both the testing and development of new theory by identifying key variables and understanding relationships between them and then applying these insights to broader contexts (161).

Collective, or multiple case studies, involve studying multiple cases simultaneously or sequentially to explore phenomena of interest in different contexts and generate broader understandings of a particular issue (159,160).

I adopted a collective and instrumental approach (159). I studied multiple cases simultaneously (160) to gain a broader understanding of how the networking work undertaken by link workers is shaped by socially and economically disadvantaged contexts. Given that the focus of my research was the networking work undertaken by link workers, I selected individual link workers as cases around which to focus the research. These link workers served as instrumental cases through which to understand how social prescribing is operating in socially and economically disadvantaged settings more broadly. I used a longitudinal approach to allow me to explore how link workers’ relational

work may evolve over time. Within each case study I used a mixed methods approach with a convergent parallel design (see Chapter 2).

5.3.2 Recruitment and Sampling

I purposively selected (225) three link workers from the sample of 21 link workers who took part in the study described in Chapter 4. I deliberately sought to include cases to represent geographical variation and different types of typically ‘left behind areas’ (17) such as such as inner-city areas, former industrial towns with high unemployment levels, and forgotten coastal towns (17). I targeted link workers serving populations in areas of ‘double disadvantage’ (areas facing both high material deprivation and relatively low levels of social capital and social infrastructure) (18). These link workers were working in some of the most deprived areas of England, as defined by the Indices of Multiple Deprivation (IMD). I also aimed to sample across different working patterns (full-time vs part-time), employing organisation (PCN vs VCS), and gender. Recruiting from my existing sample allowed me to take a longitudinal approach giving me data from three timepoints, spanning a period of almost two years (from October 2022 and March 2023 for the data which also formed part of Chapter 4, and then from November 2023 until August 2024 for the longitudinal case study visits). It allowed me to incorporate the selected link worker cases’ interview data from their participation in the research described in Chapter 4 in addition to the interviews undertaken as part of the case study research in this chapter.

I worked with each selected link worker to purposively recruit 5–10 patients with whom they had worked or were currently working with, who varied in terms of age, gender, ethnicity, employment status, receipt of state benefits, education level, and time engaging with the link worker. Link workers were asked to identify potential participants who reflected this diversity and who they considered likely to feel comfortable being approached about the research. The link worker would either contact these potential participants by telephone or during their visits into the practice where they would introduce the study to them. If potential participants expressed an interest in taking part and consented to their details being shared, I would then contact them to give them more information about the study, arrange a time for an interview, and ensure they had read a copy of the participant

information sheet. Drawing on previous research (8–10), my own experience, and my supervisory team’s previous experience, this sample size of 5-10 was considered likely to have sufficient information power (227) to allow for an in-depth exploration of patient experiences of social prescribing in each case study. I aimed to interview each patient at two timepoints, 6–9 months apart.

The three link workers were offered a £50 voucher for each week of fieldwork they participated in as a gesture of thanks for taking part in the research. All patient participants were offered a £30 gift voucher to recognise their time for each interview completed.

5.3.2.1 Mitigating challenges to recruitment

While I successfully recruited a purposive sample of three link workers as cases, I had initially aimed to recruit five link worker cases from the sample of 21 described in Chapter 4. The reasons I included only three included the following reasons: some of the link workers were no longer in post; there was a lack of capacity to take part in the research; services were changing so much that some link workers only worked remotely, which would not have allowed me to shadow them; and some link workers from the initial study (Chapter 4) did not respond to my invitation to take part in the research. These barriers to recruitment echo the challenges link workers face in their roles, as described in Chapter 3 (25).

Although my final sample size was smaller than initially planned, the selection of link worker cases was still purposive rather than convenience-based. These three link workers were deliberately chosen from the wider sample of 21 to reflect geographical variation and different types of “left-behind” areas – an inner-city area, a former industrial town on the edge of a big city, and a coastal town, as well as patterns of employing organisation and full versus part-time working patterns. Each of the cases was selected to illustrate different socioeconomic and organisational contexts. While recruitment of additional cases was constrained for reasons above, I maintained the principle of purposive selection throughout.

To address my reduced sample size, I adapted data collection to facilitate more in-depth explorations of the three cases. This involved conducting additional ethnographic observations of activities at

voluntary and community sector organisations (to which link workers made referrals to) and having informal and opportunistic conversations with those participating in these activities. These conversations and observations provided additional contextual information about the wider environment in which the link workers were operating and how they undertook their roles. These additional observations of community activities all took place during the scheduled fieldwork visit for each case. I was able to undertake these activities alongside the planned shadowing of link workers, allowing me to enrich my understanding of the broader contexts within which the link workers operated. I also recruited additional patients to take part in interviews at each of the three cases to gather additional data on patient perspectives.

5.3.3 Data Collection

I took a focused ethnographic approach (265) to enable in-depth and multi-faceted exploration of how link workers undertake their roles in socially and economically disadvantaged settings. Ethnographic approaches can involve multiple data collection methods combining both qualitative and quantitative data, but tend to be defined by observational fieldwork during which the researcher immerses themselves within the social setting under study (266). Ethnography focuses on the meanings of individuals' actions, emphasising the importance of context in understanding events and interactions (266). The meanings of observations are shaped and constructed by interactions of the researcher and participants, thus reflecting diverse and multiple interpretations of reality (265) and requiring researcher reflexivity (266). Focused ethnography is applied and pragmatic and is often used in health-related research (267). Focused ethnography differs from traditional ethnographies in three key ways (265). First, it explores a defined, as opposed to an open-ended, topic area informed by existing literature, and has a focused research question that is formulated before undertaking fieldwork (265). Second, data collection is short and purposeful, tailored to answering the research questions (265,267). Third, interviews are conducted with carefully selected participants and focused closely on the topic of study (265,267).

The fieldwork conducted in this study involved shadowing the three link workers (the cases) at two timepoints, 6–9 months apart. From discussions with practicing link workers ahead of planning the

study, this timeframe was deemed appropriate to be able to balance the need to observe shifts in networks, practices, and patient caseload over time, with the need to maintain engagement and continuity with study participants. This timeframe also reflects the practical constraints of conducting longitudinal fieldwork within the duration of a DPhil. Each bout of fieldwork lasted one working week, amounting to a total of two working weeks of fieldwork per link worker across the duration of the study. The timing of the fieldwork weeks was chosen to reflect typical working weeks. I also aimed to capture seasonal variation in primary care activity by conducting one visit in the winter months and another in the summer months. The specific weeks were finalised in consultation with each of the link workers to ensure the timing was convenient for them and did not disrupt their workload too much. During the fieldwork weeks, I remained resident in the fieldwork locations, allowing me to familiarise and immerse myself in the local context.

It is worth noting that in this chapter I refer to three timepoints. This is because the first timepoint includes data from the link worker cases that I collected for the research in Chapter 4. Timepoint one is therefore the first network interview undertaken as described in Chapter 4; timepoint two is the first fieldwork visit for each case study; timepoint three is the second fieldwork visit for each case study. During the fieldwork visits, I used the data collection techniques detailed under the following subheadings at both timepoints.

5.3.3.1 Focused ethnographic fieldwork observations and enquiry

I shadowed each link worker in their day-to-day work—meeting with patients, other professionals, and community groups (the patients I observed during their consultations with link workers provided consent for me to be present during their appointments). I took written ethnographic notes to capture my observations on topics that addressed my research question. In addition, I undertook broader observations to deepen my understanding of the contexts in which the selected link workers and their patients were situated. For example, I walked around the areas surrounding the GP practices that link workers served and some of the housing estates on which patients lived, I used forms of public transport, and I made informal and opportunistic visits to community groups in the local area. I also searched for articles on local history and reviewed publicly available data on the GP practices, to

broaden my understanding of the local contexts. These activities enabled me to obtain an appreciation for the local community infrastructure and develop insights into what navigating the local area looked and felt like.

When observing patient appointments and community group activities, I introduced myself as a doctoral research student studying the role of social prescribing link workers in the NHS. I explained that because this is a new role in the NHS, I was interested in understanding how patients experienced working with link workers and how social prescribing fitted into their everyday life, and how link workers interacted with the people they were supporting. I emphasised that I was independent from the GP practice and that I would only remain present in their consultation if they gave their consent (which was recorded in a consent form). With the exception of one patient, I did not directly observe consultations between the link workers and the patients who took part in interviews. This reflects the reality of fieldwork scheduling, link workers did not always have appointments with the same patients I was interviewing, and in some cases, I was deliberately interviewing patients they had supported in the past or were only seeing infrequently at the time. The observations also allowed me to focus on the link workers' broader caseload, allowing to me witness interactions with a wider range of patients, giving me access to additional contextual data and a broader understanding of their practice.

I documented my observations through fieldwork notes to supplement data from the interviews and focused observations.

5.3.3.2 Semi-structured interviews with link workers

For each case I conducted three semi-structured interviews with the focal link worker. The first interview was the one they took part in as participants in the research described in Chapter 4. The second two interviews took part during the two fieldwork visits, which occurred 6-9 months apart as described above. During each of the fieldwork visits, I interviewed the link workers about their experiences of their job and how they work with patients and organisations in their local community to deliver social prescribing services. During each interview they also re-completed social network analysis questions, following the same procedure and protocol described in detail in Chapter 4, with

minor adaptations to reflect the longitudinal nature of this research. Each interview took place in person during the week of fieldwork, or remotely over Microsoft Teams (either during the fieldwork week on days during which the link worker worked from home, or soon after the fieldwork week if there was not sufficient time for the interview during the fieldwork visit week. Each interview was audio-recorded and transcribed verbatim by a professional transcription service. The interview schedules can be found in Appendix 5.

5.3.3.3 Semi-structured interviews with patients connected to each link worker

In addition to interviewing the link workers, I also interviewed patients who had worked with each link worker to elicit their narratives and experiences of social prescribing, of working with the link worker, and about how social prescribing and working with the link workers fitted into the wider contexts of their lives. The patient interviews also aimed to identify how trust was built between the patient and the link worker, as well as how patients benefitted from the social prescribing pathways and networks created by the link worker. The interview schedules were informed by previous social prescribing research conducted by the team I work with (12) and developed in consultation with the Deep End PPI group to help ensure that the questions were appropriate, relevant, and accessible. The patient interviews took place at a time and place convenient for the patient—either in person at the GP surgery, a community group, or the patient’s home, or remotely via telephone. Each interview was audio-recorded and transcribed verbatim by a professional transcription service. The interview schedules can be found in Appendix 5.

5.3.3.4 Reflexive journalling

Ethnographic approaches are shaped by interactions between the researcher and study participants, and produce meanings and interpretations from these interactions (265–267). Hence, to enable me to consider my positionality and how this might influence my data collection and interpretations, I used regular reflective journalling. In my journalling I used the questions proposed by Barry et al. (268) in their reflexivity tool to help me consider the values that I was bringing to the research. The questions I considered were: *In what way might my experience colour my participation in the project? What experience have I had with qualitative research? What is my orientation to qualitative*

research? What results do I expect to come out of this project? What theoretical lens do I favour to apply to the results? What is my stake in the research? What do I hope to get out of it? What are my fears? (268). Considering each of these questions before entering each fieldwork site allowed me to incorporate reflexive notes into my fieldwork notes. I discussed these questions with my research supervision team to explore how my values might influence my interpretation of results.

5.3.4 Analysis

I undertook data analysis in two phases. The first phase involved within-case analysis, with the goal of understanding and explaining how each link worker operated within their context (269). In the second phase, I conducted a cross-case analysis to facilitate the comparison and identification of patterns across the cases. This enabled me to develop a deeper understanding of how link workers operate in socially and economically disadvantaged settings, and to consider the transferability of my findings to broader contexts (269).

5.3.4.1 Within-Case Analysis

I uploaded, managed, and analysed all interview transcripts and fieldnotes using NVivo 12 qualitative data analysis software (241). I used reflexive thematic analysis (127) to analyse the data (interview transcripts and field notes) from each case study site separately. My focuses were the nuances of each link worker's practises, their approaches to working with patients, and the contexts in which they worked. My analysis process involved reading and rereading each transcript to familiarise myself with the data and to identify points of interest in the data. I then conducted line-by-line coding of the data, developing inductive descriptive codes that captured and characterised the contents of the data. In this phase of the analysis, I also applied deductive coding where I drew on the concepts that I had identified through the meta-ethnography described in Chapter 3, and the network interview study described in Chapter 4. After initial coding of the data, I clustered the codes into broader patterns of meaning and themes to help me characterise the ways in which link workers deliver social prescribing for the benefits of patients in socially and economically disadvantaged settings.

To analyse the link worker longitudinal quantitative network data, I followed the same procedures and principles described in Chapter 4. My analysis focused on the following:

- Network size: total number of alters each link worker had in their network at each timepoint.
- Number of isolates: these are contacts in the network without connections to any other contacts. This provides an indication of network fragmentation and fragility (221). Isolate connections can take considerable time and effort to maintain (221).
- Average degree: a measure of overall network cohesion or connectivity. It measures the average number of connections or links per node in a network (221). Networks with a higher average degree tend to be more robust, meaning that connections are likely to remain well connected if nodes were removed. Having a higher average degree may imply that information flow and collaboration through the network runs more smoothly.

5.3.4.2 Cross-Case Analysis

Having analysed the data from each case separately, I then conducted my cross-case analysis (269). This allowed me to move beyond the individual narratives created in the first phase of the analysis to explore broader themes and develop a conceptual framework that explains how link workers carry out their roles in socially and economically disadvantaged settings. To facilitate this comparison and data integration, I constructed a joint-display (243) (see Appendix 6) by systemically noting key findings from each of the different methodological components side by side for each link worker case (i.e., the key qualitative findings from each of the cases, key network metrics, network visualisations, and network interpretations from notes and interviews). This allowed me to explore related constructs in the dataset (243). The comparison focused on identifying any recurring, diverging, or contrasting themes across the cases. Once the patterns and variations were identified, I explored how these related to the broader contextual factors of each specific case.

Comparing the data in this way allowed me to identify that each of the link workers in my cases employed distinct approaches to providing social prescribing. This analysis was supported by the Deep End PPI Group (177) who noted that the link worker approaches seemed to fall on a continuum of what they called ‘professionality’—adopting approaches that were either ‘more professional’ and

rigid, ‘less professional’ crossing boundaries of what they felt was appropriate for a healthcare professional, or a ‘middle ground’ between the two. This discussion alerted me to contrasting approaches adopted by each of the link workers and prompted me to think about existing theories that might help explain and characterise these different ways of working.

To add depth and explanatory power to my cross-case comparison, I drew on de Certeau’s concept of ‘strategies and tactics’ (270) to characterise the patterns of approaches apparent across each of the cases. I explain this theoretical perspective in detail later in the results section of this chapter. The application of this theoretical lens allowed me to develop a conceptual framework that explained how and what approaches link workers adopt to span systemic gaps to deliver social prescribing in socially and economically disadvantaged settings.

5.4 Results

5.4.1 Case Study Sample

Fieldwork visits took place between November 2023 and August 2024, totalling over 240 hours of fieldwork. Across the three cases, I conducted 37 interviews with 23 patients and three interviews with each of the three link worker cases (9 total interviews with the link workers). Each of the interviews with link workers lasted approximately 90 minutes. Interviews with patients lasted for 20–40 minutes. To protect the identities of the link worker cases, I describe their characteristics narratively without attributing identifiers to each description.

All three link worker cases served areas with double disadvantage (18) (see Chapter 1), which were among the most deprived in England. They were funded by PCNs, with one link worker employed directly through the PCN and the other two subcontracted—one through the local GP federation and the other through a local VCS organisation. Two were female, and one was male. Additionally, two had backgrounds working in the VCS, and one had previously worked in a corporate environment. At the time of their first interview, the link workers had been employed for 18, 23, and 36 months respectively. By their third interview timepoint, the link workers had been undertaking their roles for 35, 42, and 60 months respectively. All three link workers had been long-term residents within the

wider local areas they served and had detailed understandings of the local area and organisations within it; however none lived on the most deprived housing estates some of their patients resided in. The link workers varied in terms of their working patterns, which also changed over the course of the study. At their first interview timepoint, two worked full-time and the third worked 3.5 days per week. By the third interview timepoint, only one remained full-time, one reduced from full time to 3 days per week, and the third had further reduced their part-time employment to 2 days per week.

The link workers also varied in terms of the number of practices they served, with the numbers changing across the study time frame. One link worker served a single practice throughout the entire study period. Another initially served two practices, reducing to one at the final interview/fieldwork timepoint. This was due to organisational and contractual changes which resulted in them ceasing to cover the more deprived of the two practice. This organisational shift was itself analytically important and is discussed later in this chapter. The practice they continued to serve, fell within the 3rd IMD decile, therefore remaining in an area of disadvantage. The third link worker served five practices at the first interview timepoint, dropping to three practices at timepoints two and three. In terms of caseload, the link worker serving one practice had a caseload of 85, 60, and 50 at each timepoint respectively. The link worker that served two and then one practice had 25,30, and 20 patients on their caseload at each timepoint respectively. The link workers that served three practices had caseloads of 40, 85, and 33. The drop in the number of patients on each caseload likely reflects the change in working patterns (dropping to part-time or reducing the number of practices served) or a change in the way link workers set boundaries around their work.

The social prescribing services provided by the link workers were similar in that they all offered a degree of flexibility in terms of support for patients.

Two of the services offered a flexible number of sessions with some patients being supported long-term (more than 2 years). Contact with patients varied by need and could occur over the telephone, in person at the GP surgery, or at the patient's home. These two services mainly received referrals from the GP practices, but the link workers also occasionally identified patients in need of support by attending community group activities.

The third service, while also offering flexible support, had contact with patients 3–4 times. Most contact was over the telephone, with occasional face-to-face meetings at the GP surgery or the VCS offices, and sometimes (infrequently) in the patient’s home. This service had multiple referral routes, receiving referrals from the GP practices, the VCS organisation that employed the link worker, as well as other local organisations (although the link worker would only support patients who were associated with the GP practices they served).

All three link workers had contact with other link workers in their locality, accessing support informally through group WhatsApp chats, or more formally by sharing offices with other link workers or by collaborating through the locality’s strategic joined-up working approach.

5.4.2 Patient Participants

I recruited a total of 23 patient participants across the three link worker cases. I had initially aimed to recruit 5–7 patients per case study. When I struggled to recruit five case study link workers, I aimed to recruit additional patients to take part in interviews to increase the breadth and depth of patient perspectives in my study. I successfully recruited additional patients at two out of the three case studies. As I discuss later in this chapter, my inability to recruit additional patient participants at one of the case studies may have been related to some of the challenges faced by the link worker/social prescribing service at that site.

The patient participants were aged between 22 and 86 years (median = 54) with 12 patients being female and 11 being male. Most were White British (n=16) and 13 lived in areas within the lowest two IMD deciles. All but one of the patient participants were unemployed or retired. Out of the 17 participants that I recruited at the first study visit, 14 took part in a follow-up interview. Three patients only took part in an interview at my first fieldwork visits, and an additional three patients were recruited during my second fieldwork visits only taking part in an interview once at the third timepoint.

Patients started seeing a link worker for diverse reasons, including: mental health concerns; housing and financial support; food vouchers or support accessing food banks; social isolation; weight

management; pain management; bereavement; support to access volunteering opportunities; support to access community groups; support for asylum seekers; support for people with elderly relatives moving into care; and complex physical conditions which had knock-on effects on wider aspects of their lives.

Patients varied in the intensity and duration of support they received from link workers. Some received long-term intensive support, where the link worker had been following up with them regularly for 2–3 years and supporting them with multiple issues they encountered in daily life. Other patients had ongoing responsive support, where they were able to contact the link worker if an issue they thought the link worker could help them resolve had arisen in their lives. This responsive support differed from long-term intensive support in that the patients would contact the link worker if they needed help rather than the link worker taking a proactive role in regularly following up with them. Others received short-term (weeks or months) intensive support where the link worker helped them resolve an acute issue (e.g. an application for a disability benefit) after which they did not require much, if any, additional support. Some patients only required short-term support, either to access a community group or to find out about resources they might be able to access. These patients were able to access the resources with minimal additional support from the link worker and did not require long-term follow-up. These different patterns of support mirror those found in other studies of social prescribing (10).

5.4.3 Case Geographies and Wider Contexts

The link workers served areas located in the Northeast, Southeast, and Northwest of England, covering inner-city areas, former industrial towns, and coastal towns. The areas are described in detail in the next section. To protect the anonymity of the link worker cases, I do not connect the geographical locations to the specific cases.

5.4.3.1 Inner-City Former Industrial Area

One area was originally a Victorian working-class area with densely built housing for coal mine, shipyard, and factory workers. It was redeveloped in the mid-1900s after being considered unfit for

human habitation with widespread disrepair and lack of sanitation facilities in the houses. The redevelopment aimed to preserve existing communities as residents felt strongly about remaining in the area. In more recent years, the locality has suffered from a number of social problems common to other inner-city urban housing areas (17), such as high levels of youth crime and vandalism, problems with drunkenness and drug use, high levels of unemployment, as well as a declining local high street. Walking down the high street during my fieldwork visits, I noted a high number of boarded up shop windows, closed banks, and broken shop windows. I was also struck by the high number of pawnbrokers and betting shops, and fast-food outlets—aligning with national observations of more concentrated distributions of gambling shops in areas with high levels of social deprivation (271). Research participants echoed some of these problems during their interviews, discussing their encounters with crime in their local area, their ways of dealing with it, but also highlighting the strong sense of community present in the area.

“I don’t know, there just seems to be more people taking drugs over here outside the supermarket at the bottom of the road there. It’s bonkers, rough pubs on [road name] there. I know it’s not that far from where I live but it’s like a totally different world, you know.”
P1, Timepoint 2

“I’ve had two incidences, one with someone that was clearly under the influence of some kind of drug. That was quite scary. This was before I was pregnant, I think. And then the other time, which was also before I was pregnant, the kids in the area like teenagers, they’re also quite scary. They also use drugs. So, I didn’t report any...anything because word gets around fast in those areas.” P6, Timepoint 3

“It’s not the actual area, the area is fine, the people are lovely, they’re friendly enough. I mean you know; you get your odd one around where we live, but once we shut that door and lock that door, that’s sort of shut out. Like I say, it could be anywhere now. You’re not going to get the perfect area are you really now.” P10, Timepoint 3

5.4.3.2 Forgotten Coastal Town

This area was originally a seaside holiday destination, characterised by seasonal work patterns and businesses serving the needs of holiday makers. As many other seaside towns nationally, this area has experienced gradual economic decline since the 1960s (272). It suffers from a number of

structural challenges including low educational attainment compared to national averages; low economic activity; high rates of unemployment; an aging population (29% of residents are aged 65 or over compared to only 18% nationally); and large parts of the area are among the most deprived areas nationally. Health in the local authority is generally worse than the English average with high levels of alcohol-related hospital stays, high levels of obesity, and high rates of violence and crime.

During my fieldwork visits, I noticed that while the area is listed as deprived overall, there were differences between neighbourhoods, with some appearing to be more affluent than others. On the high street I again noticed many boarded-up shop windows, a lack of grocery stores, and high numbers of pawnbrokers, betting shops, and arcades. One of the neighbourhoods covered by this social prescribing link worker is one of the most deprived neighbourhoods in England. Walking through this neighbourhood I observed poor quality housing, and many houses had accumulated piles of rubbish in their front yards. Conversations with the link worker and other local social prescribing stakeholders highlighted that those living in this area suffer from ‘abject poverty,’ often requiring support for hoarding, hygiene, drug and alcohol misuse, and basic needs such as food and heating. Research participants echoed some of these problems in their interviews. However, they also highlighted some of the assets such as the pleasant seaside landscape and feeling of community in the area.

“Yeah, it is a bit of a struggle because obviously I live in a shanti town, it's not, there's no bricks in the houses, and I find that super weird, and it's freezing and it's a very low-income area, and they keep promising to put more funds into the area, it either doesn't materialise or materialises in the weirdest things. So they're doing the road, they're building this really big building where they have the marketplace that was outside is now inside and it's like 'who pays for the...who signed off on this, bring some bricks into the town?' There's really bad potholes in the area, it's just not great.” P11 Timepoint 2

“There's a big sense of community amongst everyone but only because we're all struggling together. But it is amazing because some of the neighbours I get on really well with and we do help each other out and I get the family bus tickets, I've always got a spare ticket on my...if someone needs to get on bus, come on with me.” P11, Timepoint 2

5.4.3.3 Former Industrial Town

This area was a centre of textile manufacturing during the Industrial Revolution but has since become one of the most deprived areas in England. It has had high-profile crime and housing-condition scandals, but it also has a strong history of community action. The area has higher levels of ethnic diversity compared to its surrounding areas and England as a whole. Discussing the area with local social prescribing stakeholders, they commented that it has had to rebuild itself following the collapse of the textile industry and that it has required significant amounts of investment to support housing regeneration. Walking through the city centre, it was apparent that there has been investment in local council infrastructure, transport, and the maintenance of local historical monuments. I noticed a number of fast-food chains and limited options for fresh, healthy food. In residential areas, I observed a mixture of new housing estates alongside older, lower-quality housing. The wider area has benefitted from a strong systemic commitment to public health, driven by principles of devolution and a strong shared vision for joined-up health and care. This context provided an important backdrop for the link worker's practices.

“Where I am is okay because I’m right on the outskirts. But I mean there’s a lot of community spirit on it but it’s the same as anywhere, you’ve got the rough element haven’t you, but you get that wherever you go.” P19, Timepoint 2

“Nice town, it’s... everybody’s like, I never see here like if you... so many people like drunk or anything it’s quickly sorted, if you... I don’t see anything here, I see nice and calm and here are so many charities available kind of my circumstance they can help, always they’re ready for help us. So that’s a plus point.” P17, Timepoint 2

Table 14: Patient participant characteristics across case studies.

ID	Age	Gender	IMD of Home Address	Ethnic Background	Employment status	Support Received from Link Worker
P1	50	M	5	White British	Unemployed	Short-term intensive support
P2	36	M	3	White British	Unemployed	Long-term intensive support
P3	50	M	2	White British	Unemployed	Short-term intensive support
P4	56	M	1	White British	Unemployed	Ongoing responsive support
P5	84	F	1	British	Retired	Long-term intensive support
P6	25	F	1	Black British	Unemployed	Ongoing responsive support
P7	80	M	6	White British	Retired	Long-term intensive support
P8	86	F	6	White British	Retired	Long-term intensive support
P9	53	M	1	White British	Unemployed	Attends group set up by link worker
P10	55	F	1	White British	Full-time carer	Attends group set up by link worker
P11	25	F	1	White British	Unemployed	Short-term intensive support
P12	60	F	9	White British	Full-time	Short-term support
P13	63	F	2	Black British	Retired	Ongoing responsive support—attends group
P14	72	F	5	White British	Retired	Short-term support, attended group
P15	76	F	3	White British	Retired	Ongoing responsive support—attends group
P16	22	M	3	White British	Unemployed	Ongoing responsive support—attended group set up by link worker
P17	45	F	1	Indian	Unemployed	Ongoing responsive support—attended group set up by link worker
P18	60	F	1	White British	Unemployed	Short-term intensive support
P19	54	M	1	White British	Unemployed	Short-term responsive support
P20	59	M	3	White British	Unemployed	Short-term intensive support
P21	46	M	3	Asian	Unemployed	Long-term intensive support
P22	46	M	1	Black African	Unemployed	Short-term intensive support
P23	49	F	1	South Asian	Unemployed	Long-term intensive support

5.4.4 From Strategies to Tactics: A Continuum of Link Working Approaches

Through the cross-case analysis it became apparent that each of the three link workers adopted distinct approaches to navigating their roles as spanners of systemic gaps. These approaches fell on a continuum between alignment with organisational expectations and pathways to creative approaches that worked around systemic and organisational barriers to deliver person centred care. To explore and characterise this continuum of practices, I drew on Michel de Certeau's concept of 'strategies and tactics' (270).

De Certeau suggests that there are two key structures in society: the first is the dominant order, or wider (economic) system, and the second is the users who exist within the system (273). The system maintains its existence and dominance through 'strategies' which he defines as "*the calculation (or manipulation) of power relationships that becomes possible as soon as a subject with will and power (a business, an army, a city, a scientific institution) can be isolated*" (de Certeau, 1998, p. 35) (270). In other words, strategies are methods employed by institutions or systems, operating from a position of power and control, which create formal structures and rules to organise and regulate practices through which their power is enacted. Strategies tend to be stable and reproduce the power dynamics of society. However, individuals and groups who inhabit or use spaces produced by strategies but lack institutional power can employ what de Certeau terms 'tactics' to creatively navigate and resist the constraints of these imposed structures. Tactics are defined as "a calculated action determined by the absence of a proper locus" (pp. 35–36) (270). Unlike strategies, tactics do not create their own spaces and structures, but are instead opportunistic and often improvised, operating in spaces that are not their own, allowing individuals to 'make do' within the constraints of the system. Tactics "make use of the cracks that particular junctions open in the surveillance of proprietary powers" (pp. 37–39) (270). They are described as the 'art of the weak,' employed by those with less power or agency as methods of using and in a way misusing what strategy seeks to impose. As tactics do not have a space of their own, they tend to be subtle and invisible, subversive, and can change rapidly in

response to fluctuating circumstances (273), and therefore do not have the power to bring about systemic change.

Extending de Certeau's binary notions of strategies and tactics, my analysis identified that link worker approaches to social prescribing fall on a continuum between 'tactical' practices—creatively repurposing system structures to benefit patients—and more 'strategic' practices aligned with system structures that focus on signposting and navigating existing pathways. All three link worker cases employed approaches from across the continuum of practices. However, each individual link worker displayed a dominant position that could be characterised as falling either at the tactical, pragmatic (middle), or strategic end of the continuum. Tactical approaches involve highly relational, reactive, adaptive, and create methods to navigate systemic gaps. In tactical approaches, link workers draw on their professional networks to support patients by bypassing barriers imposed by the wider system. At the opposite end of the continuum, strategic approaches employ practices that are more in line with and governed by formal organisational policies and interests. They are focused on navigating the existing system with professionalism. Positioned between these two poles on the continuum is a more 'pragmatic' approach which combines tactical adaptability with pragmatic and intentional alignment with system strategies. Each of the approaches adopted by the link workers was shaped, to a certain extent, by individual style and experience, as well as by the wider organisational and system level contexts within which they operated.

Tactical, strategic, and pragmatic approaches each bring benefits for patients in the form of relational continuity, advocacy, and person-centred care, but they differ with regard to sustainability, equity, and ability to contribute towards systemic change. The approaches located at the poles of the continuum (tactical and strategic) displayed higher levels of fragility than practices located in the pragmatic middle-ground. Approaches aligned with tactics were fragile because they operated in the 'cracks' (270) of organisational strategies (policies and regulations) and therefore lacked the power for systemic change. They were also highly dependent on the individual link workers undertaking these approaches which has implications for equitable service delivery. Tactical approaches were also emotionally and relationally intensive, leaving link workers at risk of burnout, having

implications for the sustainability of social prescribing. Approaches overly aligned with strategies, on the other hand, risked unintentionally reinforcing existing inequities through their adherence to institutional structures which may not be sensitive to the needs of those experiencing high levels of social and economic disadvantage. Approaches in the pragmatic middle-ground had the greatest potential for delivering responsive person-centred care while also contributing to systemic change and action on health inequities. The emergence of this approach, however, was heavily reliant on broader systemic alignment and commitment to action on the social determinants of health. Each of these approaches and their sustainability were reflected in link workers' professional networks. This continuum is illustrated in Figure 18. I discuss each of these approaches in detail below.

I chose to apply this theoretical framework as it allowed me to extend thinking our team had conducted in other social prescribing research building on Lipsky's idea of "street-level bureaucrats" (274). We employed this framework to explain how link workers exercise discretion within their roles (9) (this is discussed in more detail in the discussion section of this chapter section 5.5). Applying de Certeau's notions of 'strategies and tactics' allowed me to situate individual-level link worker practices and discretionary acts to broader system contexts of social and economic disadvantage to understand how link workers may respond to and or may be constrained to these contexts. The choice of this theoretical framework was also informed by discussions I had with the Deep End PPI group. When I shared some participant quotes with them from interviews I had done, they reflected that certain link worker approaches felt "too professional" while others "not professional enough", and others occupied a "middle ground of professionalism". This prompted me to consider theories that would allow me to connect these observed variations to the broader systems within which link workers operate. Furthermore, in Chapter 4, I found that link workers may sometimes feel like outsiders in medical models of care, and de Certeau's framework is particularly useful in understanding the actions of those who are not in positions of power (270). However, due to the philosophical and metaphorical nature of de Certeau's concepts, I needed to adapt and expand on this in my analysis, for instance by identifying a spectrum of practices rather than two binary concepts, and by identifying a middle pragmatic ground. I also considered other theories, such as

Giddens' Structuration Theory (275) which views human behaviour as a synthesis of structure and agency, where social structures are maintained and adapted through agency. However, through discussions with my supervisors it became clear that de Certeau's concepts of strategies and tactics were better suited to explaining the patterns in my data. De Certeau's concepts of strategy and tactics have been applied in other healthcare research to analyse nurses' everyday workarounds to rigid institutional policies and protocols (276), and to explore how hospital staff make sense of patients' experiences (277).

Continuum of Link Worker Practices



Figure 18: The Continuum of Link Worker Practices informed by de Certeau's concepts of strategies and tactics.

5.4.5 Tactical Approaches to Link Working

Tactical approaches are characterised by a high level of creativity and relationality. These approaches often go beyond conventional professional boundaries, finding creative workarounds to systemic barriers. Tactical creativity allows link workers to respond to immediate patient needs but makes their practice vulnerable to relational overexertion and policy changes. The network of the link worker aligned with tactical approaches was characterised by small, disconnected clusters and a high number of isolates. This structure reflects the creative, immediate problem-solving nature of their approach: effective for individual patients but lacking the building of cross-network connections that foster network sustainability.

5.4.5.1 Intensive Relational Care

A defining feature of the link worker whose practice could be characterised as being tactical was their ability to form long-term, intensive, and meaningful relationships with patients. This approach sometimes transcended conventional professional norms in a way which built trust, with the link worker providing advice and support like a friend but with the practical problem-solving skills of a professional. This highly relational approach sometimes worked to subvert rigid systemic strategies to provide personalised and tailored care. For patients, this meant that the link worker was perceived as someone who not only facilitated access to services, but also someone who actively advocated for their needs in ways that were non-judgemental, highly personal and invested.

“Yeah, erm, she's really approachable, kind of a warm energy sort of thing. Not a mother figure, but more like, erm I don't know, like a friend but a professional friend. It's a very nice balance, she's very balanced for someone like me that doesn't feel balanced a lot, t's nice to have a constant like I said. And she doesn't judge, I've never felt her judging me, which I can easily sniff that out when I'm around people. She's very responsive, she responds to my texts, my issues and my worries. Even on the days that she's off, the very next day she replies quite quickly...” P6, Timepoint 2

“If I couldn't leave the house, she would... she wouldn't push me out, she would more ease, erm like have a have a good talk of why and then she would put each one in a box and say, 'Well this one we can sort out by doing this,' yeah she would make things a lot easier. Whereas a lot of other people don't do that, they try and push you out the door, and to do

that makes your mental health a lot worse. Or if I was going to get something and I didn't need it, she would say, 'Definitely not, 'You don't need it, it's a waste of money,' so don't do it.' P2, Timepoint 2

Their approach was highly flexible and tailored to individual patient needs, often taking on an informal quality. Patients were able to access the link worker via text on her work mobile phone, and the link worker also reached out opportunistically to people she was supporting.

"Sometimes I'd get a text out the blue asking if you wanna do this, do you wanna go here, do you wanna go there. I try to do them all for her because I know she's always been there for me." P1, Timepoint 2

"On the odd occasion I've rang up and I've ranted and raved with the link worker and she's always, (name), (name), okay there's nothing to be uptight about. and then after the phone call I'll send her a text and say I'm sorry for being a prat. But like I've never, ever, ever seen her flustered. She just takes everything into her stride and says... she'll go right, let's take it from the bottom and we'll sort this. She's been like that since the very day I met her. She's been superb." P4, Timepoint 2

In some cases, the link worker offered intensive support and was closely involved in patients' personal lives. One example involved continuing to support a patient after they changed GP surgery, therefore no longer falling under the link worker's official purview. This support included helping the person obtain items needed for their house such as cooking utensils or furniture. The link worker supported them in their own time, outside of their core working hours. Another example involved supporting a patient who was nearing the end of their life and did not have much family support. The link worker was given a spare key to the patient's house so they could easily visit. After the patient died, the link worker helped with packing up the patient's belongings in their house.

"So, if I need stuff, say for instance you know when you're getting the stuff out of the oven, she got us a mat to put the tray on. She's got us oven gloves. She's got us quite a bit of stuff, but it's all been off freecycle. So none of, it's paid for." P2, Timepoint 3

"Well in my instance no, because like she's... I think she's gone over and beyond what she needed to do for me, including trying to get the insurance company and my doctor's surgery together to try and hopefully get my claim sorted out." P4, Timepoint 3

This highly personal approach meant that the link worker made efforts to really understand the patients they were supporting. This positioned them to be able to advocate for their patients and to tactically overcome systemic barriers which demanded high levels of self-efficacy from the patients to navigate. For instance, the link worker attended medical appointments with patients, reminding them to bring up issues they might otherwise have forgotten. They also picked up on issues the patient was experiencing and took them back to their GP to deal with.

“If I needed to go to the doctor's, because [the link worker] knows well, nearly everything about us, I've got a very bad memory, so the link worker would come into my appointment with us, and if I told the doctor stuff, then the link worker would pop up and say, 'Oh, yeah this also,' or 'Yeah, you've forgot about this.' Erm, if my mental health was bad and the link worker was in the office, I would go in, and she'd call me down a lot.” P2, Timepoint 2

“Patient, elderly, COPD, really not very well, no family at all, she couldn't do very much for herself at all and she was lonely, so she needed me to go and visit and just spend half an hour there having a chat and finding out how her health was. Because she was so ill, that was actually really useful because if I went and visited and she was having a really bad day, then I could come back and say, can one of the doctors just ring, or she's asked can she have some more cream for her eczema and I could come back and talk to someone. So that served a practical reason for that.” Link Worker 1, Timepoint 1

The reliability of the link worker and the ease with which patients could access them, and return for help if they needed, helped to foster trust. This was particularly important for patients whose trust in the healthcare system may have been undermined due to lack of relational continuity and fragmentation of care. In doing so, the link worker could tactically address the gaps left by fragmented institutional care.

“I think if the patient didn't have access to a social prescriber, it would be very easy for referrals, etc to get lost because doctors do not have the time to go chasing up referrals. They really don't. Whereas if a patient contacts a social prescriber and says I think a referral went in six months ago, I will contact them, I will chase it up, I will make sure something's done about it. So that's of benefit certainly to the patients. I think that's the main...the main thing is being an intermediary between the patients and things that the GPs just don't have the opportunity to do.” Link Worker 1, Timepoint 1

“She fills in so many gaps. I know any day I could ring her and if she couldn’t... she’ll say if I can’t answer, if I can’t pick up I’ll get back to you. She’s just helped me mentally; in every way I think because you know somebody really cares. The doctor cares but they haven’t got time to care for individuals.” P8, Timepoint 3

“Knowing that if anything comes up I’ve always got someone there on the end of the line ‘cause she’s always there for us. No matter what I ask, she tries to help us and it is a big relief and since then I’ve gotten my confidence back a bit, talking to people through her.” P1 Timepoint 2

These examples illustrate how adopting highly involved tactical approaches stretched the boundaries of the link worker’s role to provide responsive, person-centred care. However, such approaches also risked relational overextension and the blurring of boundaries between professional support and dependency. This could result in unrealistic expectations of the link worker’s role, placing them at risk of role stress and burnout, particularly in contexts where formal supervision or support are lacking. 2

“She actually gave me a lift to make sure I got there safely. That’s how great she is, I don’t know if that’s wrong within her working boundaries, but she knows I’m okay, it’s just I needed some kind of help. 9 o’clock in the morning she gave us a lift, she’s just superb, I couldn’t fault her.” P4, Timepoint 2

“I guess boundaries is something. It’s something, certainly something that I – it’s something I am conscious of for me, because I potentially, I have the potential to go too far, to do too much. There are – there has been twice in the nearly three years that I have recognised that the relationship isn’t productive for the patient anymore... So, you know, I know where boundaries are. It’s just I have a tendency, perhaps, to want to do more than the role demands that I do.” Link Worker 1, Timepoint 1

“I think there are patients where I’ve made a big difference in their life and it’s a valuable thing to have. I think it’s underestimated sometimes the work, the toll it takes sometimes. I haven’t had any form of supervision for almost a year. I have had group, online clinical supervision once in the three and a half years. I regularly talk to patients about bereavement, suicide, ideation, self-harm. Again, it’s okay for me at the moment, I can go to the other link workers if I need support. It shouldn’t be that way, we should have regular supervision and clinical supervision and it should be a priority.” Link Worker 1, Timepoint 2

5.4.5.2 Creative Problem Solving

Another defining feature of the link worker who primarily adopted tactical practices was their solution-focused creativity. In response to gaps in formal health services or community resources, they demonstrated an ability to improvise and think creatively. For instance, recognising the need for free therapeutic activities for patients struggling with anxiety or social isolation, they organised a weekly art group. They identified a charitable provider within the community who would provide materials and a group leader at no cost, and leveraged unused space in the GP surgery basement in which the group could run. In doing so, the link worker was able to subvert the formal limitations of resource scarcity, ‘making do’ with what was available. This exemplifies de Certeau’s tactical use of space, where individuals reclaim power by using spaces not originally designed for them.

“The room is in the basement and has no windows. All the pipes run through it, so whenever somebody flushes the toilet, there are running water sounds through the pipes. The room also has a vaccine fridge which constantly hums in the background. The link worker makes a joke about it saying it could be a mindfulness activity ‘Imagine you’re by a stream or hearing waves at the sea’” Fieldwork notes

The link worker also organised a support group for people living with chronic conditions such as fibromyalgia and arthritis. Once a month, they invited members of voluntary and community organisations to provide free talks and resources on issues affecting these groups such as exercise, managing fatigue, and managing pain. Like the art group, this group was held in the GP practice basement, however, it ran in the evening, after official GP closing hours. In doing so, the link worker gained favour with the practice partners: as the support group was operating on their premises, they were able to count the activity towards additional out-of-hours services. This may be interpreted as representing a tactical negotiation with institutional strategies, where the link worker tactically aligns the activity with institutional priorities (funding tied to out-of-hours services) to support actions that may not have been explicitly designed for that purpose.

Other examples of their tactical creativity included how the link worker identified underutilised resources, repurposing them to fill gaps in service provision. Responding to a care home patient’s request for exercise, the link worker recruited students studying physiotherapy/sports and exercise

science to provide free exercise within care homes. They recognised that students may require hands on experience to bolster their CVs or complete courses and used this to create a service to meet the needs of care home residents. The link worker engaged with the educational college as a resource and effectively redirected its goals (student experience and learning) to fill gaps in service provision, exemplifying a tactical reconfiguration of existing systems and bringing together separate entities (patients, care homes, students, and colleges) to create a shared benefit.

“It was a patient that contacted me and said I would really like to do exercise we don’t get out very much. I just thought right well if you can’t go to the exercise we need to bring the exercise to you. That’s when I thought where do I find people that can do exercise with the residents. I thought well universities, either as a voluntary basis, which looks really good on your CV. Or as part of a module to be able to tick a box for that sort of thing. So that’s when it started.” Link Worker 1, Timepoint 2

5.4.5.3 System Navigation

Tactical approaches also played an important role in helping patients navigate institutional strategies, such as benefit application processes and appointment systems, which can present significant barriers for disadvantaged patients. The link worker employed tactical workarounds by drawing on their knowledge and professional networks to bypass systems and barriers, making these processes more accessible to patients.

Patients described the process of applying for housing or benefit support as causing considerable anxiety, leaving them feeling that benefit forms were intentionally designed to discourage claims. The link worker would sometimes support these patients by accompanying them to benefit assessments and helping them interpret the wording of the forms, enabling patients to overcome some of the systemic barriers that otherwise left them disempowered.

“She’s been immense, and like I say, I’m relatively intelligent, but that paperwork is made to bamboozle and put you off. I’m certain of it, absolutely certain of it. I don’t think I could have got through it without her like. And I think it’s a fantastic service that the surgery offered, and they couldn’t have picked a better person as well, she’s really, really good.” P4, Timepoint 2

“Got a letter off the dole saying that I had to go for a work capability assessment to see if I was fit to go back to work and that and I was proper nervous about going there because I was frightened, they would take us off – I would lose £400 a month you know if they said I was fit for going to work. So she drove us up there because it’s in [town] and I couldn’t get there on me own. I was really anxious about going there. She came there with us and all, helped us with that and she sat in with us while the professional was in with us and stuff. It was a great relief that she was with us, you know. I think if she hadn’t have been there I will have been in there for much longer. I would have started getting proper anxious. I’d have probably had a panic attack or something ‘cause I used to get them a lot but now I don’t ‘cause [the link worker] can come with us to places like that. It’s a relief to know, you know.”
P1, Timepoint 2

The link worker helped patients refine the wording of their responses on application forms to improve their chances of acceptance. The guidance they provided demonstrates their ability to interpret and utilise institutional tools for the benefit of patients who might otherwise be excluded due to inaccessible institutional strategies.

“For a lot of paperwork there’s also a knack behind it. So things like a PIP application, a personal independence application, there is a way of writing it that will be more successful. I always say to patients it’s no good just saying, I can’t walk more than ten metres, you have to then say, okay so what does it feel like not to be able to do that.” *Link Worker 1, Timepoint 2*

“I’ve got one patient who rang me recently and said that they were doing the Power of Attorney for their mum, would I just go over the paperwork with her just to make sure she hadn’t missed anything. Because it’s one of those things, if you submit and you’ve not done it right you have to start again.” *Link Worker 1, Timepoint 2*

The link worker using tactical approaches relied heavily on their professional networks to bypass and reconfigure institutional strategies to meet patients’ needs. The link worker developed ‘gold dust contacts’—direct relationships with individuals in housing offices, benefits departments, and job centres—through which they could make direct queries about the status of a patient’s housing or benefit application. This allowed them to bypass lengthy and impersonal processes, such as waiting on hold on the telephone for extended periods.

“If it's got anything to do with benefits or housing, it's gonna take so much longer to do. And that's usually the reason why they get referred to us 'cause the patient has tried but because of mental health problems for a lot of them, they can't sit and wait on the phone for an hour and 20 minutes on hold especially when some of these organisations then just cut you off. And that has happened to me several times.... That is why I have sourced really good contacts. So I have somebody in housing. I have somebody in benefits. I have someone at the Job Centre. And those three people are like gold dust. My job would be so much harder if I didn't have those three people.” Link Worker 1, Timepoint 1

*“A patient came in with a letter from the benefit office they did not understand. When the link worker read it, they noticed that the letter was an invitation to a meeting that was happening later this morning. It was apparent that the patient was not going to make it to the appointment in time, so the link worker called their contact at the benefit office who promptly picked up the phone. The link worker quoted the patient's national insurance number. The contact was then able to reschedule the benefit appointment for the patient”
Fieldwork notes*

The link worker was also able to leverage their position in the GP practice to help patients bypass long waiting times for appointments or routine tests.

“Very often it's a medical thing because they know they can get to me a bit quicker than they can going through the usual GP process. But it's usually something really simple like can you just check that my medication's ordered for next week, kind of thing. That's a quick conversation with the prescriptions clerk and it's done.” Link Worker 1, Timepoint 2

“Well, she's helped me get appointments at the doctor's. She's spoken to a doctor when I've rang because you get through and... well you can be on the phone for hours trying to get through and it's all anxious you know... then they say there's no appointments, ring the next morning... She's ringing this afternoon to see how I am and she wants us to do a couple of blood pressure checks. I try to help myself as much as I can, but it's lovely to know that I can just ring [the link worker]. Where you ring the doctor, and they say there's no appointments. I waited four weeks for a telephone consultation.” P8, Timepoint 2

These ‘gold dust’ contacts were usually made by accident and opportunistically, demonstrating the link worker's tactical ingenuity but also highlighting the fragility of such practices. These relationships rely heavily on individual initiative and goodwill, raising questions about their sustainability, scalability, and equity.

“It's usually by accident. You know, you when ‘cause for housing, for instance, everybody comes with a housing support officer and if you're lucky, the patient I'm working with remembers who that is and has the contacts for them...I have sent emails and never had a response and so you just work out that actually the one that got back to you really quickly was really helpful, you know, and responsive and, you know, pleasant to email and if I find somebody like that, I generally say, you know, do you mind if I contact you again? And because you've already got to the point where you've been chatting over the emails, they generally say no problem and they then go down on my gold list. And that's usually the way it happens. It certainly happened like that for housing and benefits.” Link Worker 1, Timepoint 1

This creative system navigation was reflected in the structure of this link worker's network. Their network was characterised by small distinct clusters (representing the GP practice or small community groups) with limited interconnectivity between the clusters, suggesting limited interaction and collaboration between clusters Figure 19. Over the course of the study, their network was characterised by an increasing number of isolates at each interview (isolates Timepoint 1: 6, Timepoint 2: 22, Timepoint 3: 23). In network analysis, isolates are nodes in networks without connections, which tend to require a lot of effort to maintain, as they are not integrated into the broader network structure. Their presence may point to missed opportunities for integration. The relative lack of overall connectivity in the networks may reflect the link worker's opportunistic approach to problem solving, where they address immediate needs rather than forming part of a long-term strategic plan. For instance, they may develop a relationship with an individual or a community group in response to an identified immediate and acute problem—such as the need to create a therapeutic art group for patients experiencing anxiety or to develop gold dust contacts through which to bypass system barriers (strategies).

5.4.5.4 Fragility of a tactical approach

Tactics are inherently improvised, temporary, opportunistic, and reactive to realities that they have no power over (270,273). While the tactics described above delivered clear and immediate benefits to patients, they rely on the ingenuity, goodwill, and effort of individual link workers, making them fragile and unsustainable in the absence of broader systemic support. This fragility stems from a lack

of structural integration, vulnerability to changing institutional strategies, and the emotional labour and overextension involved in these approaches.

5.4.5.4.1 Lack of Structural Integration

Tactics seek to “make use of the cracks” (p. 37) (270) in strategies but lack the power to reform or improve them. While the tactical approaches described above may effectively address immediate needs, they also reveal inherent limitations for addressing entrenched systemic barriers. For example, the link worker expressed a preference for supporting older patients, whose life circumstances tended to be relatively stable and whose needs could often easily be addressed through relational care.

“They’re very grateful for anything you do, absolutely anything. Pushing [patient’s name] up here in his wheelchair, and it’s such a small, tiny little thing for me and yet it means he gets out for an afternoon and sees other people. So that’s a no brainer. I love talking to them if they want to talk to you, they’re chatty. Often also they are more settled with their housing and benefits so there’s not so much of that sort of thing. But it’s nice to sit and talk to them about their lives. If I judge that you can have a laugh with them, then I’ll have a laugh with them. I don’t know, I just feel as though I can always be more use to older patients yeah.”

Link Worker 1, Timepoint 2

When working with patients experiencing systemic issues, such as housing insecurity and financial instability, the link worker found these cases challenging, as solutions were often not easily available. Their tactical approaches could not always overcome systemic structures, revealing the limits of tactical improvisation in addressing systemic inequalities and structural injustice.

“Probably because it’s completely out of my control. It’s the state of the housing in the area, to start with. I had a patient in and other stuff’s going on in her life and she said I know I need to get on the housing list, but I’m going to wait a couple of months until I’ve sorted out A, B and C. I said no don’t wait, do it now. I’ll do it with you, we’ll get you on the system. I happened to have the latest newsletter from housing, as a social prescriber we get it 24 hours in advance to what people get it and tenants or prospective tenants get it, and I said this is the housing, this is what we’ve got. There were probably 25 houses on that list that are available for tenants. There will be hundreds if not thousands of people on a waiting list for a council house and there’s 25 available. That’s completely out of my control, it’s one of the things that stresses people out so much, the housing is done in bands, band rings.” Link Worker 1, Timepoint 3

“Also, because housing and benefits are very time consuming, and I have to admit they’re not my favourite things to do. There are other people out there who are better than me, there are organisations specifically set up to do forms, welfare rights, so it would always be just a referral for those things as much as possible...You work really hard and you do it all and you know they need it and you know they deserve it and they don’t get it. The system is massively flawed.” Link Worker 1, Timepoint 3

The lack of integration within broader system structures was reflected in this link worker’s network (Figure 19). An absence of strong overall network connections may mean that successful initiatives, such as the GP practice art group, are not easily scaled or replicated across the broader system due to limited opportunities for sharing knowledge and resources. This aligns with what can be expected from approaches focused on tactics, which are inherently improvised and lack the strategic cohesion and reach to drive and deliver broader systemic and structural change. While tactics provide responsive and tailored patient-centred care, they can lack the mechanisms for collaboration and broader systemic impact required for action on health inequities (13).

“So I imagine that wouldn't continue...[name] and [name] who are up there at the top is a time limited piece of work. So hopefully by the time we get to the end of November, my interaction with them would probably stop as well. So it's, you know, doing a lot with them at the moment, but it's not gonna continue for much longer.” Link Worker 1, Timepoint 1

The tactically aligned link worker also relied heavily on contacts that were personal to them, such as people they knew from their previous role working for a VCS organisation. While this may offer a streamlined way of getting things done for patients, relying on such connections means that the network is unlikely to persist should the link worker move on from their role.

“No, most of them, I would say if I was you know, if it was to leave I would be..., I can easily leave a list of contacts and things like that, and that would be absolutely fine. The only - there's a couple that perhaps wouldn't. Like [name], I don't think they would...And obviously, my connection to [name], and [name] is very personal 'cause I brought that from the last job.” Link Worker 1, Timepoint 1

5.4.5.4.2 Vulnerability to Changing Institutional Strategies (Policies)

The situational and opportunistic nature of tactics can make them vulnerable to changing institutional policies. A notable example was a change in policy which prohibited the link worker from driving patients to appointments or community activities in their own car. Previously, they were allowed to use their vehicle (which had business insurance) to deliver direct, responsive, and tailored support to patients. This ability represented a core feature of their tactical ingenuity through which they navigated challenges in local service provision.

“I had a court appearance a month ago for a domestic with my old partner, and I was terrified that I couldn't make it, because even if I got a bus or taxi, I would struggle to walk to the place. She actually gave me a lift to make sure I got there safely.” P4, Timepoint 2

While the new institutional strategy was likely introduced due to concerns over safety or compliance with insurance policies, it prioritised formal control over tailored care. As a result, some patients could no longer access help they had relied on.

“The link worker can no longer give patients lifts to appointments and community groups. They were told to stop doing this due to not having proper systems/insurance in place...This has had a massive impact on her way of working and means that certain patients she supports cannot attend groups anymore. She gives an example of needing to drive her car to a patient's house and then taking a taxi with them to an activity so that she can still support their attendance. This only works if the patient can afford a taxi.” Fieldwork notes

“Just before lockdown I went to a group at the local church which wasn't a religious group it was just for people who were lonely, people to meet up, like a warm hub. The link worker came and she brought four patients and I love to get involved with people and I love to talk to people... Then they've stopped her bringing people in her car, so those four people no longer can come to the group because they're all stuck in their house, all with different illnesses... It's stopping her doing her job. That's stopping social prescribing. To my mind social prescribing is getting people out of the house to join things, to talk to people...” P8, Timepoint 3

The link worker was forced to adopt workarounds, such as arranging taxis or relying on alternative forms of transport. These workarounds required significant time and effort, diverting resources from other aspects of their role. These changes highlight the fragility of tactical care.

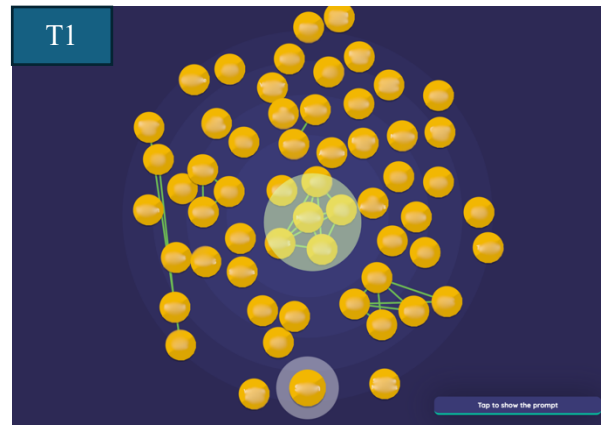
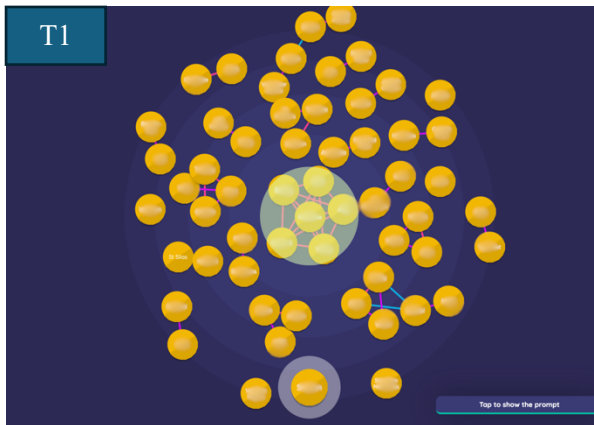
There are patients as I say with hospital appointments and one of the criteria of my job was to reduce the number of DNAs to hospital appointments and GP appointments. I really feel as though that's now out of my control, that's not something I can now have much to do and help with. I can organise patient transport for them, that's not always easy because you have to be prepared to be collected two hours before your appointment time...because potentially they're picking up several patients on the way, which is why you have to be ready two hours beforehand and they're always isn't space for me to go with them. Link Worker 1, Timepoint 3

5.4.5.4.3 Emotional Labour and Overextension

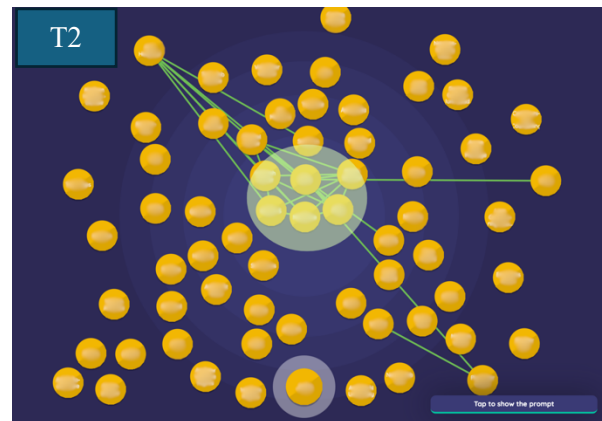
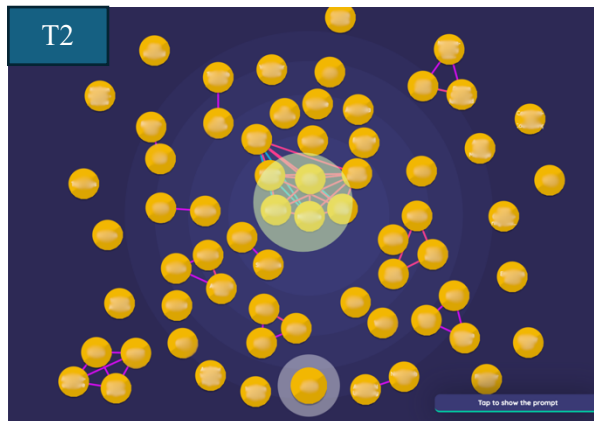
The relational tactics described above provided person-centred and tailored care. However, the emotional demands of these tactical practices risked relational overextension and link worker burnout. The link worker noted the lack of support or opportunities to share this emotional labour.

"Some of the things I've spoken to you about today, I should be able to speak to somebody in supervision. Whether it makes any difference or not, that should be available to speak to. I'm managing my situation and it's fine... But you should be able to tell somebody these things. Also I am aware of some of the link workers who are young, who haven't had the experience that I've had, that maybe the bereavement, the suicide, the self-harm, I don't want them to get worn down, I don't want them to feel overwhelmed or to feel as though they need to leave the job." Link Worker 1, Timepoint 3

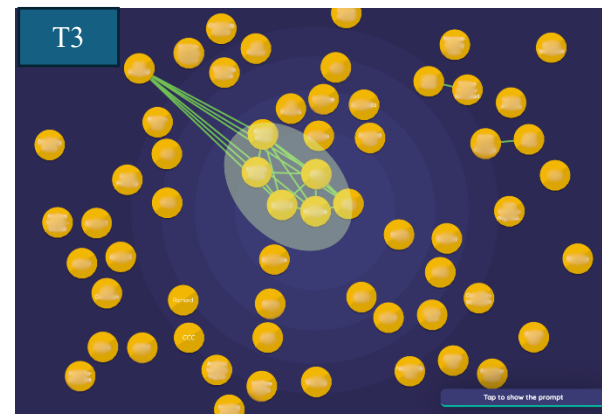
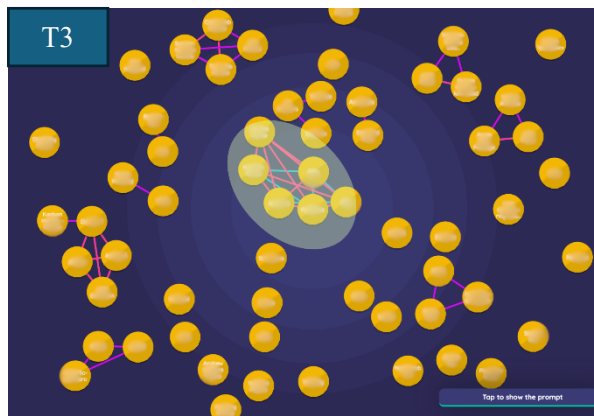
Furthermore, the relational intensity of these practices may have implications for both personal safety and opportunity cost. Providing lifts and extensive support may expose link workers to risk as well as place significant demands on their time, which may limit their capacity to support other patients on their caseload.



Timepoint 1: Network size = 68; Number of Isolates = 6; Average Degree = 4.01



Timepoint 2: Network size = 76; Number of Isolates = 22; Average Degree = 3.69



Timepoint 3: Network size = 69; Number of Isolates = 23; Average Degree = 3.6

Figure 19: The professional network of the tactically aligned link worker at times at timepoints 1-3.

Due to a quirk in the software, I was not able to display all the relationships (ties) on the same diagram. The right hand column therefore represents general relationships (such as work together; create services together; go to each other for advice and support). The green ties in the lefthand column represent referral (people who make referrals to each other).

The green circled clusters represent the contacts at the GP practice the link worker serves.

5.4.6 Strategic Approaches to Link Working

In contrast to tactical approaches, which creatively work around system and institutional policies, strategic approaches are more aligned with—and, in some cases, constrained by—institutional strategies, offering fewer opportunities for tactical improvisation. Link workers aligned with strategic approaches act as connectors or facilitators, linking patients and helping them navigate established systems and pathways rather than subverting them or creatively reimagining them. In doing so, they display a high degree of professional empathy, as well as occasionally engaging in more tactical practices to provide person-centred care. While strategy-oriented practice can help ensure consistency, its inherent rigidity may mean that it excludes those with complex social needs who may require more tactical approaches to fully benefit from social prescribing.

5.4.6.1.1 Bounded by Organisational and Systemic Strategies

The role of the strategically aligned link worker, was shaped by the strategies employed by institutions to organise and maintain systems. The link worker served two GP practices and was employed through a VCS organisation. One practice (Practice A) was located in an area that fell into the 3rd IMD decile, while the other (Practice B) was in an area that fell into the most deprived decile. During my visit, I observed some noteworthy differences between Practices A and B. Practice A was larger, modern, and had recently undergone complete renovation. It also had a community garden, which was established and managed by the same VCS organisation that employed the link worker. Practice B was much smaller, older, and located some distance from the highly deprived neighbourhood in which a large part of its patient population lived. This may reflect broader systemic patterns where disadvantaged areas often also suffer from poorer community infrastructure (17). The link worker did not have a permanent room in either GP surgery, but was usually given some office space in Practice A. The link worker was rarely offered office space in Practice B due to space limitations, which meant they sometimes ran their clinic from the waiting room. Notably, I was never able to visit Practice B to observe the link worker, as there was no space available for them to use during my visits.

The structure of the strategically aligned link worker's professional network reflects how they were bounded by institutional boundaries and strategies. Their network was characterised by two clear clusters of connections: one representing the VCS organisation that employed them and another representing PCN they served (see Figure 20). The two cohesive clusters representing the VCS and PCN demonstrate how the link worker's relationships and understanding of their network were primarily formed through their formal contractual obligations, showing alignment with broader system strategies.

Being contracted through a VCS organisation introduced layers of administrative negotiation that affected service delivery. The VCS organisation's financial and contracting priorities shaped how it used the PCN funding. This affected how much link workers were paid, and imposed defined boundaries around the number of hours of the link worker's time each practice had access to.

"The deputy director of the VCS organisation mentioned that the funding for the link workers is split, they get lower salaries but in exchange some of that money goes to fund supervision and support they receive from the VCS organisation." Fieldwork notes

"So with all of that it was almost a bit like pinching Peter to pay Paul, because you've got 16.25 hours with one surgery and another one still expecting the same level of service but only paying for seven hours, how's that going to work. So, it was very much like, well we're just going to throw it all up in the air, see where it lands." Link Worker 2, Timepoint 2

While the VCS organisation's concerns around funding and contracting of the services may reflect broader systemic financing issues in this sector (278), the resulting institutional strategies (policies) seemed to prioritise cost-saving and financial efficiency over relational care, impacting the link worker's practice. The VCS organisation, which managed a community garden beside the GP practice, gave notice to the link worker that they would start charging a weekly fee for the weight management group to use the space. As a result, the link worker was forced to move the group to the GP practice, which they believed would limit the quality of the service for patients and jeopardise the continuation of the group.

“The deputy director of the VCS believes that a problem with social prescribing services and link workers based solely in PCNs is that they won’t think about the sustainability of the organisations and services they are referring into.” Fieldwork notes

“But it’s almost changed from being a voluntary organisation to like how are we going to get the money in and getting the money in and using social prescribing to fund other projects.” Link Worker 2, Timepoint 3

“People come along and they go for a walk around the garden, they want to find it... but it’s not the same as saying look, come and sit in the garden and have a cup of tea while we talk about other things. We have so many people just sort of drop in that when I’m in the surgery I think it’s going to really change the way that people feel about it. I wouldn’t be surprised if the group does diminish, I really don’t think it’s going to be so successful. We’re going to try it and we will see how we go and I don’t want to be pessimistic.” Link Worker 2, Timepoint 3

By my second fieldwork visit, the link worker’s working pattern had changed. Contractual negotiations between the VCS organisation and the PCN resulted in the link worker only covering Practice A, and not Practice B. There were concerns that this disruption in relational continuity could significantly impact the trust-building process required to work with marginalised populations experiencing high levels of deprivation and distrust in institutional systems.

“I walked into a voluntary organisation I walked past as I was walking around the neighbourhood with extremely high levels of deprivation. I struck up a conversation with a member of staff who told me about the difficulty organisations have building trust with residents. She talked about how the stigma people feel here is visceral and constantly perpetuated in narratives in the press and media. This stigma stops people from engaging in services and meant that the organisation took almost a decade to build trust with the local population.” Fieldwork notes

“People, and I’m generalising, people are very insular, they are very, very sceptical of anybody with a sort of like a management title, with a helper title. They are very private, they’re very proud, they’re very community based. So it’s about finding key people. So these people know people and people that go to them it’s because they trust them. So I can’t just sit in a room and say, oh you can trust me, but I needed to be almost introduced by somebody that they trust.” Link Worker 2, Timepoint 2

Institutional strategies aimed at financial accountability and impact monitoring required the link worker to record all activities and patient notes on multiple systems. The duplication of administrative tasks overloaded the link worker and detracted from their ability to provide direct patient care. It also limited their capacity for tactical innovation, such as starting new community projects, and to engage in some of the adaptive practices required for effective social prescribing (25).

“No I just wish that I had more time and that the frustration for us as social prescribers is the way that we’re working at the moment. We have a database that everything has to go on that database. So every referral has to be logged, every conversation has to be logged and I absolutely understand that. But we’ve also got a clinical system as well. And now that we’re linked to the clinical system as well, we’re duplicating ‘cause we have to make notes. So we’re basically doubling up on the notes and where the funding from the NHS is coming from they wanna know where we’re spending our money. So we’re having to add so much to that database. You know, there are days where I’m just doing admin so if there was any - the frustration with the job is I don’t find that I have enough time to do all of the administration and to actually make the phone calls and then to actually do the referrals. It’s just not enough time. And when you look at these other little projects that you wanna do, there is so much we could do if we just had that, you know, some of those administration tasks taken away.” Link Worker 2, Timepoint 1

5.4.6.1.2 Professional Empathy and Care Within Boundaries

The link worker with a dominantly strategic approach worked with a high degree of professionalism, empathy, and care towards the people they supported. Their approach was consistent and reliable, ensuring follow-through on commitments, referrals, and signposting suggestions. As with the tactically oriented link worker, this consistency and continuity were important for building trust with individuals experiencing uncertainty and deprivation, particularly those who may have felt let down by the system before.

“I do want to get a bigger place where I can have a bed, but she’s going to help me with that as well. I feel confident that she will because everything she said, she’s done, she’s not someone one who say, ‘I’ll try help you with this’ and then you don’t hear back from her for six months like health visitors... she follows up 100% she’s honest and actually follows through with what she says” P11, Timepoint 2

“Once I’ve referred, signposted, I will task myself two weeks, a week, a month's time to call that client back and say, were you contracted by whoever. How was that conversation? So it's about and that's what I see as the link, the link working bit and it's making sure that all those pieces of that puzzle ‘cause I don't find it is one thing. So, it's about creating like a jigsaw with all the different pieces and then try to fit them all together. And then sometimes one piece won't fit. So, you have to go actually, that's not fitting. I'll move it and I'll try somewhere else.” Link Worker 2, Timepoint 1

However, unlike the tactically oriented link worker, who creatively repurposed organisational strategies to set up services and groups, the strategically oriented link worker remained closely in line with predefined organisational strategies and established pathways to set up groups. A key feature of their role was running a weekly peer support weight management group, attended by 8–12 patients from Practice A. Initially, the link worker was allowed to use space provided by their employing VCS organisation and could draw on support from associated volunteers. The group provided informal and non-judgemental weight management advice and accountability, while also serving as an opportunity for social connection. Sessions began with an optional weigh-in, followed by short, informal individual chats with the link worker or a volunteer about diet and exercise over the last week. After weigh-ins, the group would come together over a cup of tea for conversation or a game. This weekly meeting provided the link worker with built-in opportunities to follow-up with patients. For some patients, the group provided an invaluable social and supportive environment that went beyond addressing weight-related physical issues.

The strategically aligned link worker maintained relatively firm boundaries regarding the extent to which they would get involved with patients' lives. Their approach generally focused on being a holder of knowledge and navigating existing pathways rather than reimagining or repurposing them. This included sharing knowledge about available support, signposting patients accordingly, and expecting patients to do some of the work themselves.

“If we get a new referral we'll do an initial call. So that is normally the one where you're fact finding and those ones normally take a long time if you're doing them properly. Then based on that you would do – you would give them some stuff to signpost them and then you do any referrals from that. So once you get off the phone, you're then doing your referrals to

the appropriate organisations for them. I'd say probably everybody needs maybe one referral at least sometimes you're looking at five or six depending on how complex it is." Link Worker 2, Timepoint 1

"I would say in layman terms 'she's the glue' that is holding us all together, she's the connection. We can go to her and ask her questions about things to do with mum's situation, and she has the knowledge and the information at her fingertips to be able to then point us in the right direction of where we need to go to. That is invaluable, I would say she is the link of the web." P12, Timepoint 2

"So to know what exists it's very handy to have her, she's the middle between getting what you need and being in need, she helps connect you. When you ring up and you need the police they answer, she's like the call centre woman, 'Oh hi, let me patch you through to them, oh you need this, let me put you through to that now.' That's how I describe her, as like the go-to to get that help that you need. She doesn't run the services, but she gets you in with them, that's how I'd describe her." P11, Timepoint 2

This link worker's focus on navigating existing and formal pathways was mirrored in their network structure. In their network, the link worker connects or brokers the peripheral isolates to the core clusters rather than fostering broader network connectivity (see Figure 20). The success of their practice and support they provided depended on the reliability of individuals within their network rather than systemic structures. While this strategically aligned link worker discussed finding reliable contacts locally, these contacts differed from the 'gold dust' contacts described by the more tactically aligned link worker, as the contacts were not sought specifically to help them creatively overcome systemic barriers.

"I'm getting to the point where it's very much like, it depends on the person. Because we can all do the same thing as social prescribers, everybody that works for [organisation] can do the same thing. If you get the right person in the job doing it, who's committed to it, then the services really, really work. Now the services and the facilities are there, but it's just tapping into it and finding a person. It's like I've now got some really good contacts at the District Council where they've referred in to me, and it seems to be once they've referred in to me and I've helped them, then I go back to them and then I say oh it's ((name)), oh hello mate how are you. Then all of a sudden you've got that... and I'm like I know it's not your case but is there any... oh I'll raise it with them for you. So it's about building that personal connection." Link Worker 2, Timepoint 3

The strategically aligned link worker occasionally engaged in tactical working, particularly when this was essential to address urgent problems or to maintain the trust required to support a particular patient. For example, when they stopped officially serving Practice B, they continued to support one patient from the practice who had complex needs, with whom they had spent a long time building trust. In another case, the link worker advocated for a patient living in substandard housing conditions, chasing the estate agent to ensure the patient received with heaters and a suitable mattress. However, these moments of tactical adaptation were carefully chosen and justified.

“Occasionally, you know, I've gone round to people's houses, but we try not to because that's very, very time consuming. Time you've got there, they've made you a cup of tea. It's better if we can do the vast majority over the phone or face to face if we really need to.” Link Worker 2, Timepoint 2

“I had one the other day and it was Friday. Friday afternoon.... She'd been dumped there. And there was no other word to describe it, her and her two children just dumped in this hotel room. She had no food. She had half a loaf of bread and about that much milk and 89p and two small children. Absolutely terrifying. I mean the foodbank was actually closed because the time I got onto her on the phone it was about half past four. So what do you do? You go round to Tesco's and you get them enough food for the weekend and you take it round to them and then you tell them to come round on Monday morning to get a foodbank voucher so that they've got enough food. So you deal with the emergency and we're not supposed to be an emergency service. We're not an emergency but we because there isn't anybody else to do it. We do it.” Link Worker 2, Timepoint 1

5.4.6.1.3 The Costs of Rigid Strategic Alignment

Working within the boundaries of structured institutional systems ensures a degree of consistency and accountability in the link workers approach, as well as alignment with organisational expectations. However, the issues noted above with Practice B provide a poignant example of how these boundaries reinforce existing inequities. Practice A, located in a slightly more affluent part of town, provided the link worker with office space, making it easier to have face-to-face appointments with patients. Practice B could not offer the same facilities, potentially limiting the service patients could receive. The majority of the strategically aligned link worker's caseload consisted of patients registered with Practice A, who found it easier to access social prescribing (due to more stable life

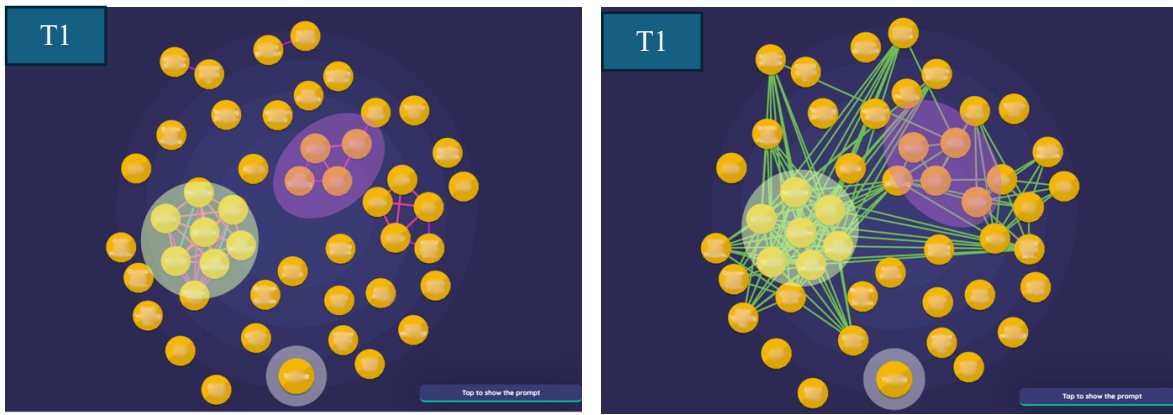
circumstances), but also because the Practice B patients were often deemed too complex to fall within the defined boundaries of the social prescribing service.

“...it's really easy for somebody at Practice A. They'll have an old person come in that says they're a bit lonely or they've lost their husband. It's a very easy referral...Whereas the ones in Practice B, they're not necessarily meeting that kind of clientele but they are meeting the ones with these really complex needs and they're mentioning somebody else, or they're not even stable medically to move on to that next stage. You can't do anything with them until their meds are sorted out, until they've seen the mental health practitioners, etc, till they're gone to the drug and alcohol, you know, unit or whatever it is they need. They're still not medically fit to move on to social prescribing... But like I said, the referrals for them, from them are different from Practice A in as much as they are people that are drugs, alcohol, serious mental health issues. But like I said to you quite often, those are the ones that are almost rejecting the help.” Link Worker 2, Timepoint 1

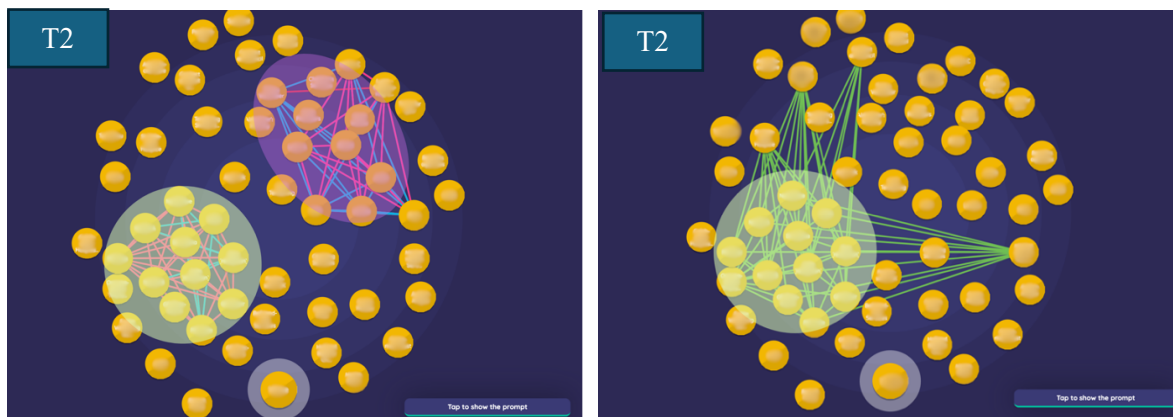
“It is noteworthy that as a researcher I struggled to recruit patient interview participants from Practice B. I only spoke to one patient from that practice and was not able to conduct a follow-up interview due to their contact details changing multiple times giving me no way of reaching them. The managers at the VCS organisation who had access to records were able to tell me that this patient had moved address since my last visit and that their phone number had changed multiple times.” Fieldwork notes

The changes in the link worker's network over time, highlight how, in this case, networks shaped by strategic alignment may be vulnerable to organisational changes. Between Timepoints 1 and 2, their network expanded in overall size (network size: Timepoint 1: 57; Timepoint 2: 68), with the formation of strong and cohesive ties within the PCN and VCS clusters, but also with a rise in network isolates (isolates: Timepoint 1: 17; Timepoint 2: 28). By Timepoint 3, while the network size remained relatively stable from Timepoint 2, the number of isolates increased again (n=34), accompanied by a reduction in overall connectivity in the PCN and VCS clusters. The average degree (mean number of connections per node) more than halved between Timepoint 1 and Timepoint 3 (average degree Timepoint 1: 9.6 Timepoint 2: 9.8, Timepoint 3: 4.4). This decline points to an overall weakening of network ties and to a more fragmented network structure. Although this pattern derives from a single case during a period of organisational change, it illustrates how institutional changes can be reflected in link workers' networks. The decline in network connectivity, coincided

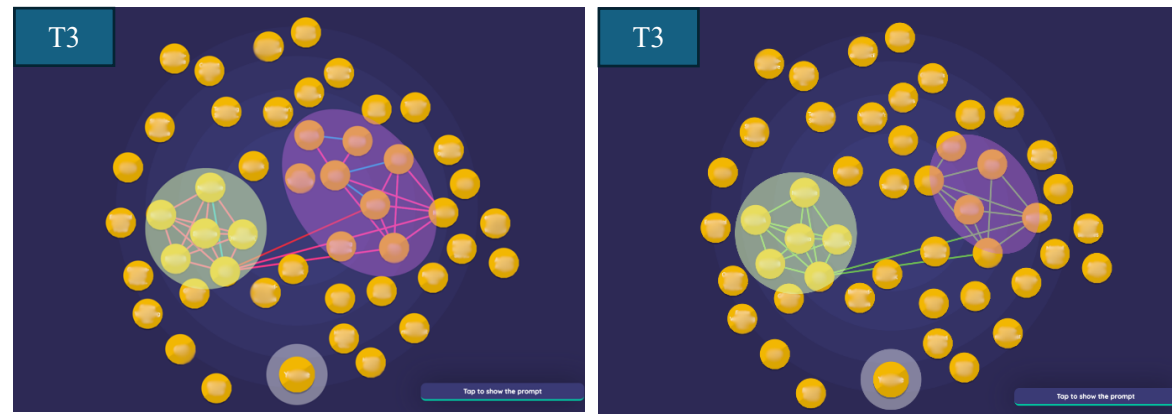
with the link worker reducing their working hours and their withdrawal from Practice B, illustrating the potential vulnerability of strategically aligned networks when organisational strategies that prioritise financial efficiency also reshape link worker roles. While the two denser clusters of the PCN and the VCS (Figure 20) indicate some internal cohesion in the network, the limited connection between these clusters points to a siloed structure oriented towards internal operational efficiencies rather than broader systemic collaboration (279,280).



Timepoint 1: Network size = 57; Number of Isolates = 17; Average Degree = 9,6



Timepoint 2: Network size = 68; Number of Isolates = 28; Average Degree = 9,8



Timepoint 3: Network size = 59; Number of Isolates = 34; Average Degree = 4.4

Figure 20: The professional network of the strategically aligned link worker at timepoints 1-3.

Due to a quirk in the software, I was not able to display all the relationships (ties) on the same diagram. The right hand column therefore represents general relationships (such as work together; create services together; go to each other for advice and support). The green ties in the lefthand column represent referral (people who make referrals to each other).

The green circled cluster represents the contacts at the GP practice the link worker serves. The purple circled contacts represent the VCS organisation.

5.4.7 Pragmatic Approaches to Link Working

Positioned between the two poles on the continuum, the pragmatic approach combines tactical adaptability with pragmatic and intentional alignment with system strategies. Strategic alignment allowed the link worker to contribute to systemic change. However, the emergence of this approach was facilitated by a supportive broader system with extensive buy-in into intersectoral working and strategic commitment to action on the social determinants of health.

5.4.7.1.1 Intentionality and Strategy Alignment

The pragmatically oriented link worker's approach was grounded in a commitment to equity and in the recognition that patients' circumstances are shaped by structural and systemic factors such as poverty, housing and financial instability, or historical trauma. They believed that tackling social determinants required broader political and systemic change and that social prescribing could contribute to this change through building communities.

“Narrow the distribution of wealth, the gap in the distribution of wealth [laugh] not have so many people controlling so much money, yeah, a less divisive society, a society based more on hope than division. I mean it's big stuff is this, yeah, and yeah, just better levels of pay for people, a good education system that talks about the strength of belonging and community as well... I'll tell you something that has worked really well is devolution...so the devolved powers works really well so that what people feel being developed is, they feel more connected in the areas that they work and live, that they feel as though the people that are making the decisions are the people that are much closer to them and understand.” Link Worker 3, Timepoint 3

The wider system itself provided a foundation for ways of working that transcended institutional boundaries and different orientations to care, giving the link worker the agency and endorsement to work in ways that might be considered tactical or subversive in other contexts. For example, I observed the link worker using their work time and personal tools and equipment to do some outdoor handiwork for a community group to which they occasionally signposted patients. They also arranged for the group to use the GP practice staff kitchen after their weekly outdoor activities. Doing these favours was crucial for building relationships with the community group and for supporting the delivery of social prescribing. These tactics were intentional, serving the purpose of

strengthening community-centred ways of working, breaking down institutional boundaries, and fostering trust.

“Social prescribing has introduced a new dimension into primary care, and it plays a critical role in connecting primary care with community services...Services have been changed to be working less so in silos in that respect but then it's also part of making it my role to go out and meet with these services. So going along to meetings, going along to events and talking to people. Be a good ambassador for the service as well. So presenting myself in an appropriate manner when I'm speaking to services, explaining what my role is. So I think it's working with existing systems, but to also to get out there and work with those services as well.” Link Worker 3, Timepoint 2

The link worker understood broader systems of governance, local health agendas relating to person-centred care, and integrated ways of working. They worked to align their practice to both fit into these frameworks and to strengthen them. Their explicit and ideological commitment to person-centred care, community building, and equity served as a blueprint and foundation for their overall practice.

“An opinion is a lot of people that we caseload with there is quite a lot of complex support needs there and these people that have maybe spent the last 20 years ending up in the position that they're in and it requires that level of investment to help that person to get back to a better place, whatever factors are involved in that. I think the project-based work enabled you to support that much more effectively in terms of assisting that person and reducing social isolation, building confidence, interacting with people, having a feeling of purpose and a feeling of belonging.” Link Worker 3, Timepoint 3

By using their understanding and alignment with organisational strategies, they were able to lean into system strategies that already prioritised joined-up working, adopting practices that contributed to community building. When they worked full time, they made the case to the PCN to allow them to spend two of their working days doing community-focused project work. In doing so, they very intentionally aimed to move beyond individual-level determinants of health, working to create environments and communities, believing this to be the most effective and sustainable way of supporting patients with complex needs.

“I had to put a case forward to get two days a week to be able to do the project work and it was based on a number of things; working as groups, trying to help people to re-establish communities and to try and assist people to sort of have ownership of what they’re doing and what comes from that is that having social connections and contacts and having things to do. And the PCN agreed to it and what has also happened out of that is that there’s been quite a lot of money freely available to do a project linked to primary care so prior to that, GP practices didn’t really have the capacity to be managing small projects, well the ones in our area and because I was able to push it, I was being able to get that money and secure partnerships with other organisations. “Link Worker 3, Timepoint 2

“It’s put a lot, like I said, it’s put a lot of opportunities for me to improve my art, show my art around the community, bring something to the community instead of me just walking around and hanging around outside. I think if more people knew about what these activities like art groups and gardening groups, I think if more people knew about that it’d be quite a better place because people can decide to go there and do gardening and do art and bring stuff to the community instead of just being on the streets causing trouble”. P16, Timepoint 2

“I go in and I see the guys that I’m volunteering with now and they go, are you okay? Shake hands, fist bump, how are you doing? You know, and I see them outside, because don’t forget it doesn’t just stop when you’re volunteering because I work in the community, I see these guys up and down and these ladies, and I see these people all the time. So, it gives you a sense of belonging.” P19, Timepoint 2

This strategic understanding and alignment were also reflected in the pragmatically aligned link worker’s network structure (Figure 21). Their network is large (network size = Timepoint 1: 66, Timepoint 2: 146, Timepoint 3: 139), densely connected (average degree = Timepoint 1: 32, Timepoint 2: 24, Timepoint 3: 41), and resilient. This reflects both the existing broader systemic commitment to joint working, as well as the link worker’s efforts to integrate healthcare institutions, community resources, and statutory organisations. Their network developed over the three timepoints, highlighting the impact of their practice had on bridging systems, and aligning with the broader local strategic vision of interorganisational integration.

At Timepoint 1, their network was relatively compact but with a highly connected structure (network size = 66, average degree = 32). It had two distinct and interconnected clusters with relatively few

isolates (isolates = 8). As with the strategically aligned link worker, the two clusters in their network represent the PCN and community organisations. The dense connection between these two core clusters reflects the link worker's pragmatic approach to establishing strong foundational relationships with these key system structures. They expressed an awareness of the need to strengthen connections between primary care and organisations in the community.

"I think it's just having systems in place that enables primary care to understand the relevance and the significance of working with the voluntary sector and with community services and the skills that they have and bring to people's health and well-being. And I think it's been interesting sort of watching you do the little maps on the screens. What's really apparent to me is that the voluntary and public and community sector are working really closely together but there's still quite a lot of work to do in terms of primary care, in terms of connecting them." Link Worker 3, Timepoint 1

At timepoint 2, the size and complexity of their network had grown considerably (network size = 146). This expansion aligned with their increased engagement with community projects (described above) and with programmes at the time. This network growth was accompanied by an increase in the number of isolates (isolates = 63) and a decrease in average connectivity (average degree = 24). This might suggest that when the link worker's network expanded its reach, maintaining the same level of overall network connection may have been challenging. However, this network structure also highlights the tactical work the link worker was doing to grow and diversify the network overall. Notably, the single cluster representing the PCN in Timepoint 1 turned into 3 distinct clusters representing each of the practices they served by Timepoint 2 (see Figure 21). This reflected the link worker's growing familiarity with the clinical environment they worked in and their greater integration into each of the three practices.

5.4.7.1.2 Tactical Pragmatism in Relational and Community Care

By employing tactical practices to meet patients' acute and pressing needs alongside their broader strategic work, the pragmatically oriented link worker helped patients navigate institutional strategies (including benefit application processes, passport renewals, immigration documentation, job applications), and maintained contact through easily accessible and more informal means. When

needed, they conducted home visits or took patients to appointments in their car. These methods of support reflect the tactical dimension of their role which needs to respond and adapt to gaps in institutional systems that limit-person centred care.

“I still keep in touch with the link worker through social media and all, so if I need him I can text him, so. Everything’s fine with that, so that’s not too bad.” P20, Timepoint 3

“He give us a lift all the time and if you come by bus, they pay me my travel money because I can’t afford it, they know my situation, so they help me.” P17, Timepoint 2

For patients with highly complex needs for long periods of time (in one case for more than 4 years), the link worker worked as part of a multidisciplinary team within the GP practice. What distinguished these tactical acts from the ones undertaken by tactically oriented link worker was that the system within which the pragmatically aligned link worker operated legitimised these acts. This allowed them to integrate these practices into their work in a way that strengthened the overall strategic framework of coordinated care. This legitimisation, provided by broader systemic support, increased the likelihood that these tactical acts would be sustainable and contribute to systemic change.

“I think it’s absolutely critical, as part of the whole package of the GP practice, that you don’t... that I don’t take sole responsibility, that I keep people informed about that support and sometimes I will go and speak to the clinician about it but it’s, yeah, I mean it’s crucial...I mean I had a meeting with a GP this morning, I got a referral, sent a screen message to the GP, went downstairs, had a 10 minute chat and we both bounced ideas off each other and came to a good conclusion around a patient and it was a perfectly comfortable normal conversation.” Link Worker 3, Timepoint 3

Pragmatic approaches involved using tactical ingenuity in the way this link worker mobilised resources and fostered partnerships to create community activities and projects. Unlike the more purely tactically aligned link worker, who relied on reconfiguring existing systems or repurposing spaces (such as drawing on students from the community college to provide services), the pragmatically aligned link worker coordinated their creative tactical activities with broader system-level aims and interests. Through their understanding of system strategies and goals, for example, they were able to leverage project funding through a funding scheme for ‘Green and Blue Social

Prescribing.’ This project allowed them to run a community garden on a plot of land beside the GP practice. These community projects then formed the main way through which the link worker supported patients.

“I’ve been able to get money relatively easily because it’s new and the other thing as well is that if it’s connected to the practice...I’ve been doing bid writing for a long time but then I do base the writing on the model of the grass roots model, based on the grass roots model about the reason that we’re doing this is so that people in the area have got ownership of what’s actually happening.” Link Worker 3, Timepoint 2

“Yeah, the only one that we really do is, like I said, we have a little community garden, it’s an arts and crafts group plus the community gardens, so we’ve got a young lad who is a very good artist and he comes and sits in the garden and does his stuff and then when it’s wet we all do like little artistic painting and crafty things and planning little things but when it’s nice we go in the garden which is good to be outdoors, we grow our own veg and stuff, so.” P18, Timepoint 2

5.4.7.1.3 Vulnerability in Pragmatic Approaches to System Change (Strategies)

Balanced strategic alignment legitimised some of the pragmatic link worker’s tactical ways of working. However, maintaining strategic alignment could also mean limiting the social prescribing service, as was evident in the case of the more purely strategically aligned link worker described earlier. The funding the more pragmatic link worker leveraged through the ‘Green and Blue Social Prescribing’ funding initiative, for example, was short-term and came to an abrupt end when it was not renewed due to the evaluation failing to demonstrate clear enough impact. Community-building initiatives were a defining feature of the link worker’s practice, aimed at creating longer-term and sustainable benefits for their patients. This example illustrates how the success of community and social prescribing initiatives is reliant on resource availability and systematic and strategic support. It demonstrates how vulnerable these initiatives can be when embedded in systems that prioritise immediate quantifiable outcomes over long-term relational and structural change.

Community-building projects require time and resources, and their fragility was further highlighted when the link worker reduced their working hours to part-time. With fewer hours available for work and discontinuation of core project funding, the link worker’s practice shifted away from

community-building projects towards prioritising individual patient caseload as part of the clinical multi-disciplinary care team. This not only disrupted continuity of care for patients participating in those projects, but it also limited the link worker's ability to enact their vision of holistic and community-focused practice. Whilst the individual-level support continued for more vulnerable patients with complex needs, their longer-term relational and structural community-focused work became more limited. The emotional responses of patients to the loss of the community garden project illustrated that these activities were important sources of support for them that fostered connection, trust, and provided meaning to their lives.

“Because the link worker he was not doing anymore and my depression I think it was the same thing, it's like it's not going down, it's going worse. Because before, every single week I just go there and I spend time and everything and at the moment they go to something else and they do something, different things and I'm not because I can't afford to go far away and stuff.” P17, Timepoint 3

After the project funding ended and the link worker's involvement ceased, the patients and volunteers who attended the group made efforts to keep it running on their own without access to the GP practice space or the leadership of the link worker. While patients felt it was not the same, this continued effort perhaps demonstrates the value and potential enduring impact of the community-centred approach taken by the pragmatically aligned link worker. The link worker was able to foster collaboration and community between a group of people who wanted to keep the activity going as much as possible without the broader structural support. It was, however, unclear for how long their efforts would or could continue without systemic and strategic support.

“So, it kind of dwindled off on the Fridays. Because it started off where everybody was going there religiously and we had a really nice team of people and we would meet on a Friday and do arts and crafts etc., and then go into the garden. How that's panned out now is that it got less and less and less and dwindled off. So I think what's happened is the link worker has obviously had to ask other people and another team of people have got in now, only one of which I know which is ((name)) and I think there's a lady called (name) that still does it etc. So it never actually finished, it never stopped, it's just obviously... you know yourself, things happen in life.” P19, Timepoint 3

“But when it stopped when the link worker cut down to three days instead of five and he won’t go on Fridays, so it kind of stopped at the doctor’s, it wasn’t on for like two or three months. So all through the three months I was trying to contact people to get it back running. I think’s where I spoke to the link worker last on the phone.” P16, Timepoint 3

Despite disruptions in project funding and a reduction in their working time, the overall interconnectivity of the link worker’s network increased substantially at timepoint 3 (average degree timepoint 3 = 41), with a notable reduction in the number of isolates (isolates timepoint 3 = 39). While the overall size of their network decreased slightly (from 146 to 139), reflecting the cessation of some of the community project work and the link worker’s reduced working hours, the network remained large and highly cohesive overall. This consolidation is indicative of the pragmatically aligned link worker’s ability to both create and maintain a strong, interconnected network, that is more likely resilient to disruptions such as reduced funding.

Their network structure provides a further illustration of how the link worker operated in a pragmatic middle ground between strategic and tactical approaches. Their ability to work within organisational strategies allowed them to develop community-based initiatives such as the community garden, however, the same organisational strategies that enabled these activities, also made the activities vulnerable when strategic priorities shifted and funding ceased. Despite these disruptions, the link worker’s network was resilient to these changes, becoming more connected and having fewer isolates. The dense network cores (see Figure 21) reflected their familiarity and intentional alignment with organisational strategies (organisations being represented by the tight cores), working with them to foster cohesive systems of care. The network’s growth, initial fragmentation through the addition of isolates, and eventual overall consolidation over the three timepoints demonstrate the link worker’s ability to act tactically to address community needs and to integrate these tactics into a broader system strategy. Being able to combine tactical and strategic ways of working may have allowed the link worker to strengthen their overall network even as organisational strategic changes destabilised some of the community-based activities.

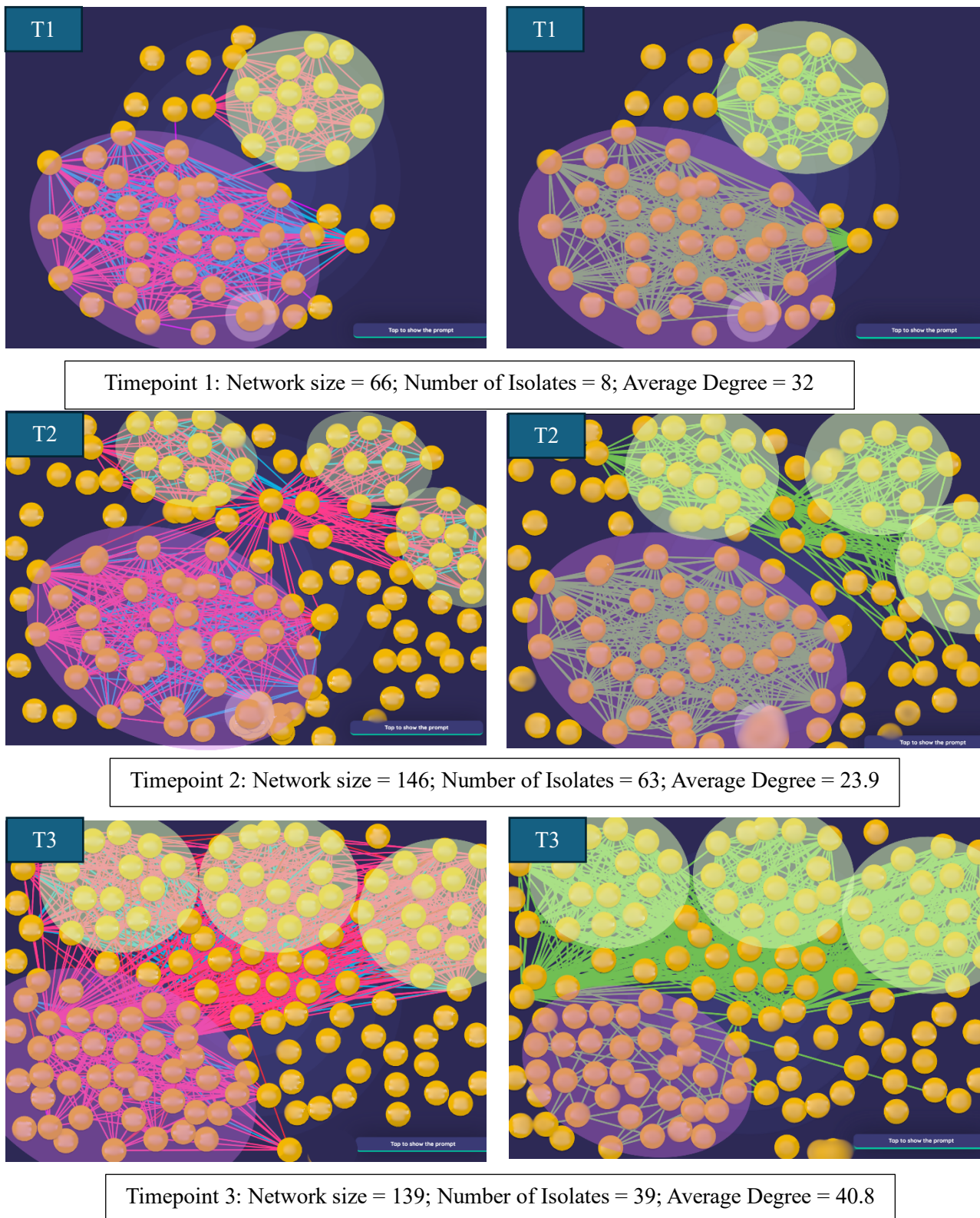


Figure 21: The professional network of the pragmatically aligned link worker at timepoints 1-3.

Due to a quirk in the software, I was not able to display all the relationships (ties) on the same diagram. The right hand column therefore represents general relationships (such as work together; create services together; go to each other for advice and support). The green ties in the lefthand column represent referral (people who make referrals to each other).

The green circled cluster represents the contacts at the GP practice the link worker serves. These evolve from one cluster to three as the link worker became more familiar with their clinical setting. The purple circled contacts represent the VCS contacts.

5.5 Discussion

In this longitudinal case study, I explored how link workers navigate their roles as spanners of systemic gaps to deliver social prescribing in socially and economically disadvantaged settings.

Through this chapter, I aimed to answer the following thesis research questions:

Thesis Question 3: How do link workers build and sustain relationships for the delivery of social prescribing in areas with high levels of socioeconomic deprivation?

Thesis Question 4: How do these networks and relationships change over time?

Thesis Question 5: What support and resources do link workers need to successfully undertake this networking work? (Answered in Chapters 4 and 5)

Thesis Question 6: How do link workers impact patients experiencing socioeconomic disadvantage through social prescribing?

In the cross-case analysis I drew on de Certeau's concepts of strategy and tactics (270) to illustrate how link worker practices (and the ways in which they build and sustain relationships for the delivery of social prescribing) fall on a continuum between approaches that align with organisational policies and pathways (strategy), and creative approaches that work around systemic and organisational barriers (tactics), to deliver person-centred care. My analysis revealed three positions on this continuum: tactical, strategic, and pragmatic. Integrating qualitative and network data revealed how tactical, strategic, and pragmatic approaches are evident in the link workers' networks, with distinct structural and relational patterns that point to differing sustainability of each approach. The longitudinal approach I took, allowed me to explore how these networks and relationships changed over time as well as explore what resources and support link workers need to undertake this work.

This mixed-methods analysis offered a more complete understanding of each of these approaches than either method could provide on its own. For example, the quantitative network data showed that the network of the tactically aligned link worker contained a high number of isolates, however the qualitative data was necessary to understand that these isolates represented 'gold dust' contacts or

other connections the link worker had made in response to an immediate patient need, reflecting the responsive and tactical nature of their practice.

5.5.1 A Continuum of Link Worker Practices

Tactical approaches employ highly relational practices, where the link worker becomes intensely involved in patients' lives and engages in creative problem solving and system navigation that often go beyond professional boundaries. While these approaches can be highly responsive to patients' immediate needs, they also introduce a number of fragilities that limit their sustainability as an approach to social prescribing. Firstly, they are dependent on and unique to the individual link worker who undertakes them, which has implications for the equity of social prescribing as such individual approaches cannot be implemented universally. Secondly, these tactical approaches can be demanding and emotionally intensive, risking link worker burnout. Thirdly, as de Certeau notes (270), tactics operate in the cracks of systemic strategies and, therefore, do not have the power to bring about long-term systemic change. This also makes them vulnerable to changing institutional policies, which can, in turn, impact patient care.

The network of the tactically aligned link worker displays high levels of fragility, with a high number of isolates, containing opportunistic connections that depend entirely on the link worker's personal relationships. The presence of small, disconnected clusters with limited overall connectivity means that network cohesion relies on the presence of the link worker (who is at risk of burnout due to the emotionally demanding nature of tactical approaches), limiting the sustainability of such networks.

On the opposite end of the continuum, strategic approaches are both more aligned with and more constrained by institutional policies and structures. Strategic approaches focus on connecting and facilitating, helping patients access existing systems and pathways rather than circumventing them, repurposing them, or building new ones. While strategic approaches can still build trust and rapport with patients, link workers aligned with such approaches may maintain boundaries and professional distance rather than becoming highly involved in patients' lives. By aligning themselves with existing institutional policies link workers may help ensure consistency and the maintenance of

professional boundaries. However, strategic approaches also risk reinforcing existing inequities, as they may be less accessible to those experiencing high levels of disadvantage.

The network structure of the link worker adopting a more strategic approach was characterised by two distinct clusters of connections (representing the PCN and VCS organisations they worked for) with limited cross-connections between them. This reflects the maintenance of organisational boundaries with limited cross-sector integration. The connectivity within the network represents traditional pathways and ways of working (e.g. referrals between primary and secondary care), suggesting that alignment with institutional strategies may constrain relationship-building outside of formal pathways. Following organisational contractual changes, this link worker needed to reduce their hours and the number of practices they served. This contributed to a decrease in network connectivity, making their network more fragmented overall. This example illustrates how network structures can be vulnerable to resource constraints and policy changes.

Positioned in the middle of the continuum, a pragmatic approach combines creative and relational tactical practices with strategic alignment with systems and policies. In combining tactical and strategic approaches, a pragmatic approach can provide the relational and responsive care needed to support those experiencing disadvantage as well as contributing towards systemic change by intentionally aligning with system strategies. The emergence of a pragmatic approach, however, is contingent on system strategies aligned and committed to intersectoral action on social determinants of health. In such a supportive system, actions that may be considered tactical and therefore fragile in other contexts, become legitimated by the system, giving them the power to strengthen existing systemic efforts of integrated care and contribute to strategic change.

The network of the link worker who adopted a pragmatic approach was characterised by dense connections both within and across different sectors and organisational clusters. These dense connections create multiple pathways between different services, ensuring that the network is likely to continue to exist in the absence of the link worker. Notably, despite funding changes and a reduction in the link worker's weekly hours, the network maintained its size and increased its connectivity. This provides evidence for the sustainability of social prescribing approaches that are

supported by wider systemic level commitment to joint action on the social determinants of health. This network structure illustrates how pragmatic approaches can contribute to systemic resilience and sustain service pathways beyond the efforts of individual link workers.

This continuum provides a framework to explain variations in how the link worker role is operationalised in different settings. It expands de Certeau's original binary formulation of strategies and tactics, highlighting how link worker practices emerge from an interplay between individual approaches and wider contextual and systemic constraints. By moving beyond a strategy and tactics binary, the continuum I have presented captures the nuanced reality of link workers who must work within institutional frameworks while addressing the needs of disadvantaged populations that existing systems often fail to serve.

The idea of a continuum of approaches to link working echoes other work on social prescribing I have been involved with (9) which found that link workers engage in 'micro-discretions'—"actions and advice-giving based on personal judgement of a situation, which may not always reflect explicit guidance or protocols" (p. 1) (9). In that work, we draw on Lipsky's theory of 'street-level bureaucracy' (274) to highlight how link workers exercise discretion, sometimes going beyond guidelines and boundaries of the role, to meet patients' needs. According to Lipsky, street-level bureaucrats are frontline public service workers who work directly with citizens and who exercise discretion in the ways they work. They develop coping mechanisms to manage workload and resource constraints, working to reconcile the demands of policy with the realities of working to support patients (274).

The continuum I have presented in this chapter enriches our previous work (9) on the notion of micro-discretions by highlighting how different link worker approaches may emerge from the link workers' interactions with broader system contexts and the systemic gaps which link workers navigate. My analysis also connects these different practices to different network structures, pointing to potential differences in the sustainability of different approaches.

Organisational context may also have shaped link worker's approaches, with PCN employed link workers feeling able to adopt more tactical practices. This resonates with findings from Chapter 4, where PCN-employed link workers benefitted from official membership in clinical settings. This membership afforded them access to healthcare networks and allowed them to work beyond medical orientations to care (strategies) without compromising their official membership in clinical settings.

One of the questions my research aimed to address was: *What impact do link workers have on patients experiencing social and economic disadvantage?* Link workers can help patients navigate complex health and social care systems, for example supporting patients to interpret and complete benefit and housing applications which might improve their life circumstances. They can also facilitate patients' access to GP appointments as well as advocate for patients and for their best interests. In addition to these practical forms of support, link workers also play an important relational role in supporting patients. All three approaches on the continuum provided patients with relational continuity of care (being able to see the same health professional and having a good relationship with them) (281). As described in some of the participant quotes presented in this chapter, this continuity was highly valued by patients and often contrasted with the fragmented and time-pressured interactions they experienced in other parts of the health, care, and social system. This aligns with findings from a qualitative study by Mercer and colleagues (281), which found that patients in socially and economically disadvantaged settings valued relational continuity of care, where they felt that GPs understood the bigger picture of their lives including family issues, poverty, and community problems.

Across the cases it was also clear that link workers can be important sources of emotional and motivational support in moments of vulnerability, helping patients to feel less isolated and more able to cope. This echoes findings from other research we have conducted on social prescribing (8). The community-based activities run by link workers, such as the community garden, can help to build social connections for patients, provide them with a routine, and a sense of purpose where they might otherwise have limited opportunities for meaningful social interaction. However, the cases in this chapter also illustrate how vulnerable these benefits can be when link worker capacity or

organisational support change. Reduced working hours or the loss of funding for activities have implications for the support link workers could offer.

Findings from this chapter also need to be understood within the broader context of the pressures facing the NHS, primary care, and social care, as outlined in Chapter 1. Each of cases and their contexts were also shaped by workforce shortages, rising demand for health and social care services, fragmented community services provision, and the effects of austerity on both the statutory and voluntary sector services. These contexts and broader structural constraints shaped the kinds of problems patients needed support with (e.g. housing, delays in mental health support, navigating complex benefits systems) which in turn often required link workers to provide intensive, relational, and often long-term support in place of overstretched statutory and healthcare services. The organisational changes evident in some of the link worker cases highlighted in this chapter (such as discontinuation of funding for community groups, or contractual changes to link worker working patterns) echo the precarious funding landscape facing community and healthcare services, as outlined in depth in Chapter 1. I return to some of these broader contextual issues in more detail in Chapter 6, where I integrated the findings from across my thesis and discuss their implications with reference to the broader NHS and primary care systems.

5.5.1.1 Strengths and Limitations

The research I have presented in this chapter benefits from its longitudinal design, spanning 2 years with three data collection points. This design allowed me to capture how link worker practices and networks evolved over time. It allowed me to observe how the practices matured and responded to policy and institutional changes, providing an insight into the development and sustainability of different approaches to social prescribing. The combination of ethnographic observations, interviews, and social network analysis allowed me to develop a multi-faceted understanding of how different approaches to link working are operationalised in socially and economically disadvantaged settings. The theoretical grounding in de Certeau's notions of strategies and tactics provides a novel analytical framework for understanding and explaining how link worker practices are shaped by and operationalised in wider social and organisational settings.

While the in-depth case study approach in this study provided rich and detailed narratives of different link worker approaches, it was limited by the relatively small number of cases I studied. I had initially aimed to recruit five link worker cases but encountered several recruitment challenges, which may reflect the workforce instability noted in other research .

Remote only link workers were excluded in this study because their roles would not have allowed shadowing or direct observation of interactions with patients and colleagues. Their exclusion also reflects the fact that remote delivery is not the default mode of social prescribing delivery (23), and excluding them ensured I was able to focus on case studies that capture typical delivery models. The results and analysis in this chapter may not reflect the experiences and practices of link workers who work fully remotely.

I found it difficult to recruit patients from areas with the highest level of social and economic disadvantage, particularly in the case of the strategically aligned link worker. The perspectives of these patients would likely have enriched the data used in this study; my inability to recruit them is perhaps also evidence of the systemic challenges present at that site. I relied on the link workers who were the focus of my cases for the recruitment of patient participants, and while this may have increased patient recruitment and retention, it may also have biased my data towards positive patient experiences.

The in-depth case study design limited the possible sample size, preventing an exploration of how further individual-level determinants such as gender, time in role, or professional background might influence how link workers operate. Future research could explore whether having a professional background in the VCS makes link workers more comfortable with tactical flexibility, given their experience in creatively mobilising resources. Conversely, are those with experience in corporate or more structured organisational environments more likely to adopt strategic and bounded approaches? Link workers' personal values may also play a role. For example, the pragmatically aligned link worker in this study was vocally committed to equity and community building, adopting an approach informed by principles of social justice. Future research could explore how these individual-level determinants may affect link workers' orientations to practice.

5.5.2 Reflexivity

As discussed in previous chapters, my background in anthropology and in health services research, as well as my interest in health inequities, have shaped some of the assumptions and values I brought to my research. Ethnographic approaches introduce an additional interactional element to the research where the researcher and participants co-produce meanings and interpretations. At one of the case study sites, it was apparent that some local stakeholders were hoping that my presence and the research I was undertaking was an opportunity for an informal evaluation of their social prescribing model that would positively showcase their service. This exerted subtle pressures on me as a researcher. I needed to balance providing a data driven account of the service while ensuring that those who welcomed me at the research site felt they were benefitting from my research. This meant that when I observed practices which may not have been considered favourable from an evaluation perspective, I needed to be careful about how I framed and communicated them back to the social prescribing stakeholders at the site. This pressure also led me to feeling guilt when I observed things I thought the social prescribing service could be doing better. To manage these feelings and tensions I had open and honest discussions with my supervisors who were able to guide how I could think and frame these tensions in my reporting.

I also found myself experiencing frustration when service changes at one of the case study sites led to some disorganisation during my visit, due to certain key processes stopping and negatively affecting the service's consistency. These changes disrupted some of my planned data collection activities as it limited how much forward planning I could do before my visit. I managed these disruptions and feelings of frustration by being flexible in my data collection approach. For example, interviews I had initially planned to conduct in person were conducted remotely instead. I also sought out additional opportunities for informal conversations with local community organisations to offer perspectives on the wider context in which the social prescribing service operated. Additionally, I discussed my frustrations with my supervisors to help contextualise and mitigate some of the influence that these frustrations might have had on my interpretation of the data.

Throughout my research visits, I was mindful of my position as a researcher affiliated with a prestigious university and how this might influence how participants interacted with me, particularly patients experiencing high levels of social and economic disadvantage. I developed a range of strategies to mitigate the potential for this social distance to cause a power imbalance, whereby patients may not have felt able to share honest accounts of their personal circumstances. I built rapport with patients, emphasising their role as experts in their own lived experience and highlighting the value that their voices would bring to my understanding of social prescribing. I ensured that I appeared approachable by using a simple, accessible, and friendly communication style, dressing casually, and avoiding using my laptop or making notes while interacting with patients individually or in groups. I also drew on the expertise of the Deep End PPI group (177), who worked with me to ensure the language in my interview schedule was accessible.

Another key point I reflected on during my fieldwork visits was the extent to which my presence may have been shaping the practices and service I was observing. Throughout the fieldwork, I often had discussions with each of the link workers about their work. Many of these discussions involved me querying them about the decisions they made in their practice. One instance where such a discussion appeared to change practice was when I asked one of the link workers how they let patients in the practice know that the service existed. They noted that patients typically found out if they were referred by their GP or if they were invited to an organised group the link worker was running. This prompted me to ask whether they sent text notifications about the service to patients who might benefit. They responded that they did not, but mentioned that I was the second person to raise this, so they would do it. Similarly, the network interviews involved creating maps of the interactions between link worker contacts. During the activity, the link workers sometimes identified gaps in their networks where additional work could help connect siloed contacts or services. While I am not certain whether these reflections led to any concrete changes in how the link workers managed their networks, I was mindful of the potential this had to change their practices. By reflecting on these interactions, I sought to provide a transparent account of the ways in which the data and the interpretations have been co-constructed.

5.5.3 Implications for Policy and Practice

This research has highlighted that link worker approaches can be shaped by the wider systemic contexts within which they operate. Policy needs to consider how system contexts such as organisational structures, funding, and broader system integration may enable or constrain practice. The pragmatic approach—appearing the most sustainable in terms of network resilience, support for patients with complex needs, and potential for systemic change—emerged in a context where the broader system already had an established commitment to intersectoral working and action on the social determinants of health.

The sustainability of social prescribing depends on supporting the individuals who undertake this complex work. Tactical and highly relational ways of working can entail significant emotional labour, yet link workers may not receive acknowledgement for this work (8) or adequate supervision and training (9,201). Policy and organisational frameworks should consider ensuring that link workers have access to appropriate supervision in which they can discuss challenging aspects of their roles. This supervision may also be key in supporting link workers who may be engaging in beyond guideline working to maintain appropriate and safe professional boundaries. A more detailed discussion on the need for supervision is provided in Chapter 6.

The network analysis in this study suggested that different link worker approaches can create distinct relational infrastructure (networks), each with implications for service sustainability. Rather than relying on individual link workers to broker connections between disparate individuals and organisations in the community, organisations should consider building mechanisms for sustaining these relationships at an organisational level. This could include creating opportunities for regular intersectoral collaboration, joint meetings and planning processes, and allocating sufficient resources to facilitate effective joint working (282).

A key finding of this study was that tactical approaches, which reject professional boundaries and circumvent system barriers, may play a crucial role in supporting patients experiencing disadvantage. While boundaries may be necessary for sustainability and appropriate practice (9,86), overly rigid approaches may exclude those with highest levels of need. Consideration should be given to

developing frameworks that support link workers in navigating boundary decisions and facilitate team-based approaches to supporting complex cases, rather than relying on the judgement of individual link workers. These frameworks should consider ethical and medicolegal perspectives that protect both link workers and patients. Appropriate boundaries may vary across different contexts and populations, meaning that guiding frameworks must be flexible rather than adopting a one-size-fits-all approach.

5.6 Conclusion

The research I have presented in this chapter builds on Chapters 3 and 4 to demonstrate that link workers may navigate their roles as spanners of systemic gaps by employing practices falling on a continuum between approaches that align with organisational policies and pathways (strategy), and creative approaches which work around systemic and organisational barriers (tactics), to deliver person-centred care. This continuum provides a framework for understanding the diversity of link worker practices, as well as how they may emerge in response to broader contextual factors. The findings suggest that the most sustainable and equitable approaches to social prescribing may require a pragmatic combination of tactical flexibility and strategic alignment. However, the emergence of such pragmatic approaches may be contingent on the presence of a supportive wider systemic commitment to action on the social determinants of health.

In the next chapter, I will summarise the findings from each of the three empirical chapters (Chapters 3–5) and integrate them to develop a final conceptual framework for understanding how social prescribing operates in socially and economically disadvantaged settings.

Chapter 6: Understanding Structural Determinants of Social Prescribing – Summary, Integration, Discussion, and Conclusion

6.1 Introduction

My research in this thesis explored how social prescribing social prescribing has been implemented in areas with high levels of social and economic disadvantaged in England. To undertake this exploration, I focused on how link workers undertaking a crucial part of their role, building networks across healthcare and community sectors for the delivery of social prescribing. In Chapter 1, I observed that while social prescribing has been framed as a potential solution to socially determined health inequities, its implementation (and link workers' ability to build and sustain networks) may be influenced by a number of systemic constraints, such as the inequitable distribution of healthcare and community assets, as well as the crisis facing primary care and general practice in the NHS. My research has explored ways in which social prescribing link workers carry out their roles and build their professional networks in areas with high levels of social and economic disadvantage.

I start this chapter by summarising key findings from each of my empirical chapters (Chapters 3–5), relating them to my secondary research questions. Following this summary, I then integrate the key findings from across the empirical chapters to develop a conceptual framework that explains how social prescribing and link worker practices are shaped by systemic constraints.

In each empirical chapter of this thesis, I have provided a detailed discussion of the findings, relating them to the broader literature. In this chapter, I focus on discussing the final conceptual framework developed in through the final integration stage in this chapter. I discuss the overall contribution of my thesis, focusing on how it furthers our understanding of social prescribing and the link worker role, as well as the insights it generates that may be applicable to healthcare more broadly, and the methodological contributions it makes.

After discussing the contributions of this thesis, I highlight the overall strengths and limitations of the research undertaken. I then discuss implications for policy and practice, focusing on the need for systemic support for integrated care, the integration of additional roles, and the need to recognise the labour involved in link worker roles. I then point to directions for future research before making a concluding statement. I then close this thesis with some personal reflections on my DPhil journey.

6.2 Summary of Key Findings

This thesis aimed to answer the following central research question: “How do link workers create and sustain networks and relationships for social prescribing in socioeconomically disadvantaged settings?”

I also sought to answer the following secondary research questions:

- 1) What does the existing literature say about link workers’ experiences of carrying out their roles and how they work with patients?
- 2) What are the experiences and perceptions of link workers around creating networks between primary care to VCS organisations in different settings?
- 3) How do link workers build and sustain relationships with VCS organisations for the delivery of social prescribing in areas with high levels of socioeconomic deprivation?
- 4) How do these networks and relationships change over time?
- 5) What skills, support, and resources do link workers need to successfully manage and maintain these networks?
- 6) What impact do link workers have on patients experiencing social and economic disadvantage?

I answered these questions through three empirical workstreams reported across three chapters. The findings from these chapters are summarised below.

6.2.1 Summary of Findings in Chapter 3

The meta-ethnography, presented in Chapter 3, allowed me to answer secondary research question 1. In synthesising existing qualitative literature on link workers’ broader experiences of undertaking their roles, this study provided the initial conceptual foundation for my thesis. This initial conceptual

framework highlighted fundamental tensions between the policy aspirations of social prescribing and the contexts into which social prescribing is being implemented. These contexts are shaped by political and economic forces which emphasise budgetary constraint over social welfare, and which place the onus for maintaining health on individuals and on communities. These tensions manifest at every level of social prescribing. At the link worker level, role ambiguity, precarity in professional status, and relational and emotional labour can cause role stress and may lead to burnout or job dissatisfaction. At the organisation level, link workers experienced varying levels of support (e.g. supervision, training) again shaping the potential for role stress. Tensions can also arise between meeting performance targets and delivering person-centred care as many systems prioritise measurable outcomes over relational and longer-term support. At the system level, social prescribing operates within a fragmented and underfunded health and social care system where services are often overstretched and underfunded. Lack of role definition can then leave link workers covering gaps in the system, with limited onward referral options leaving link workers to “hold” patients. At the patient level, people seeing a link worker often face complex health and social needs that may require longer-term intensive support than is accommodated in social prescribing models. The social prescribing policy narrative emphasises empowerment and choice, yet structural barriers such as poverty and underinvestment in community infrastructure may limit choice and service-user ability to engage in social prescribing.

6.2.2 Summary of Findings in Chapter 4

The findings from Chapter 4 contribute to answering secondary research questions 2, 3, and 5. Building on findings in Chapter 3, which highlighted that link workers’ experiences of their roles are shaped by a number of systemic and structural factors, Chapter 4 explored how link workers undertake networking across different areas of social and economic deprivation and organisational settings, a crucial part of their role. I demonstrated that link workers span boundaries across healthcare and community sectors, bridging organisations as well as medical and community orientations to care.

Alongside spanning boundaries, link workers also span systemic gaps. In areas with high levels of deprivation, link workers do not necessarily struggle to build networks, but instead develop larger, more complex (and sometimes more fragmented) networks in response to greater need and system instability. Organisational context also impacts link worker networking, with those employed by PCNs generally being more able to build cohesive cross-sector network compared to those employed by the VCS. This is likely due to membership in the PCN making it easier to connect with already cohesive clinical groups.

In their role as boundary-spanners, link workers can be described as occupying a liminal space, being “betwixt and between” neither fully part of either clinical or community settings. This liminal status can allow link workers to operate outside of conventional healthcare practices and reject clinical orientations to care if needed. Their position at the boundaries of clinical and community practice gives them flexibility to innovate and create new ways of working that bridge across organisations. However, liminality can also be a significant source of role stress. In clinical settings, link workers’ networking labour may be undervalued or unrecognised, and those employed by VCS organisations may be seen as outsiders in healthcare settings. To cope with the challenges, they experience in their liminal boundary-spanning positions, link workers develop “communities of practice” and relational knowledge.

6.2.3 Summary of Findings in Chapter 5

In Chapter 5, I sought to answer my secondary research questions 2, 3, 4, 5, and 6. To this end, I undertook longitudinal case studies in areas with high levels of social and economic disadvantage to examine how link workers navigate their roles as spanners of boundaries and gaps in practice. My analysis identified that link workers employ a continuum of approaches ranging from tactical improvisation to strategic alignment.

At one end of the continuum, link worker approaches may be aligned with “tactics”. Tactics creatively work around system constraints often operating in the “cracks” of institutional structures to deliver responsive and relational care in socioeconomically disadvantaged areas. Examples include repurposing institutional spaces for community activities, mobilising resources in creative

ways, and developing close (sometimes quite personal) relationships with patients. While these tactical approaches can make a difference to individual patients, tactics do not have the power to bring about systemic change. Tactics are highly dependent on the individual link worker who employs them and are up to the discretion of individual link workers as to who will benefit from them. This has implications for equitable service provision. Tactical approaches are also emotionally and relationally intensive, risking link worker burnout and, in turn limiting the sustainability of such approaches. Tactical approaches were evident in link worker networks and characterised by small distinct clusters with limited connectivity and a high number of isolates. Connections were opportunistic, often made in response to immediate needs, with a heavy reliance on personal contacts. These fragmented and fragile networks pose challenges to the overall sustainability of a social prescribing service, as they are unlikely to persist if the link worker leaves and depend on individual relationships rather than systemic collaboration.

On the opposite end of the continuum, link worker's approaches may align with or be shaped by institutional "strategies", focusing more on navigating existing systems than on circumventing and repurposing them. Examples include following defined role limits, working within set parameters, using established referral pathways, complying with monitoring requirements, meeting contractual obligations, and holding and sharing system knowledge. While strategic alignment may ensure service consistency, prioritising existing pathways and ways of working may reinforce health inequities by favouring those who can already easily navigate these systems. The network of the strategically aligned link worker was characterised by two clear core clusters with traditional organisational boundaries (the PCN and the VCS organisation the link worker works for) with limited interconnection between the clusters and a high number of peripheral isolates. The connections between the different clusters reflected existing formal pathways and the relationships were shaped by contractual obligations. The network was vulnerable to changes in the link worker's pattern of working, with the network weakening when faced with contractual and other institutional challenges.

Where system level strategies shift and there is commitment to intersectoral working and integrated care, a third “pragmatic” approach can emerge. Taking a pragmatic approach, the link worker can leverage systemic strategies while maintaining some tactical flexibility. Link workers can undertake strategic system navigation, leveraging project funding for community initiatives, and aligning community work with broader health system agendas. They can advocate for community centred-ways of working, establishing dense interconnected networks between different organisations who have already committed to cross-sectoral collaboration for health. In a supportive system, creative “tactical” approaches which may otherwise be considered fragile and unstable become legitimised and sustainable forming integrated components of the overarching system (for example, using work time to do favours for community groups, conducting home visits, and driving patients to appointments when needed as part of coordinated care). This case demonstrates how system-level commitment and alignment may be required for sustainable social prescribing that has potential to begin addressing the social determinants of health and health inequities.

All three approaches on the continuum support patients in navigating complex health and social care systems, helping them to interpret and navigate complex processes such as housing or benefit applications, and providing non-judgemental easily accessible support. Link workers can also facilitate patients’ access to GP appointments. All three approaches also offered patients relational continuity of care, helping to ensure patients received person-centred support.

6.3 From Summary to Integration

Having now summarised the findings from each of the empirical chapters in this thesis, I will now integrate them to develop an overarching conceptual framework that explains how social prescribing link workers may operate and build and sustain their networks for social prescribing in socially and economically disadvantaged settings.

Drawing on mixed-methods approaches to integration (222,243,283) I constructed a joint-display to integrate the key findings from across the different workstreams in this research and to develop an overarching conceptual framework. This integration process allowed me to systematically compare

and integrate the findings from the different methodological approaches and studies carried out in this thesis to develop a unified conceptual framework that locates social prescribing and link working within wider structural contexts. I developed the integration matrix iteratively and held an analysis workshop with my supervisors where we refined the categories, linkages, and conceptual boundaries together. I was not able to seek specific PPI input on the integration matrix during the DPhil period. This represents a limitation in terms of ensuring that this overall synthesis fully resonates with perspectives from lived experience. I will address this limitation in future dissemination activities during which I will seek PPI feedback on the integration matrix which will give me opportunities to validate and enrich my synthesis and overarching framework.

Through this final integration process, I drew on the concepts of macro-, meso-, and micro-level framings (284) which can help depict how complex interventions are shaped across multiple interacting levels of implementation (284). Social prescribing has been described as a complex intervention (1) and the research in this thesis has demonstrated that its implementation is shaped by interactions between policy structures (macro), organisational conditions (meso), and individual adaptations or responses by link workers and patients (micro) (25). I constructed a joint-display (283) detailing key themes and findings from each of the different workstreams (empirical chapters). This allowed me to compare the findings across the different research streams to identify recurring concepts, cluster them into broader patterns of meaning and identify at which level they operated (policy structures, organisational conditions, or individual responses) (Table 15). Displaying the findings in this way allowed me to construct a narrative and overarching conceptual framework which provides an understanding of how structural constraints shape social prescribing in socially and economically disadvantaged settings.

Table 15: Joint display of the integration of findings across chapters

Level	Meta-Ethnography	Network Interviews	Case Studies	Integration
<p>Policy/System Level (Macro)</p>	<p><i>Tensions at the System Level:</i></p> <p>Austerity has reduced the availability of resources often having a disproportionate effect on areas with the highest levels of need. (Ch. 3 3.4.3.3)</p> <p>Service gaps force link workers to support patients outside of their scope as they fill gaps for overstretched services. (Ch. 3, 3.4.3.3.3)</p>	<p>Link workers are boundary spanners of systemic gaps – gaps in service provision, gaps between healthcare and other services. (Ch. 4, 4.4.5.2)</p>	<p>In their roles as boundary spanners link worker practices fall on a continuum between strategies and tactics, each having implications for sustainability and ability to drive systemic change. (Ch. 5, 5.4.4)</p> <p>Where system structures are supportive and align efforts on intersectoral working for action on health inequities and social determinants of health, a “Pragmatic” approach to link working can emerge. (Ch 5, 5.4.7)</p>	<p>Social prescribing and link worker practices can be influenced by the broader systems in which they operate. This policy level has an impact on link worker practices and their experiences of their roles.</p> <p>In unsupportive systems where there is a mismatch between system strategies (policy) and reality link workers act as spanners of systemic gaps, employing either tactical or strategic practices which may be unsustainable and have limited impact on equity and system change.</p> <p>In supportive systems (institutional/system strategies) – policy starting to align for intersectoral action, link workers can be spanners of aligned efforts, adopting pragmatic approaches, connecting system efforts rather than compensating for fragmentation.</p>
<p>Organisational/Local Level (Meso)</p>	<p><i>Tensions at the Organisational Level:</i></p> <p>Varying levels of buy-in to social prescribing across organisations. (Ch 3: 3.4.3.2)</p> <p>Organisational/performance targets can influence the</p>	<p>Link workers are boundary spanners occupying a liminal position between healthcare and community structures. (Ch 4: 4.4.5.1)</p> <p>VCS-employed link workers may face additional barriers to</p>	<p>Organisational strategies (policies) can dictate the ways in which link workers are able to carry out their roles. (Ch5: 5.4.6)</p>	<p>Organisational fragmentation reflects broader unsupportive wider system (institutional/system strategies).</p> <p>The need to span this fragmentation places link workers in a liminal position.</p> <p>Employing organisation shapes link workers’ networking opportunities and</p>

Level	Meta-Ethnography	Network Interviews	Case Studies	Integration
	<p>delivery of person-centred care. (Ch3:3.4.3.2.2)</p> <p>Support structures for link workers can be inconsistent due to different levels of organisational buy-in or training available to link workers through these organisations. (Ch 3: 3.4.3.2)</p> <p>Physical space limitations mean link workers may not have space in GP practices potentially limiting their integration into clinical teams. (Ch3: 3.4.3.2.3)</p>	<p>integration in healthcare settings. (Ch 4: 4.4.6 and 4.4.5.1)</p> <p>The relational labour of networking/community orientations to care are not always valued in clinical settings. (Ch4: 4.4.5.3)</p>		<p>the extent to which they feel integrated in clinical settings. Link workers navigate competing orientations to care, often without adequate organisational support or recognition for their relational labour.</p>
<p>Individual Responses (micro level)</p>	<p><i>Tensions at the Link Worker Level:</i></p> <p>Role stress caused by lack of clear role definition or professional status and role flexibility. (Ch 3: 3.4.3.1.1)</p> <p>Link workers risk burnout from emotional and relational overextension with complex cases. (Ch3: 3.4.3.1.3)</p> <p>Success of social prescribing is often dependent on the individual link workers which can make services fragile. (Ch3: 3.4.3.1.4)</p>	<p>The ways in which link workers network is influenced by wider contextual factors such as area deprivation. (Ch4: 4.4.3.1 and 4.4.5.2)</p> <p>The ways in which link workers network is influenced by organisational settings – those employed by PCNs have more cohesive networks and may find it easier to connect with others in clinical settings. (Ch4: 4.4.3.2 and 4.4.5.1)</p>	<p>Link workers adopt approaches on a continuum between “strategies” and “tactics” (Ch. 5, 5.4.4)</p> <p>“Tactical” approaches involve creative and sometimes subversive workarounds that are responsive to patient needs by lacking power to create systemic change. (Ch 5: 5.4.5)</p> <p>“Strategic” approaches are aligned with or shaped by broader organisational or system strategies (policies) that can ensure consistent service delivery but also may maintain the status quo that may reinforce existing inequities. (Ch5: 5.4.6)</p> <p>“Pragmatic” approaches balance tactical flexibility and strategic alignment, allowing sustainable link worker practices that have</p>	<p>Link workers adopt approaches on a continuum between “strategies” and “tactics” in response to broader system contexts.</p> <p>In unsupportive systems, link workers adopt “tactical” or “strategic” approaches.</p> <p>Tactical approaches provide flexible and responsive person-centred care but lack sustainability and risk burnout through relational overextension. Strategic approaches provide consistency but may reinforce existing inequities through maintaining the status quo.</p> <p>In supportive systems, link workers can adopt “pragmatic” approaches. These are more likely to be sustainable and</p>

Level	Meta-Ethnography	Network Interviews	Case Studies	Integration
		<p>Networking can help with some of the challenges of liminality (through developing communities of practice) and with overcoming some of the challenges of systemic gaps (through developing relational knowledge) (Ch4: 4.4.5.5)</p> <p>Intensive networking requires significant relational labour. (Ch4: 4.4.5.3)</p>	<p>potential to contribute to systemic change. (Ch 5: 5.4.7)</p>	<p>contribute to systemic change. In these systems, the link worker role is embedded into clinical and community practice, reducing stressors associated with liminality.</p>
<p>Individual Responses (micro level)</p>	<p><i>Tensions at the Service-User Level:</i></p> <p>Policy language of “choice” and “empowerment” may not match the reality of those living with social and economic disadvantage. (Ch3: 3.4.3.4.1)</p> <p>Those experiencing disadvantage or complex conditions may require more intensive support than permitted by standardised social prescribing models. (Ch3: 3.4.3.4.2)</p>	<p>In deprived areas link workers serve patients with basic needs which may not be met by the current system. Examples include supporting people waiting for housing, needing support with financial matters, referrals to foodbanks, or interim support while waiting for mental health services. (Ch4: 4.4.5.2)</p>	<p>Tactical approaches can make a big difference in supporting patients experiencing disadvantage through creatively working around systems that exclude them or are difficult to navigate. (Ch 5: 5.4.5.2 and 5.4.5.3)</p> <p>Link workers provide stability and consistency and be a source of support for patients in fragmented systems. (Ch 5: 5.5.1)</p>	<p>Organisational fragmentation caused by an unsupportive wider system</p> <p>Patients in socially and economically disadvantaged areas experience fragmented care, and limited choice despite policy narratives.</p> <p>Social prescribing supports patients by providing person-centred tailored support through link worker flexibility, responsiveness, and creativity. However, the system-level context can limit the sustainability of the support patients receive from link workers.</p>

6.4 Beyond the Policy Vision: Understanding how Structural Constraints Shape Social Prescribing

Broader policy and system contexts can provide supportive or unsupportive environments for social prescribing and link working. As I described in the introductory chapter of this thesis (Chapter 1) and further highlighted in the empirical chapters, the wider health and social care environment in England has been shaped by a context of decades of underinvestment and austerity measures. This context has created a health and social care system characterised by service fragmentation and a range of workforce challenges. Given this fragmentation, link workers appear to act as spanners of systemic gaps. They endeavour to fill gaps left by austerity, connect siloed parts of the healthcare system, and to navigate between medical community orientations to care and support. As spanners of systemic gaps, link workers may adopt approaches on a continuum between “tactics” and “strategy”. Tactical approaches work around the status quo, creating workarounds for systemic barriers, such as by utilising networks and connections to bypass system inefficiencies and barriers. Strategic approaches, on the other hand, are more aligned with using existing institutional pathways and ways of working. They maintain the status quo, following defined role limits and organisational processes. Both “tactical” and “strategic” approaches on their own may have limited sustainability or capacity to bring about the systemic change required for action on social determinants of health and health inequities.

When policy and systems shift towards recognising the need for collaboration and joint action on health and its social determinants, supportive environments for social prescribing are created. These environments are characterised by strategic vision and commitment to joined up action on health inequities. They provide a culture of integration in which link workers’ networking and community outreach work is valued. In these settings creative approaches which may otherwise be considered “tactical” or subversive, become a recognised way of providing person-centred responsive care. Rather than spanning systemic “gaps”, link workers can become “spanners of aligned efforts” intentionally building on and strengthening the integration of healthcare and community resources.

Link workers can adopt “pragmatic” approaches which combine the tactical flexibility needed for responsive person-centred care with strategic alignment which may enable system-level impact.

As discussed in Chapter 1 (1.2.1.3), person-centred care has no single definition or conceptualisation, partly because what it is context-dependent. However, across the literature, common components of person-centred care have been identified including: establishing a therapeutic relationship between clinicians and patients; shared power and responsibility; getting to know the person; empowering the person; and developing trust and respect (63,64). Person-centred care can be delivered by many healthcare professionals, including GPs and nurses, with many of them striving to work in person-centred ways. However, the current pressures facing primary care such as short appointments times and workforce shortages (285) can constrain the extent to which these professional can deliver person-centred care consistently. Link workers, have in part, been integrated into primary care teams to help address this issue (39), representing a dedicated role with more time allocated to it to spend time getting to know and understand patients and their needs. Link workers do not provide person-centred care instead of other professionals but instead contribute a distinctive relational and community-focused dimension to support the delivery of person-centred care in primary care teams and systems.

To strengthen this argument and to provide balance, it is important to recognise the considerable positive impact that link workers can have within the structural limitations described in this thesis and more broadly in primary care. In examples from my case studies in Chapter 5, patients frequently highlighted how link workers provided them with a sense of stability, reassurance, and practical support, sometimes in moments of distress or difficult life circumstances. Link workers played key roles in helping patients to navigate complex bureaucratic procedures such as benefit and housing applications, providing them with practical support and reassurance. Through the development of community activities such as the community garden (in the example of the pragmatically aligned link worker), or the art group (in the example of the tactically aligned link worker), link workers were able to address social isolation and create meaningful opportunities for connection. Link workers also displayed high levels of creativity, creating services (such as the exercise in care homes

in the example of the tactically aligned link worker) where formal service provision was absent. These examples illustrate the high levels of resourcefulness and commitment link workers often bring to their roles, and demonstrate that even in constrained systems, link workers can deliver valuable support for patients.

In making the argument that pragmatic approaches may enable system-level impact I am not claiming that the data from my case studies provide definitive evidence that pragmatic approaches produce system-level resilience. Instead, I am highlighting that the case of the pragmatically aligned link worker illustrates features such as dense intersectoral networks, continuity of relationships despite organisational changes, and integration with clinical teams, that are consistent with how resilience is conceptualised in the literature on network relational infrastructure and intersectoral collaboration (155). The overall argument and framework I present here is therefore conceptual and represents a theory that I have developed through the work I have undertaken for my doctoral thesis. This is a theory I intend to test further and refine in postdoctoral work.

Figure 22 summarises and explains variations in link worker practices, accounting for how systemic constraints shape social prescribing and the ways it operates in socially and economically disadvantaged settings. The framework highlights how wider political and economic contexts create structural barriers and a mismatch between the policy expectations of social prescribing and the reality into which it is being implemented. This mismatch leaves link workers needing to navigate and compensate for systemic gaps (leaving them as spanners of systemic gaps). In contrast, when link workers operate in contexts where there is broader systemic alignment that is already oriented towards collaborative action on health and its social determinants, link workers can be “spanners of aligned efforts”. As spanners of aligned efforts link workers do not need to compensate for gaps in fragmented systems but are able to work within and contribute to the aligned system components and partnerships. The framework explains how link workers may adapt to these constraints through tactical, strategic or pragmatic approaches. This conceptual framework also illustrates how the absence or availability of broader systemic support and alignment for action on the social determinants of health and health inequities may shape the sustainability of social prescribing and

link worker practices. By capturing these dynamics, this framework provides insights into how policy reforms may better support social prescribing link workers and the communities and patients they serve.

It is however important to recognise that Figure 22 does not fully convey the complexities and nuances of the concepts developed through this doctoral work. The diagram below is intended as an initial representation of an emerging theoretical idea rather than a final model. Refining the diagram and the conceptual language underpinning the notion of “spanners of aligned efforts” will form part of my dissemination and future postdoctoral work where I intend to work with key stakeholders and PPI contributors to co-produce a more accessible figure.

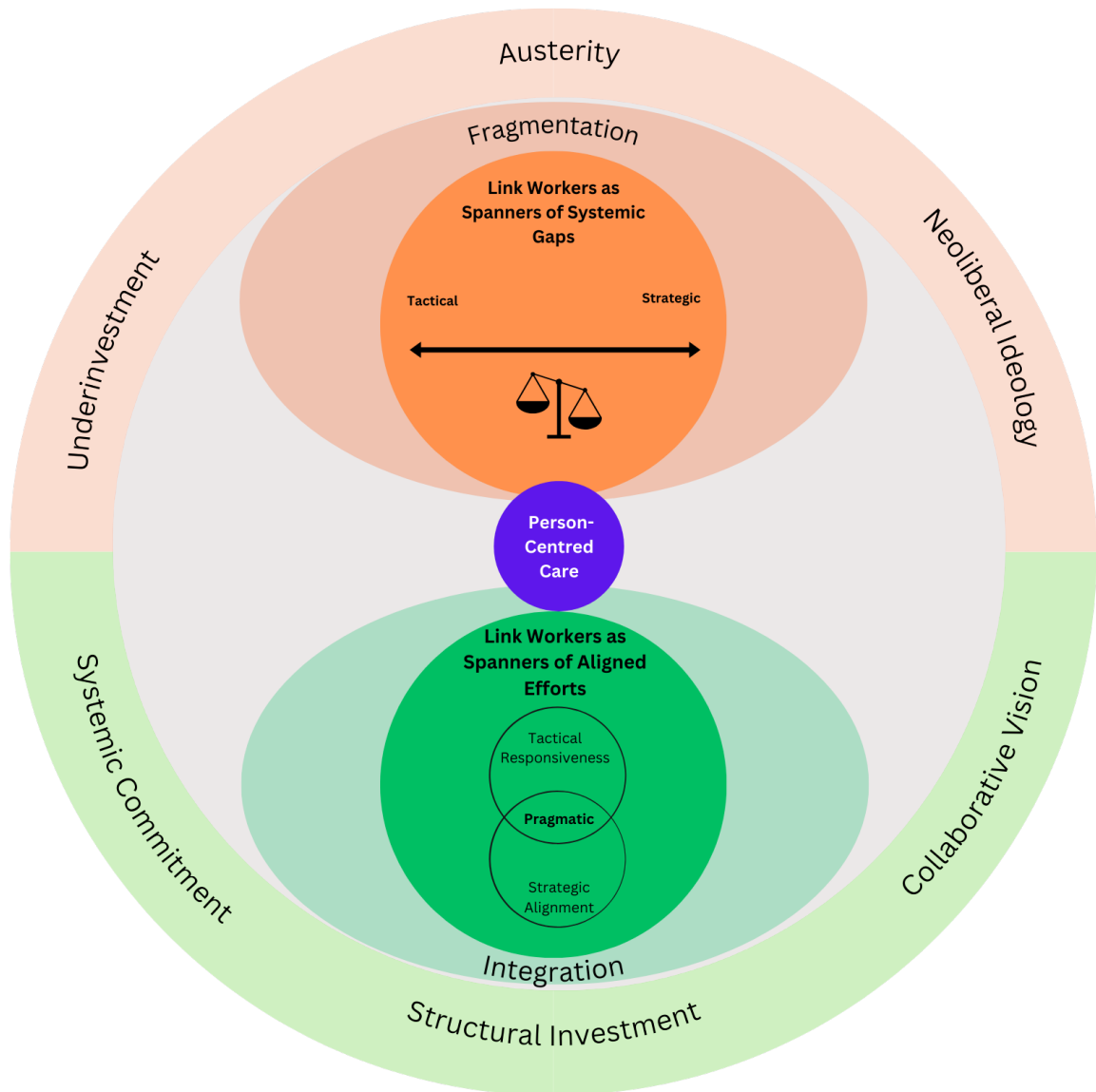


Figure 22: An initial visual summary of conceptual framework that illustrates how link worker approaches may be shaped by structural constraints.

6.5 Contributions of the Thesis

The research in this thesis make contributes to understanding of social prescribing and the link worker role, as well as insights for healthcare and primary care more generally. My thesis also makes key methodological contributions.

6.5.1 Contribution to Understanding of Social Prescribing

6.5.1.1 Link Workers as Spanners of Systemic Gaps

This study is the first to systematically explore how link workers undertake vital networking and community development work necessary for delivering social prescribing. While other studies have briefly alluded to some of the challenges link workers face, to the best of my knowledge, none have explored these networking and development practices in depth.

Other studies of social prescribing have highlighted the role link workers play as boundary spanners, bridging primary care and the community sector (1,119). Traditionally, boundary spanners are understood as actors who bridge organisational silos, or facilitate transactions and the “flow of information between people or groups who either have no physical or cognitive access to one another, or alternatively, who have no basis on which to trust each other” (246) (p.1). My research extends this understanding by demonstrating that link workers do far more than simply facilitating coordination between different sectors. They also actively span across systemic gaps, compensating for deficiencies in fragmented health, care, and community services. The work that link workers actually undertake involves complex relational labour as well as informal and creative problem solving. Their role as boundary spanners is not static or stable but instead is highly context dependent.

The social network analysis in Chapters 4 and 5 extends conceptualisations of link workers’ boundary spanning role by illustrating how different network structure patterns emerge across different socioeconomic and organisational contexts and in response to different link worker approaches.

In deprived areas, link workers compensate for systemic gaps by building larger and more complex professional networks, highlighting how boundary spanning can involve adaptive responses to resource constraints. Organisational contexts and institutional membership also shape boundary spanning opportunities. Link workers employed by PCNs participating in the research built more cohesive networks bridging healthcare and community sectors than those employed by VCS organisations (and who may struggle to integrate themselves into clinical healthcare settings). The longitudinal network analysis I employed in the case studies workstream further demonstrates how different approaches to boundary spanning (tactical, strategic, or pragmatic) can have different implications for the sustainability of social prescribing practices.

6.5.1.2 A Continuum of Link Worker Practices

Other research I have been involved with on the implementation of social prescribing link workers found that link workers employ micro-discretions which are “actions and advice-giving based on personal judgement of a situation, which may not always reflect explicit guidance or protocols” p.1 (9). We (9) suggest that link workers can be described as “inventive strategists” who exercise discretion, when required and when possible, to meet patient needs and maximise their own job satisfaction. However, these discretionary judgements can also expose them to role ambiguity and overextension due to a lack of clearly defined professional boundaries, in turn risking the sustainability of the link worker role.

The finding in this thesis that link worker practices can fall on a continuum between creative, responsive and sometimes subversive “tactics” and organisationally aligned “strategies” extends the notion of micro-discretions. This continuum provides a dynamic framework that characterises how link workers may exercise discretion and also explains why link workers may engage in different approaches in response to the contexts within which they operate. My research therefore strengthens theoretical understandings of variations in link worker practices by extending the notion of micro-discretions into a broader framework that recognises the impact of broader system structures and the role of link workers as spanners of these structures.

The notion of micro-discretions (9) explains how link workers in across many different contexts draw on their own judgement and discretion in their everyday practice. The findings from this thesis illustrate how the expression of these discretionary acts may be shaped the wider structural (social and economic) conditions within which link workers operate. The inventive and responsive practices identified in our work on micro-discretions can be found across link worker roles more broadly. However, in socially and economically disadvantaged contexts, these practices may be more frequent, more intensive, or more structurally constrained. Factors such as higher levels of unmet need typical in disadvantaged areas, fewer available resources, and more fragmented local services (as discussed in Chapter 1), may mean that link workers in disadvantaged settings need to rely on tactical workarounds to bridge systemic gaps. Conversely, in more resourced settings, similar discretionary acts may be easier to align with organisational strategies. The continuum identified in this thesis is not necessarily unique to deprived settings; instead, deprivation may influence where and how link workers position themselves along the continuum.

6.5.1.3 Locating Social Prescribing in Wider System Structures

In Chapter 1, I highlight Pot's critique (30) which argued that social prescribing has been framed as a "hyper-solution" in policy discourse. This framing suggests that no major changes and investments into healthcare and community infrastructure are necessary, as social prescribing will make efficient use of existing resources. Pot connects this hyper-solutionist framing of social prescribing to the pervasive logic of austerity, allowing policymakers to claim action on social determinants of health, while prioritising cost-saving over investment in health and community infrastructure.

Building on Pot's critique of social prescribing, the conceptual framework developed in this thesis demonstrates how social prescribing and link worker practices are shaped and constrained by systems that have suffered from austerity. This research provides empirical evidence for the assertion that without wider structural and systemic investment social prescribing may remain a cost-saving neoliberal policy. Link workers require supportive environments committed to wider systemic integration and collaborative working for them to be able to deliver on the policy visions of community development and longer-term sustainability. If healthcare and community systems

remain fragmented, as they have been under austerity, link worker practices are likely to be either “tactical” (operating in the cracks of existing policies, creatively solving immediate problems, but without the power to deliver systemic change) or “strategic” (aligned with the very system strategies that have led to fragmentation and health inequities). Neither of these approaches are likely to lead to sustainable change on their own and may work to reinforce existing health inequities.

The need for systemic reform is supported by the literature on community health workers (CHWs). Parallels can be drawn between social prescribing link workers and CHWs. Like link workers, CHWs serve as links between communities and formal health structures (286). As with social prescribing, CHW initiatives are often held up as solutions to health inequities and to social determinants of health that can address gaps in formal healthcare structures in low resource settings (286,287). However, there is limited evidence that CHW interventions can overcome the influence of structural and social determinants of health (287). Instead, sustained investment in health system reform, poverty alleviation, and intersectoral working are required for CHW interventions to reach their full potential. Rather than compensating for gaps in formal health systems, Ahmed and colleagues (286) and Blanchard and colleagues (287) cite WHO guidelines which emphasise that CHWs should be viewed as an integrated element rather than a cost-saving substitute for functioning primary care services (288). These findings are likely to be transferable to social prescribing.

Research on other frontline “linking” roles in health and social care suggests that many of the dynamics I identified in this thesis are not unique to social prescribing link workers. For example, social work has also been framed as a boundary-spanning profession, where social workers operate at the intersections of individual, family, community, and state systems (289). In these roles, social workers are expected to negotiate competing organisational logics and expectations. Like link workers, social workers may experience liminality, role ambiguity, and the emotional labour of holding relationships across different organisations and sectors to coordinate care (290,291). Similar themes have been identified in the criminal justice context with probation and community corrections officers being described as “street-level boundary spanners”, positioned between courts, prisons, welfare services and communities (292). These role face similar challenges of discretionary practice

and vulnerability to policy and funding changes (292,293). These “linking” roles which are common in the UK public sector, entail high levels of emotional and relational labour in holding together fragmented systems and building trust across organisational boundaries (294).

My analysis of link workers extends these insights by showing how, in the specific context of primary care and social prescribing, boundary-spanning involves compensating for gaps in health and community services provision, particularly in contexts of social and economic deprivation. Unlike social workers or probation officers, social prescribing link workers lack statutory powers and may not benefit from having an established professional status or regulatory frameworks (see Chapter 3). This may leave them with high levels of responsibility but with low levels of authority or structural support. Taken together, this wider literature highlights the need for boundary-spanning roles to be supported by organisational structures and system-level alignment.

The conceptual framework I have presented in this final chapter (Figure 22) offers a roadmap for the design and equitable implementation of social prescribing. A key feature of this framework is the need for systemic alignment that produces supportive environments. In supportive environments which link workers can engage pragmatic and sustainable practices that contribute to the policy vision of systemic change. Without wider systemic support, link workers are likely to continue to remain spanners of systemic gaps, employing tactics which compensate for a fragmented and under-resourced system, and therefore, unable to fulfil the policy vision of sustainable health improvement.

6.5.2 Contributions to Primary Care

6.5.2.1 Additional Roles in Primary Care

As discussed in Chapter 1, the NHS primary care workforce has seen an expansion of additional roles such as link workers (20,82). These roles include paramedics, health and wellbeing coaches, and care coordinators. Like social prescribing link workers, these other additional roles have been introduced to alleviate workforce pressures and growing demands in primary care. Many of these other roles also undertake boundary spanning by navigating community and healthcare structures

and different orientations to care (82,295). These other additional roles may also be experiencing challenges of liminality, navigating a sense of ambiguity in professional identity (285).

Some of the pressures facing link workers are likely shared by GPs, practice nurses, and other members of the primary care team. Primary care practitioners often have to navigate fragmented and under-funded services, manage rising levels of multimorbidity and social complexity (297), navigate gaps between the need for service provision and its availability, and workforce shortages (285,298). Clinicians and other members of the primary care workforce may need to rely on discretionary workarounds, informal coordination, and relational labour to support patients in contexts where system capacity is limited (299,300).

My research suggests that these boundary spanning roles may be doing more than bridging across sectors and healthcare professions; they may also be compensating for systemic gaps. My findings suggest that the effectiveness and sustainability of these roles is likely to be contingent on broader structural conditions that create supportive environments. Without broader system reform, other additional roles also risk becoming makeshift solutions without power to produce lasting improvements to primary care and to population health and equity.

6.5.2.2 Intersectoral Action for the Social Determinants of Health

Collaboration between health care and other sectors has been widely promoted as a way of improving population outcomes (282). In line with recommendations from the Marmot Review on tackling the social determinants of health (13), the NHS and wider local systems are moving towards more integrated ways of working. This aligns with the new Labour Government's commitment to "health in all policies" (301) and the recommendations of the recent Darzi Report on the state of the NHS in England (302), which calls for neighbourhood interdisciplinary working, bringing together primary and community care.

The evidence for effectiveness of intersectoral collaboration in improvement of health outcomes is limited (282), however it is unclear whether this is due to the lack of efficacy of such approaches, or because collaboration is difficult to execute well. The effects of collaboration may also be difficult

to measure (282). My findings optimistically point to how collaborative system working (supported by clear policy vision and structural investment) may begin to deliver some of the systemic change necessary to tackle health inequities. However, as underscored by Alderwick and colleagues (282,303) these efforts also require support and alignment from macro-level political and economic contexts. And while my research evidence for the potential of intersectoral action comes from one link worker case, there is evidence elsewhere to suggest that systemic alignment and commitment to action on social determinants of health (through processes such as devolution) can have a positive impact on a range of health outcomes and social determinants (304,305).

6.5.3 Methodological Contributions and Innovation

To the best of my knowledge, my research is the first to employ social network analysis to the study of social prescribing, representing a significant methodological innovation.

Using network approaches allowed me to systematically map and analyse link workers' professional networks and the ways in which they are built and sustained across different socioeconomic and organisational contexts. Mapping network structures alongside qualitative data allowed me to identify patterns of connectivity, fragmentation, and variations in link worker integration, providing a richer, more complete understanding of the networking work link workers undertake, as well as offering insight into the sustainability of these networks. Social network analysis also allowed me to systematically explore how different contextual factors, such as area deprivation and organisational setting, may impact on link worker networking activities, and how these may change over time.

The Network Canvas software offered an accessible means of collecting network data collaboratively and in a way that fostered discussion with interviewees. Collecting data in a visually stimulating and interactive way encouraged interviewees to reflect on the broader patterns of the networking work they were undertaking, with many being able to identify gaps in their practice. The successful use of the software in this project demonstrates the feasibility of digital network mapping activities and network research. This sets a precedent for future studies looking to explore workforce integration and intersectoral working using network approaches.

6.6 Strengths and Limitations

I have examined strengths and limitations of each empirical workstreams in the preceding chapters.

In this section, I consider the strengths and limitations of my thesis as a whole.

My research provides a rich mixed-methods exploration of social prescribing in socially and economically disadvantaged settings. Mixed-methods approaches provide a way of exploring complex phenomena, in detail, by providing multiple types of evidence, integrating these to produce new forms of knowledge (121). The use of social network analysis also represents a significant methodological innovation in social prescribing research. Taking this approach allowed me to develop an empirically rich analysis of how social prescribing link workers operate in socially and economically disadvantaged settings. Using different research methods allowed me to capture both structural (networks) and experiential dimensions of link worker roles, and helped me to develop a multi-level conceptual framework of how structural and systemic constraints shape social prescribing. The longitudinal design of the case studies, covering a period of almost 2 years, was also a strength, allowing for insights into how social prescribing practices are shaped and evolve over time.

Focusing on socially and economically disadvantaged settings means that this research provides important insights into the challenges of implementing social prescribing in some of the areas which may need it most. Furthermore, including patient perspectives from these settings provides valuable perspectives how social prescribing is experienced by those it aims to support.

My research has drawn on a range of theoretical perspectives which provide an analytical framework, strengthen the explanatory power of the findings and provide analytical depth (128).

Drawing on the political economy of health as a theoretical perspective allowed me to frame and situate social prescribing within broader structural determinants. This framing allowed me to critically explore how contexts shaped by austerity and the fragmentation of public services shape the implementation and sustainability of social prescribing. It allowed me to explain why link

workers are often engage in tactical practices to creatively workaround and compensate for systemic constraints.

Drawing on de Certeau's conceptualisation of "strategy and tactics" (270), Turner's notion of "liminality" (247) and developing the concept of link workers as "boundary spanners" (119), has offered new conceptual tools for understanding how link workers navigate system constraints, service fragmentation, and professional ambiguity. Employing these theoretical perspectives allowed me to make a theoretically informed contribution to wider discussions on workforce innovations, health inequities, and the evolving role of the NHS in addressing social determinants of health.

My use of network analysis represents an original and innovative empirical and methodological contribution to social prescribing research. By systematically analysing the networking and community building aspect of the link worker role, my research demonstrates how link worker networks are shaped by social and economic, and organisational settings. My analysis also highlighted how link worker practices are reflected in network structures, and how these network structures point to the sustainability of these practices.

My research benefitted from significant PPI contribution and stakeholder engagement. This helped me to ensure that my research questions addressed areas of interest to patients as well as those involved in implementing and commissioning social prescribing initiatives. PPI contributors supported the analysis of the data in this research (see Chapter 2), offering a fresh perspective and supporting reflexive practices throughout.

Another strength of this work is that it received funding from both the National Institute of Health and Care Research (NIHR) (NIHR302325) and the NIHR School for Primary Care Research (SPCR) (Project Reference 529). The application processes provided valuable external review of the research that was going to be undertaken for this thesis. This review process allowed me to refine my research questions and methodological approach. The award of funding is also indicative of the need for and importance of this research within the broader context of the NHS.

Applying a critical perspective has allowed me to situate social prescribing within a broader structural context. Throughout this thesis I balance critical analyses and observations with actionable recommendations such as investing in workforce support and integration, recognising the relational labour of networking, and strengthening community infrastructure. Furthermore, I engaged in reflexive processes throughout, drawing on the perspectives of my experiences supervisory team, PPI, and wider stakeholders. This allowed me to share my critical assumptions, thought processes, and emerging analyses, highlighting where critical biases may be.

The relatively small sample sizes in the network interview study (Chapter 4) and the case studies (Chapter 5) limit the generalisability of the network findings in this study. Although I purposively selected cases and participants to represent different implementation contexts (employing organisation, different geographical regions, types of “left behind areas”), my findings may not reflect the realities in all settings. To aid the assessment of how applicable my findings may be to other settings, I contextualised the quantitative network data with rich qualitative description and contextual information (306). Findings were also related to existing theories and studies strengthening their explanatory power (128).

6.7 Implications for Policy and Practice

6.7.1 Strengthening systemic support for integrated care

Policy narratives have presented the introduction of additional roles as a strategy for alleviating pressures in primary care (20,77,82). My research suggests that these roles require systemic and structural support to be sustainable and to avoid stressors associated with being spanners of systemic gaps. Link workers could play an important role in helping to facilitate intersectoral action to close some of the systemic gaps, but the strategic vision and commitment for doing so needs to be present.

Systemic support could include:

- Leveraging new system structures such as Integrated Care Boards to strengthen intersectoral collaboration.

- Ensuring commissioning strategies formally connect social prescribing link worker roles (and other additional roles) to wider local social care and health agendas, ensuring clear joined up visions and funding to support community development activities.
- Recognising that responsive person-centred care may require occasional beyond protocol working, and putting mechanisms in place to support ways of working that mitigate risk and support practitioners to prevent overextension and burnout.

The findings from my thesis also highlight a number of elements within existing practice that may contribute to more integrated and resilient models of care.

- Fostering strong relationships with members of the clinical teams, such as GPs, may reduce some of the isolation associated with the boundary spanning work link workers undertake.
- Having regular formal and informal case discussions with rapid feedback loops with clinicians may strengthen coordinated care, reduce the emotional burden on link workers, and provide opportunities to mitigate risks. These may also provide benefits for patient care, whereby regular communication between social prescribers and GPs can ensure that the clinical and social support they receive is responsive to their needs as they develop and progress.

6.7.2 Supporting the integration of additional roles in primary care

My research on link workers and wider research on the introduction of additional roles in primary care have highlighted that these roles risk experiencing challenges associated with liminality, becoming isolated, or poorly embedded without wider structural support (82,296). Examples of such support could include:

- Enabling link workers to access professional peers, supporting them to develop communities of practice through which they can share learning, reinforce professional identity, and access peer support.
- Developing formal mechanisms through which link workers can become embedded into healthcare settings. This may include team meetings where link workers are formally introduced and where the value of their community-oriented work is highlighted.

- Providing mentorship, dedicated clinical supervision, and support for link workers to reduce the risk of burnout, beyond-protocol working, and to support effective integration into healthcare settings.

Supported and intentional integration of link workers into healthcare settings may be particularly important for link workers (or other additional roles) whose employment is contracted through external organisations such as those in the VCS. As discussed in Chapter 4, my research suggests that link workers employed by the VCS may experience additional barriers to networking and integrating into healthcare settings compared to those employed directly through PCNs.

My findings also highlight some ways in which link workers can be supported within current system pressures:

- My thesis highlighted the value of formal and informal communities of practice (Chapter 4) for peer-support, knowledge exchange, and collective problem solving. Link worker peer relationships may help mitigate some of the challenges associated with occupying liminal positions by helping individuals form a sense of shared identity with other professionals in similar roles.
- In some instances, the networking activity undertaken by the link workers as part of this research (Chapter 4), helped them to identify possible gaps and possibility to strengthen their connections and collaborations. Structured reflective practice where link workers think about the people they work with, may identify opportunities for more effective integration into wider teams in primary and community care.

6.7.3 Recognising the relational labour of link worker roles

One of my central findings is the considerable relational and emotional labour link workers invest for the successful delivery of social prescribing. Link workers span fragmented services, building networks and developing relational knowledge about how to navigate these gaps. Supporting patients with complex and difficult life circumstances often involves high levels of emotional investment which can place link workers at risk of burnout. This labour is often hidden and sometimes undervalued in healthcare settings (8). To recognise the value of this labour, and help mitigate the risk of burnout, organisational policies could:

- Ensure adequate time and resources are allocated for link worker networking, recognising this as a core component of the role.
- Provide training that supports link workers to undertake this networking work alongside caseloads.
- Ensure that supervision and mentoring provide emotional support.
- Develop guidance around balancing networking with caseload work.

As I illustrated in the case studies in Chapter 5 tactical and highly relational link worker practices may occur informally, are highly reactive to changing patient circumstances, and may not be recorded in formal organisational monitoring systems. These forms of work may therefore remain invisible and difficult to capture formally. Current reporting for social prescribing, as set out in the PCN Directed Enhanced Services (20), focuses on broad categories of impact such as number of patients referred to social prescribing, reasons for referral, categories of onward signposting, and impact on patient wellbeing through standardised measurements. These indicators provide limited insight into the intense relational work link workers often undertake in their roles, the ways in which they navigate complex and fragmented systems, the reactive support they often provide patients, and the advocacy they often provide, which often make a big difference to patients (8,12). Recognising and monitoring the impact of these practices may require the following:

- Developing metrics and evaluation frameworks that can capture the impact of this relational and tactical work. These may include capturing qualitative accounts from patients, reflective narratives from link workers, or measuring changes in link workers' networks.
- Providing link workers with opportunities for reflective practice and supervision where these are discussed and any potential risks mitigated.

6.8 Future Research Directions

6.8.1 Incorporating additional perspectives

My research has identified the potential that systemic commitment and intersectoral action may play in addressing social determinants of health inequities alongside social prescribing. However, the primary focus of this study was the perspectives and networks of social prescribing link workers. Future research could focus on exploring perspectives from other stakeholders such as GPs, representatives from the VCS, and service commissioners.

6.8.2 Supporting “tactical” working

The “tactical” work undertaken by link workers can involve going beyond expected frameworks and ways of working. This beyond protocol working has been demonstrated in other studies of link working (9). While these tactical ways of working are often essential for providing responsive person-centred care in fragmented systems, they present risks. Future research could look at understanding how link workers make decisions about engaging in these creative tactical approaches, and what institutional processes could be put in place to support link workers to mitigate some of the risks of working in these ways.

6.8.3 Investigating individual-level determinants of approaches to link working

My research identified a continuum of link worker practices between “strategies” and “tactics”. In my analysis, I connect link workers’ position on this continuum with broader system-level constraints. However, system-level constraints are likely only part of the explanation for variations in practice. Future research could explore how link worker characteristics such as gender, time in post, or professional background might influence which practices on the “strategies” and “tactics” continuum link workers adopt. Furthermore, individual characteristics such as personal experiences, communication skills, relational competence, and previous experience experiences in community work may influence the ways in which link workers interpret their roles, build their networks and interact with patients. Appointing the “right person” into the role may therefore also play an important part in shaping effective link worker and social prescribing practice. Future research could

therefore consider how these individual-level determinants interact with system-level factors to determine the ways in which link workers approach and undertake their roles.

6.8.4 Methodological extensions of this research

Social network analysis and the use of Network Canvas proved to be an accessible and feasible approach to investigating how additional roles, such as social prescribing link workers, are integrating themselves into PCN teams. This approach could be expanded to explore the integration of other additional roles. When reflecting on the construction of network maps, participants often reflected on the value of the process for identifying gaps in practice and collaboration. Future research could explore the feasibility of utilising network maps as assessments of organisational integration and as tools for identifying gaps and silos in practice. Social network analysis has previously been used to assess intersectoral collaboration in healthcare settings (307) and could therefore present a valuable tool for studying the emergence of collaborations across Integrated Care Boards.

While Network Canvas offered a collaborative environment for the collection of network data, future research could explore ways of implementing network questionnaires on a bigger scale, using fully self-administered approaches. This could help enable the large-scale collection of network data, making findings of such studies more generalisable.

6.9 Conclusion

Through my DPhil research, I sought to understand how link workers create and sustain networks for social prescribing in socially and economically disadvantaged settings. My multiphase mixed-methods research study represented a significant methodological innovation by applying SNA to systematically study how link workers undertake an important and understudied aspect of their role – networking across healthcare and community sectors to establish pathways for social prescribing and meet patients' needs.

My research makes three key contributions to understandings of social prescribing and the link worker role. Firstly, I found that link workers not only span different organisational sectors and ways

of working but also span systemic gaps, compensating for and filling gaps in fragmented services caused by austerity and underinvestment. My analysis situates link worker practices within broader systemic and structural (political and economic) contexts and reveals how different approaches to link working may emerge as responses to system-level constraints. Through my analysis I also show that sustainable approaches to social prescribing and intersectoral working may require broader systemic alignment and commitment to action on social determinants of health.

Secondly, my analysis identified a continuum of link worker practices along a spectrum between “strategies” and “tactics”, with a “pragmatic” middle-ground that emerges when system structures support integrated care and joined-up action on the social determinants of health. This continuum extends existing research on the variation in link worker practices by providing a theoretical foundation that connects these practices to systemic constraints and explains why certain approaches may be more sustainable than others. Importantly, this conceptualisation demonstrates how broader systemic contexts can shape the potential of social prescribing and link worker approaches to address the socially determined health inequities.

Thirdly, my longitudinal network analysis connects link worker practices to their network structures, highlighting how these evolve over time and providing important insights into the sustainability of different approaches to link working.

Overall, my work demonstrates how health service innovations are fundamentally shaped by the broader political and economic contexts within which they operate. Without broader systemic commitment to action on social determinants of health, social prescribing and the link worker role risk being “Fantasy Paradigms” (26,117) - localised interventions expected to address structural inequities but without the power to change the very systems and structures that produce these inequities in the first place. However, it is also important to note, that even within these broader structural constraints, link workers can have considerable positive impact on patients and the communities they serve.

6.10 Personal Reflections

6.10.1 From a reluctant social scientist to becoming health services researcher

My interest in the social determinants of health was shaped by my background in anthropology. Anthropology draws attention to the biological, social, and cultural processes that make us human and influence our health. While I have always listened with curiosity to the perspectives of social theorists, I have often struggled to grasp theoretical concepts such as “biopower”, “symbolic interactionism,” “phenomenology,” or “epistemology,” – to name just a few of the terms that have intimidated me over the years. I found these concepts to be overly abstract, too philosophical, and difficult to apply in ways that could yield practical insights. Because of the inadequacy I felt around social theory, I was always reluctant to consider myself an anthropologist or social scientist.

I therefore set out in search for more applied orientations to research and found myself at home in health services research. This field provides an intellectual space more closely aligned with my interests and desire to undertake research that integrates insights and methods from the social sciences while maintaining a clear focus on practical implications for health policy and practice.

Through this health service research I undertook in this thesis, I have been able to explore my longstanding interest in the role that health services and primary care play in addressing the social determinants of health inequities. The interdisciplinary nature of health services research provided a space in which I could apply methods and perspectives from anthropology and other social sciences to a real-world problem.

Engaging with social theory was a challenge I set myself during this DPhil. I endeavoured to strike a balance between drawing on theory to add depth to my analyses and ensuring my work provided actionable insights for policy and practice. Through my DPhil research, I have learned to use theoretical concepts that once intimidated me as analytical tools to enhance the depth and explanatory power of my findings. This engagement has, in turn, helped me develop as a well-rounded health services researcher, striking a balance between the development and application of theoretical perspectives and the need to provide actionable recommendations.

6.10.2 Methodological Development

By the time I started my DPhil, I had worked in primary care health services research for 5 years and had already contributed to a number of research studies and academic publications. I had developed expertise and competence in a range of qualitative research methods including interviews, thematic analysis, realist research, and qualitative evidence synthesis. This DPhil presented an opportunity for me to expand my methodological skillset. I had always been intrigued by social network analysis. It was an approach I had heard of quite early on in my academic career due to its origins in anthropology, and I had identified it as a possible way of studying intersectoral working in healthcare (a key approach advocated for by the Marmot Report (13) for effective action on the social determinants of health).

Social network analysis presented a significant learning curve. I was initially intimidated by papers that employed complex mathematical modelling to the study of networks, invoking concepts such as “graph theory” and “vectors,” along with other jargon that I found inaccessible. I was unsure of its full analytical potential and what it could bring to research that was still mostly qualitative in nature. Thankfully, there are many others like me who recognise the value that social network analysis may bring to the study of health systems. The software I used, Network Canvas, was designed to make social network analysis accessible to researchers like me who wanted to learn about the networks of study participants in a way that facilitated meaningful qualitative discussion. In using it, I developed an appreciation for how network structures can shape opportunities for individuals and how systematically investigating networks can add additional depth and insight to qualitative data. Using social network analysis has also increased my confidence in designing and undertaking mixed-methods studies, allowing me to develop a versatile skillset that I will continue to develop.

6.10.3 Balancing critical analysis with meaningful policy engagement

Throughout my research, I have been aware of the critical lens I applied to the study of social prescribing and its location in a health system that has been fragmented by considerable underinvestment. However, this perspective should not neglect or undermine the very real benefits individual patients have experienced and the meaningful relationships they have developed because

of social prescribing. Link workers span the systemic gaps discussed in this thesis to benefit individual patients.

Throughout my academic and professional career, I have been driven by the motivation to undertake research that is responsive to the needs of policymakers and practitioners. For research to be useful to policy and practice, it must move beyond critique to provide constructive and actionable recommendations for policymakers and practitioners. I was quite fortunate that at the time I was looking to start my DPhil, social prescribing was emerging as a key area of policy interest and aligned with my academic interests. I was lucky to find myself working in a research team conducting pioneering research on the topic of social prescribing. From the outset, our team worked collaboratively with policymakers in the NHS to establish a programme of work around social prescribing that could (and would) inform policy, practice, and other research. Being part of this research team allowed me to understand better the processes behind policy decisions. It also helped me recognise how, as a researcher, I should align my research outputs with policy priorities and timelines in order to best have impact through my research.

6.10.4 Looking forward to research on equitable healthcare systems

As I reflect on my DPhil journey, I look forward to applying the methodological skills and theoretical insights I have developed through this work to other challenges in the equitable delivery of healthcare services and action on the social determinants of health. The tensions between policy aspirations and realities of implementation, which I identified as shaping social prescribing and the link worker role, are also likely to be relevant to other challenges in health system reform. I hope to continue undertaking work that not only draws attention to these tensions but also offers constructive and practical recommendations for creating more sustainable and equitable healthcare systems.

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Appendices

Appendix 1: Search Strategy for Meta-ethnography

Medline (Ovid MEDLINE® Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE® Daily and Ovid MEDLINE®) 1946 to present

1	social prescri*.ti,ab,kw.	247
2	(link? adj2 (worker? or practitioner? or staff or personnel or officer? or team?)).ti,ab,kw.	272
3	Patient Navigation/	870
4	((care or healthcare or community or outreach or patient?) adj5 navigator?).ti,ab,kw.	1041
5	(navigator? adj5 (program* or intervention* or service* or system?)).ti,ab,kw.	606
6	((care or healthcare or community or outreach or patient?) adj2 navigat*) and (worker? or practitioner? or staff or personnel or team?)).ti,ab,kw.	586
7	((navigat* adj2 (program* or intervention* or service* or system?)) and (worker? or practitioner? or staff or personnel or team?)).ti,ab,kw.	556
8	community health workers/ or medical receptionists/	5980
9	(receptionist? or reception staff or reception personnel).ti,ab,kw.	544
10	(health* adj (assistant? or aide? or advisor? or adviser? or advocate? or co-ordinator? or coordinator? or connector? or officer? or facilitator? or liaison or broker? or coach* or promoter? or mobili?er?)).ti,ab,kw.	6539
11	(community adj (assistant? or aide? or advisor? or adviser? or advocate? or co-ordinator? or coordinator? or connector? or officer? or facilitator? or liaison or broker? or coach* or promoter? or mobili?er?)).ti,ab,kw.	999
12	8 or 9 or 10 or 11	13617
13	((navigat* or sign post* or signpost* or path* or guided or guiding or refer*) adj5 (service? or system? or care? or healthcare or patient? or community* or support)).ti,ab,kw.	331673
14	((navigat* or sign post* or signpost* or path* or guided or guiding or refer*) adj5 (group? or club? or selfhelp* or self-help or education or learning or exercise? or physical activity)).ti,ab,kw.	73969
15	((navigat* or sign post* or signpost* or path* or guided or guiding or refer*) adj5 (social support or social network? or social activit* or social service? or social resource? or community support or community network? or community activit* or community service? or community resource?)).ti,ab,kw.	1344
16	(active* adj3 (signpost* or sign post?)).ti,ab,kw.	7
17	(navigat* or sign post* or signpost*).ti.	14535
18	intersectoral collaboration/	2425
19	community-institutional relations/ or interinstitutional relations/	21262
20	interdisciplinary communication/	17881
21	(charities/ or faith-based organizations/ or organizations, nonprofit/ or voluntary health agencies/) and (link* or liais* or collaborat* or partner* or engage* or leverag* or broker* or coordinat* or co-ordinat*).ti,ab,kw.	1076

22	((multidisciplin* or interdisciplin* or multi* disciplin* or inter disciplin* or multisector* or intersector* or multi* sector or inter sector* or multiorgani?ation* or interorgani?ation* or multi* organi?ation* or inter organi?ation*)) and (link* or liais* or collaborat* or partner* or engage* or leverag* or broker* or coordinat* or co-ordinat*).ti,ab,kw.	32776
23	((voluntary or volunteer* or charit* or faith* or church* or community or third or nongovernment* or non-government* or nonprofit* or non-profit* or "not for profit") adj2 (sector? or agenc* or organi?ation?)) and (link* or liais* or collaborat* or partner* or engage* or leverag* or broker* or coordinat* or co-ordinat*).ti,ab,kw.	8269
24	Social Determinants of Health/	4558
25	Health Equity/	2044
26	(social determinant? or social need? or psychosocial need?).ti,ab,kw.	13162
27	((health or social or psychosocial or economic) adj2 (equit* or inequit* or equal* or unequal* or depriv*).ti,ab,kw.	25642
28	((social* adj2 (interact* or isolat*)) or loneliness or lonely).ti,ab,kw.	42696
29	13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28	553565
30	12 and 29	1800
31	3 or 4 or 5 or 6 or 7 or 30	4181
32	general practice/ or family practice/	76359
33	general practitioners/ or physicians, family/ or physicians, primary care/	29155
34	Primary Health Care/	83443
35	Office Visits/	7218
36	(ambulatory adj3 (care or setting? or facilit* or ward? or department? or service?).ti,ab,kw.	18694
37	((general or family) adj2 (practi* or physician? or doctor?).ti,ab,kw.	123954
38	(primary care or primary health care or primary healthcare).ti,ab,kw.	153225
39	(clinic? or visit?).ti,ab,kw.	551099
40	((health* or medical) adj2 (center? or centre?).ti,ab,kw.	137168
41	Community Health Services/	32425
42	community.ti.	151984
43	(community adj3 (service? or care or health*).ti,ab,kw.	82400
44	32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43	1107504
45	31 and 44	2234
46	1 or 2 or 45	2708
47	exp qualitative research/	66831
48	focus groups/ or interviews as topic/	93850
49	grounded theory/	2126
50	qualitative.ti. or (qualitative adj2 (stud* or research or analysis)).ti,ab,kw.	114984
51	(interview* or focus group* or mixed method* or multiple method* or multimethod* or multi-method*).ti,ab,kw.	436089
52	(grounded theory or ethnograph* or ipa or phenomenolog* or thematic analysis or narrative analysis).ti,ab,kw.	83844
53	47 or 48 or 49 or 50 or 51 or 52	542917
54	46 and 53	946

55	afghanistan/ or exp africa/ or albania/ or andorra/ or antarctic regions/ or argentina/ or exp asia, central/ or exp asia, northern/ or exp asia, southeastern/ or exp atlantic islands/ or bahrain/ or bangladesh/ or bhutan/ or bolivia/ or borneo/ or "bosnia and herzegovina"/ or brazil/ or bulgaria/ or exp central america/ or exp china/ or colombia/ or "commonwealth of independent states"/ or croatia/ or "democratic people's republic of korea"/ or ecuador/ or gibraltar/ or guyana/ or exp india/ or indonesia/ or iran/ or iraq/ or jordan/ or kosovo/ or kuwait/ or lebanon/ or liechtenstein/ or macau/ or "macedonia (republic)"/ or exp melanesia/ or moldova/ or monaco/ or mongolia/ or montenegro/ or nepal/ or netherlands antilles/ or new guinea/ or oman/ or pakistan/ or paraguay/ or peru/ or philippines/ or qatar/ or "republic of belarus"/ or romania/ or exp russia/ or saudi arabia/ or serbia/ or sri lanka/ or suriname/ or syria/ or taiwan/ or exp transcaucasia/ or ukraine/ or uruguay/ or united arab emirates/ or exp ussr/ or venezuela/ or yemen/	1198703
56	organisation for economic co-operation and development/	367
57	australasia/ or exp australia/ or austria/ or exp baltic states/ or belgium/ or exp canada/ or chile/ or czech republic/ or europe/ or exp france/ or exp germany/ or greece/ or hungary/ or ireland/ or israel/ or exp italy/ or exp japan/ or korea/ or luxembourg/ or mexico/ or netherlands/ or new zealand/ or north america/ or poland/ or portugal/ or exp "republic of korea"/ or exp "scandinavian and nordic countries"/ or slovakia/ or slovenia/ or spain/ or switzerland/ or turkey/ or exp united kingdom/ or exp united states/	3301585
58	european union/	16805
59	developed countries/	20884
60	56 or 57 or 58 or 59	3316510
61	55 not 60	1111220
62	54 not 61	722

Embase 1974 to present

1	social prescri*.ti,ab,kw.	284
2	(link? adj2 (worker? or practitioner? or staff or personnel or officer? or team?)).ti,ab,kw.	363
3	((care or healthcare or community or outreach or patient?) adj5 navigator?).ti,ab,kw.	2241
4	(navigator? adj5 (program* or intervention* or service* or system?)).ti,ab,kw.	1108
5	((((care or healthcare or community or outreach or patient?) adj2 navigat*) and (worker? or practitioner? or staff or personnel or team?)).ti,ab,kw.	1333
6	((navigat* adj2 (program* or intervention* or service* or system?)) and (worker? or practitioner? or staff or personnel or team?)).ti,ab,kw.	1026
7	care coordinator/ or health auxiliary/ or lay health worker/ or medical receptionist/	8239
8	(receptionist? or reception staff or reception personnel).ti,ab,kw.	768
9	(health* adj (assistant? or aide? or advisor? or adviser? or advocate? or co-ordinator? or coordinator? or connector? or officer? or facilitator? or liaison or broker? or coach* or promoter? or mobili?er?)).ti,ab,kw.	7990

10	(community adj (assistant? or aide? or advisor? or adviser? or advocate? or co-ordinator? or coordinator? or connector? or officer? or facilitator? or liaison or broker? or coach* or promoter? or mobili?er?)).ti,ab,kw.	1391
11	7 or 8 or 9 or 10	17918
12	((navigat* or sign post* or signpost* or path* or guided or guiding or refer*) adj5 (service? or system? or care? or healthcare or patient? or community* or support)).ti,ab,kw.	535424
13	((navigat* or sign post* or signpost* or path* or guided or guiding or refer*) adj5 (group? or club? or selfhelp* or self-help or education or learning or exercise? or physical activity)).ti,ab,kw.	108517
14	((navigat* or sign post* or signpost* or path* or guided or guiding or refer*) adj5 (social support or social network? or social activit* or social service? or social resource? or community support or community network? or community activit* or community service? or community resource?)).ti,ab,kw.	1878
15	(active* adj3 (signpost* or sign post*)).ti,ab,kw.	10
16	(navigat* or sign post* or signpost*).ti.	18328
17	intersectoral collaboration/	2773
18	interdisciplinary communication/	12787
19	(social welfare/ or faith-based organization/ or non-governmental organization/ or sports organization/) and (link* or liais* or collaborat* or partner* or engage* or leverag* or broker* or coordinat* or co-ordinat*).ti,ab,kw.	3616
20	((multidisciplin* or interdisciplin* or multi* disciplin* or inter disciplin* or multisector* or intersector* or multi* sector or inter sector* or multiorgani?ation* or interorgani?ation* or multi* organi?ation* or inter organi?ation*) and (link* or liais* or collaborat* or partner* or engage* or leverag* or broker* or coordinat* or co-ordinat*)).ti,ab,kw.	53092
21	((((voluntary or volunteer* or charit* or faith* or church* or community or third or nongovernment* or non-government* or nonprofit* or non-profit* or "not for profit*") adj2 (sector? or agenc* or organi?ation?)) and (link* or liais* or collaborat* or partner* or engage* or leverag* or broker* or coordinat* or co-ordinat*)).ti,ab,kw.	10527
22	social determinants of health/	11081
23	Health Equity/	4960
24	(social determinant? or social need? or psychosocial need?).ti,ab,kw.	18356
25	((health or social or psychosocial or economic) adj2 (equit* or inequit* or equal* or unequal* or depriv*)).ti,ab,kw.	31704
26	((social* adj2 (interact* or isolat*)) or loneliness or lonely).ti,ab,kw.	53981
27	12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26	804752
28	11 and 27	2859
29	3 or 4 or 5 or 6 or 28	6566
30	general practice/	79758
31	general practitioner/	105374

32	*primary medical care/ or *primary health care/	64986
33	(ambulatory adj3 (care or setting? or facilit* or ward? or department? or service?)).ti,ab,kw.	27112
34	((general or family) adj2 (practi* or physician? or doctor?)).ti,ab,kw.	156933
35	(primary care or primary health care or primary healthcare).ti,ab,kw.	202130
36	(clinic? or visit?).ti,ab,kw.	879283
37	((health* or medical) adj2 (center? or centre?)).ti,ab,kw.	203651
38	community care/	56315
39	community.ti.	177187
40	(community adj3 (service? or care or health*)).ti,ab,kw.	105307
41	30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40	1594306
42	29 and 41	3867
43	1 or 2 or 42	4463
44	exp qualitative research/	91441
45	multimethod study/ or open ended questionnaire/ or exp interview/	315010
46	grounded theory/	8446
47	qualitative.ti. or (qualitative adj2 (stud* or research or analysis)).ti,ab,kw.	145359
48	(interview* or focus group* or mixed method* or multiple method* or multimethod* or multi-method*).ti,ab,kw.	551514
49	(grounded theory or ethnograph* or ipa or phenomenolog* or thematic analysis or narrative analysis).ti,ab,kw.	101486
50	44 or 45 or 46 or 47 or 48 or 49	722635
51	43 and 50	1411
52	afghanistan/ or exp africa/ or argentina/ or bahrain/ or bangladesh/ or bhutan/ or bolivia/ or borneo/ or exp brazil/ or brunei darussalam/ or exp china/ or colombia/ or ecuador/ or equatorial guinea/ or guinea/ or guinea-bissau/ or guyana/ or exp india/ or exp indonesia/ or iran/ or exp iraq/ or jordan/ or kazakhstan/ or kuwait/ or kyrgyzstan/ or laos/ or lebanon/ or exp malaysia/ or mongolia/ or myanmar/ or nepal/ or north korea/ or oman/ or exp pakistan/ or papua new guinea/ or paraguay/ or peru/ or qatar/ or philippines/ or exp russian federation/ or saudi arabia/ or singapore/ or sri lanka/ or suriname/ or syrian arab republic/ or taiwan/ or tajikistan/ or thailand/ or timor-leste/ or turkmenistan/ or exp united arab emirates/ or uruguay/ or exp uzbekistan/ or venezuela/ or viet nam/ or yemen/	1366252
53	exp "organisation for economic co-operation and development"/	1794
54	exp "australia and new zealand"/ or austria/ or exp "baltic states"/ or exp belgium/ or chile/ or "czech republic"/ or denmark/ or europe/ or exp finland/ or exp france/ or exp germany/ or greece/ or hungary/ or iceland/ or ireland/ or israel/ or exp italy/ or japan/ or korea/ or luxembourg/ or netherlands/ or exp "north america"/ or exp norway/ or exp portugal/ or scandinavia/ or slovakia/ or slovenia/ or "south korea"/ or exp spain/ or sweden/ or switzerland/ or exp "turkey (republic)"/ or exp united kingdom/ or western europe/	3402016
55	european union/	28619

56	developed country/	34184
57	53 or 54 or 55 or 56	3432758
58	52 not 57	1249567
59	51 not 58	1111

PsycINFO 1806 to present

1	social prescri*.ti,ab.	97
2	(link? adj2 (worker? or practitioner? or staff or personnel or officer? or team?)).ti,ab.	226
3	((care or healthcare or community or outreach or patient?) adj5 navigator?).ti,ab.	303
4	(navigator? adj5 (program* or intervention* or service* or system?)).ti,ab.	176
5	((care or healthcare or community or outreach or patient?) adj2 navigat*) and (worker? or practitioner? or staff or personnel or team?)).ti,ab.	226
6	((navigat* adj2 (program* or intervention* or service* or system?) and (worker? or practitioner? or staff or personnel or team?)).ti,ab.	225
7	exp clerical personnel/	713
8	(receptionist? or reception staff or reception personnel).ti,ab.	165
9	(health* adj (assistant? or aide? or advisor? or adviser? or advocate? or co-ordinator? or coordinator? or connector? or officer? or facilitator? or liaison or broker? or coach* or promoter? or mobili?er?)).ti,ab.	1870
10	(community adj (assistant? or aide? or advisor? or adviser? or advocate? or co-ordinator? or coordinator? or connector? or officer? or facilitator? or liaison or broker? or coach* or promoter? or mobili?er?)).ti,ab.	585
11	7 or 8 or 9 or 10	3317
12	((navigat* or sign post* or signpost* or path* or guided or guiding or refer*) adj5 (service? or system? or care? or healthcare or patient? or community* or support)).ti,ab.	48596
13	((navigat* or sign post* or signpost* or path* or guided or guiding or refer*) adj5 (group? or club? or selfhelp* or self-help or education or learning or exercise? or physical activity)).ti,ab.	25303
14	((navigat* or sign post* or signpost* or path* or guided or guiding or refer*) adj5 (social support or social network? or social activit* or social service? or social resource? or community support or community network? or community activit* or community service? or community resource?)).ti,ab.	1252
15	(active* adj3 (signpost* or sign post*)).ti,ab.	2
16	(navigat* or sign post* or signpost*).ti.	5095
17	(ngos/ or nonprofit organizations/ or exp religious organizations/) and (link* or liais* or collaborat* or partner* or engage* or leverag* or broker* or coordinat* or co-ordinat*).ti,ab.	1596

18	((multidisciplin* or interdisciplin* or multi* disciplin* or inter disciplin* or multisector* or intersector* or multi* sector or inter sector* or multiorgani?ation* or interorgani?ation* or multi* organi?ation* or inter organi?ation*) and (link* or liais* or collaborat* or partner* or engage* or leverag* or broker* or coordinat* or co-ordinat*)).ti,ab.	14424
19	((voluntary or volunteer* or charit* or faith* or church* or community or third or nongovernment* or non-government* or nonprofit* or non-profit* or "not for profit*") adj2 (sector? or agenc* or organi?ation?)) and (link* or liais* or collaborat* or partner* or engage* or leverag* or broker* or coordinat* or co-ordinat*)).ti,ab.	6328
20	health disparities/	9009
21	(social determinant? or social need? or psychosocial need?).ti,ab.	6634
22	((health or social or psychosocial or economic) adj2 (equit* or inequit* or equal* or inequal* or depriv*)).ti,ab.	12999
23	((social* adj2 (interact* or isolat*)) or loneliness or lonely).ti,ab.	56425
24	12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23	174481
25	11 and 24	377
26	3 or 4 or 5 or 6 or 25	1027
27	family medicine/	1274
28	general practitioners/ or family physicians/	7579
29	(ambulatory adj3 (care or setting? or facilit* or ward? or department? or service?)).ti,ab.	2249
30	((general or family) adj2 (practi* or physician? or doctor?)).ti,ab.	24170
31	(primary care or primary health care or primary healthcare).ti,ab.	35484
32	(clinic? or visit?).ti,ab.	107563
33	((health* or medical) adj2 (center? or centre?)).ti,ab.	22331
34	community health/ or community services/	20090
35	community.ti.	63600
36	(community adj3 (service? or care or health*)).ti,ab.	40826
37	27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36	255285
38	26 and 37	469
39	1 or 2 or 38	781
40	exp qualitative methods/ or mixed methods research/	18189
41	interviews/ or focus group interview/ or semi-structured interview/	12199
42	qualitative.ti. or (qualitative adj2 (stud* or research or analysis)).ti,ab.	99715
43	(interview* or focus group* or mixed method* or multiple method* or multimethod* or multi-method*).ti,ab.	387828
44	(grounded theory or ethnograph* or ipa or phenomenolog* or thematic analysis or narrative analysis).ti,ab.	109288
45	40 or 41 or 42 or 43 or 44	477990
46	39 and 45	286

47	developing countries/ not developed countries/	5412
48	46 not 47	286

CINAHL

#	Query	Results
S33	S26 NOT S32	1.046
S32	S27 NOT S31	266.625
S31	S28 OR S29 OR S30	1.629.324
S30	(MH "European Union") OR (MH "Developed Countries")	9.787
S29	(MH "Australia+") OR (MH "New Zealand") OR (MH "North America") OR (MH "Canada+") OR (MH "Mexico") OR (MH "United States+") OR (MH "Austria") OR (MH "Belgium") OR (MH "Germany+") OR (MH "France") OR (MH "Greece") OR (MH "Ireland") OR (MH "Italy") OR (MH "Luxembourg") OR (MH "Netherlands") OR (MH "Portugal") OR (MH "Scandinavia+") OR (MH "Spain") OR (MH "Switzerland") OR (MH "United Kingdom+") OR (MH "Baltic States+") OR (MH "Czech Republic") OR (MH "Hungary") OR (MH "Poland") OR (MH "Japan") OR (MH "South Korea") OR (MH "Chile") OR (MH "Israel") OR (MH "Turkey")	1.622.390
S28	(MH "Organisation for Economic Co-Operation and Development")	195
S27	(MH "Africa") OR (MH "Antarctic Regions") OR (MH "Asia, Central+") OR (MH "Asia, Southeastern+") OR (MH "Bangladesh") OR (MH "Bhutan") OR (MH "India") OR (MH "Afghanistan") OR (MH "Bahrain") OR (MH "Iran") OR (MH "Jordan") OR (MH "Lebanon") OR (MH "Oman") OR (MH "Saudi Arabia") OR (MH "Syria") OR (MH "United Arab Emirates") OR (MH "Yemen") OR (MH "Nepal") OR (MH "Sri Lanka") OR (MH "Taiwan") OR (MH "North Korea") OR (MH "Mongolia") OR (MH "Macao") OR (MH "Andorra") OR (MH "China+") OR (MH "Albania") OR (MH "Bosnia-Herzegovina") OR (MH "Bulgaria") OR (MH "Byelarus") OR (MH "Croatia") OR (MH "Macedonia (Republic)") OR (MH "Moldova") OR (MH "Russia") OR (MH "Serbia") OR (MH "Ukraine") OR (MH "Yugoslavia") OR (MH "Central America+") OR (MH "Latin America") OR (MH "South America") OR (MH "Bolivia") OR (MH "Brazil") OR (MH "Ecuador") OR (MH "Guyana") OR (MH "Paraguay") OR (MH "Peru") OR (MH "Suriname") OR (MH "Uruguay") OR (MH "Venezuela") OR (MH "West Indies+") OR (MH "Atlantic Islands+") OR (MH "Low and Middle Income Countries") OR (MH "Melanesia+") OR (MH "Micronesia+") OR (MH "Polynesia+")	296.208
S26	S22 AND S25	1.159
S25	S23 OR S24	436.365

S24	TI qualitative OR AB ((qualitative N2 (stud* or research or analysis))) OR TI ((interview* or "focus group*" or "mixed method*" or "multiple method*" or multimethod* or "multi-method*")) OR AB ((interview* or "focus group*" or "mixed method*" or "multiple method*" or multimethod* or "multi-method*")) OR TI (("grounded theory" or ethnograph* or ipa or phenomenolog* or "thematic analysis" or "narrative analysis")) OR AB (("grounded theory" or ethnograph* or ipa or phenomenolog* or "thematic analysis" or "narrative analysis"))	313.725
S23	(MH "Qualitative Studies+") OR (MH "Interviews+") OR (MH "Focus Groups")	312.069
S22	S1 OR S21	3.484
S21	S15 AND S20	2.496
S20	S16 OR S17 OR S18 OR S19	511.753
S19	TI community OR AB ((community N3 (service# or care or health*)))	131.511
S18	(MH "Community Health Services") OR (MH "Community Service")	24.278
S17	TI ((ambulatory N3 (care or setting# or facilit* or ward# or department# or service#))) OR AB ((ambulatory N3 (care or setting# or facilit* or ward# or department# or service#))) OR TI (((general or family) N2 (practi* or physician# or doctor#))) OR AB (((general or family) N2 (practi* or physician# or doctor#))) OR TI (("primary care" or "primary health care" or "primary healthcare")) OR AB (("primary care" or "primary health care" or "primary healthcare")) OR TI (clinic# or visit#) OR AB (clinic# or visit#) OR TI (((health* or medical) N2 (center# or centre#))) OR AB (((health* or medical) N2 (center# or centre#)))	353.798
S16	(MH "Family Practice") OR (MH "Physicians, Family") OR (MH "Primary Health Care") OR (MH "Office Visits")	109.462
S15	S2 OR S3 OR S14	6.149
S14	S6 AND S13	3.345
S13	S7 OR S8 OR S9 OR S10 OR S11 OR S12	231.079
S12	TI (("social determinant#" or "social need#" or "psychosocial need#")) OR AB (("social determinant#" or "social need#" or "psychosocial need#")) OR TI (((health or social or psychosocial or economic) N2 (equit* or inequit* or equal* or inequal* or depriv*))) OR AB (((health or social or psychosocial or economic) N2 (equit* or inequit* or equal* or inequal* or depriv*))) OR TI (((social* N2 (interact* or isolat*)) or loneliness or lonely)) OR AB (((social* N2 (interact* or isolat*)) or loneliness or lonely))	44.097
S11	(MH "Social Determinants of Health")	7.422

- S10 TI (((multidisciplin* or interdisciplin* or "multi* disciplin*" or "inter* disciplin*" or multisector* or intersector* or "multi* sector*" or "inter* sector*" or multiorgani#ation* or interorgani#ation* or "multi* organi#ation*" or "inter* organi#ation*") and (link* or liais* or collaborat* or partner* or engage* or leverag* or broker* or coordinat* or co-ordinat*))) OR AB (((multidisciplin* or interdisciplin* or "multi* disciplin*" or "inter* disciplin*" or multisector* or intersector* or "multi* sector*" or "inter* sector*" or multiorgani#ation* or interorgani#ation* or "multi* organi#ation*" or "inter* organi#ation*") and (link* or liais* or collaborat* or partner* or engage* or leverag* or broker* or coordinat* or co-ordinat*))) OR TI ((((voluntary or volunteer* or charit* or faith* or church* or community or third or nongovernment* or non-government* or nonprofit* or non-profit* or "not for profit") N2 (sector# or agenc* or organi#ation#)) and (link* or liais* or collaborat* or partner* or engage* or leverag* or broker* or coordinat* or co-ordinat*))) OR AB ((((voluntary or volunteer* or charit* or faith* or church* or community or third or nongovernment* or non-government* or nonprofit* or non-profit* or "not for profit") N2 (sector# or agenc* or organi#ation#)) and (link* or liais* or collaborat* or partner* or engage* or leverag* or broker* or coordinat* or co-ordinat*))) 21.592
- S9 (MH "Charities") OR (MH "Organizations, Nonprofit") OR (MH "Voluntary Health Agencies+") OR (MH "Sports Organizations") OR (MH "Support Groups") AND ((TI (link* or liais* or collaborat* or partner* or engage* or leverag* or broker* or coordinat* or co-ordinat*)) OR (AB(link* or liais* or collaborat* or partner* or engage* or leverag* or broker* or coordinat* or co-ordinat*))) 23.665
- S8 (MH "Community-Institutional Relations") OR (MH "Interinstitutional Relations") 14.028
- S7 TI (((navigat* or sign post* or signpost* or path* or guided or guiding or refer*) N5 (service# or system# or care# or healthcare or patient# or community* or support))) OR AB (((navigat* or sign post* or signpost* or path* or guided or guiding or refer*) N5 (service# or system# or care# or healthcare or patient# or community* or support))) OR TI (((navigat* or sign post* or signpost* or path* or guided or guiding or refer*) N5 (group# or club# or selfhelp* or self-help or education or learning or exercise# or "physical activity"))) OR AB (((navigat* or sign post* or signpost* or path* or guided or guiding or refer*) N5 (group# or club# or selfhelp* or self-help or education or learning or exercise# or "physical activity"))) OR TI (((navigat* or sign post* or signpost* or path* or guided or guiding or refer*) N5 ("social support" or "social network*" or "social activit*" or "social service*" or "social resource*" or "community support" or "community network*" or "community activit*" or "community service*" or "community resource*"))) OR AB (((navigat* or sign post* or signpost* or path* or guided or guiding or refer*) N5 ("social support" or "social network*" or "social activit*" or "social service*" or "social resource*" or "community support" or "community network*" or "community activit*" or "community service*" or "community resource*"))) OR TI ((navigat* or "sign post*" or signpost*)) OR AB ((active* N3 (signpost* or "sign post*"))) 130.975
- S6 S4 OR S5 27.960

- S5 TI (("receptionist#" or "reception staff" or "reception personnel")) OR AB (("receptionist#" or "reception staff" or "reception personnel")) OR TI ((health* N1 (assistant# or aide# or advisor# or adviser# or advocate# or co-ordinator# or coordinator# or connector# or officer# or facilitator# or liaison or broker# or coach* or promoter#)) OR AB ((health* N1 (assistant# or aide# or advisor# or adviser# or advocate# or co-ordinator# or coordinator# or connector# or officer# or facilitator# or liaison or broker# or coach* or promoter# or mobili#er#)) OR TI ((community N1 (assistant# or aide# or advisor# or adviser# or advocate# or co-ordinator# or coordinator# or connector# or officer# or facilitator# or liaison or broker# or coach* or promoter#)) OR AB ((community N1 (assistant# or aide# or advisor# or adviser# or advocate# or co-ordinator# or coordinator# or connector# or officer# or facilitator# or liaison or broker# or coach* or promoter# or mobili#er#)))) 9.596
- S4 (MH "Community Health Workers") OR (MH "Clerical Personnel") OR (MH "Volunteer Workers") 18.734
- S3 TI (((care or healthcare or community or outreach or patient#) N5 navigator#)) OR AB (((care or healthcare or community or outreach or patient#) N5 navigator#)) OR TI ((navigator# N5 (program* or intervention* or service* or system#)) OR AB ((navigator# N5 (program* or intervention* or service* or system#))) OR TI ((((care or healthcare or community or outreach or patient#) N2 navigat*) and (worker# or practitioner# or staff or personnel or team#)) OR AB ((((care or healthcare or community or outreach or patient#) N2 navigat*) and (worker# or practitioner# or staff or personnel or team#))) OR TI (((navigat* N2 (program* or intervention* or service* or system#)) and (worker# or practitioner# or staff or personnel or team#))) OR AB (((navigat* N2 (program* or intervention* or service* or system#)) and (worker# or practitioner# or staff or personnel or team#)))) 1.895
- S2 (MH "Patient Navigation") 1.541
- S1 TX social prescri* OR TX ((link# N2 (worker# or practitioner# or staff or personnel or officer# or team#))) 1.007

Set	Search - Sociology Collection - Applied Social Sciences Index & Abstracts, Sociological Abstracts and Sociology Database	Results
S25	<u>S18 OR S19 OR S20 OR S21 OR S22 OR S23 OR S24</u>	756
S24	S15 AND S17	314
S23	S14 AND S17	285
S22	S13 AND S17	31
S21	S12 AND S17	37
S20	S11 AND S17	46
S19	S10 AND S17	33
S18	S2 AND S17	194
S17	TI(qualitative) or AB, TI(qualitative NEAR/2 (stud* or research or analysis)) OR AB, TI(interview* or ("focus group" OR "focus groups") or ("mixed method" OR "mixed methods") or ("multiple methods") or multimethod* or multi-method*) OR AB, TI("grounded theory" or ethnograph* or ipa or phenomenolog* or "thematic analysis" or "narrative analysis")	401833
S15	S8 AND S9	948
S14	S7 AND S9	911
S13	S6 AND S9	101
S12	S5 AND S9	76
S11	S4 AND S9	107
S10	S3 AND S9	123
S9	AB, TI(ambulatory NEAR/3 (care or setting?? or facilit* or ward?? or department?? or service??)) OR AB, TI((general or family) NEAR/2 (practi* or physician?? or doctor??)) OR AB, TI("primary care" or "primary health care" or "primary healthcare") OR AB, TI("clinic" OR "clinics" OR "visit" OR "visits") OR AB, TI((health* or medical) NEAR/2 (center?? or centre??)) OR TI(community) OR AB, TI(community NEAR/3 (service?? or care or health*))	223949
S8	AB, TI(community NEAR/1 (assistant?? or aide?? or advisor?? or adviser?? or advocate?? or co-ordinator?? or coordinator?? or connector?? or officer?? or facilitator?? or liaison or broker?? or coach* or promoter?? or mobilizer??))	1559
S7	AB, TI(health* NEAR/1 (assistant?? or aide?? or advisor?? or adviser?? or advocate?? or co-ordinator?? or coordinator?? or connector?? or officer?? or facilitator?? or liaison or broker?? or coach* or promoter?? or mobilizer??))	3673
S6	AB, TI(receptionist?? or "reception staff" or "reception personnel")	186
S5	AB, TI(navigat* NEAR/2 (program* or intervention* or service* or system??)) and AB, TI(worker?? or practitioner?? or staff or personnel or team??)	232

S4	AB,TI((care or healthcare or community or outreach or patient??) NEAR/2 navigat*) AND AB,TI(worker?? or practitioner?? or staff or personnel or team??)	219
S3	AB,TI((care or healthcare or community or outreach or patient??) NEAR/5 navigator??) OR AB,TI(navigator?? NEAR/5 (program* or intervention* or service* or system??))	293
S2	AB,TI("social prescri*") OR AB,TI(link?? NEAR/2 (worker?? or practitioner?? or staff or personnel or officer?? or team??))	734

Social Science Citation Index (Web of Science Core Collection) [1900-present)

1	TS=("social prescri*" OR (link\$ NEAR/2 (worker\$ or practitioner\$ or staff or personnel or officer\$ or team\$)))	1056
2	TS=((care or healthcare or community or outreach or patient\$) NEAR/5 navigator\$) OR TS=(navigator\$ NEAR/5 (program* or intervention* or service* or system\$)) OR TS=(((care or healthcare or community or outreach or patient\$) NEAR/2 navigat*) and (worker\$ or practitioner\$ or staff or personnel or team\$)) OR TS=((navigat* NEAR/2 (program* or intervention* or service* or system\$)) and (worker\$ or practitioner\$ or staff or personnel or team\$))	1290
3	TS=(receptionist\$ or "reception staff" or "reception personnel") OR TS=(health* NEAR/1 (assistant\$ or aide\$ or advisor\$ or adviser\$ or advocate\$ or co-ordinator\$ or coordinator\$ or connector\$ or officer\$ or facilitator\$ or liaison or broker\$ or coach* or promoter\$ or mobili?er\$)) OR TS=(community NEAR/1 (assistant\$ or aide\$ or advisor\$ or adviser\$ or advocate\$ or co-ordinator\$ or coordinator\$ or connector\$ or officer\$ or facilitator\$ or liaison or broker\$ or coach* or promoter\$ or mobili?er\$))	6984
4	TS=((navigat* or "sign post*" or signpost* or path* or guided or guiding or refer*) NEAR/5 (service\$ or system\$ or care\$ or healthcare or patient\$ or community* or support)) OR TS=((navigat* or "sign post*" or signpost* or path* or guided or guiding or refer*) NEAR/5 (group\$ or club\$ or selfhelp* or self-help or education or learning or exercise\$ or "physical activity")) OR TS=((navigat* or "sign post*" or signpost* or path* or guided or guiding or refer*) NEAR/5 ("social support" or "social network\$" or "social activit*" or "social service\$" or "social resource\$" or "community support" or "community network\$" or "community activit*" or "community service\$" or "community resource\$")) OR TS=(active* NEAR/3 (signpost* or "sign post*")) OR TI=(navigat* or "sign post*" or signpost*)	96934

5	TS=((multidisciplin* or interdisciplin* or "multi* disciplin*" or "inter disciplin*" or multisector* or intersector* or "multi* sector*" or "inter sector*" or multiorgani?ation* or interorgani?ation* or "multi* organi?ation*" or inter organi?ation*) and (link* or liais* or collaborat* or partner* or engage* or leverag* or broker* or coordinat* or co-ordinat*)) OR TS=(((voluntary or volunteer* or charit* or faith* or church* or community or third or nongovernment* or non-government* or nonprofit* or non-profit* or "not for profit*") NEAR/2 (sector\$ or agenc* or organi?ation\$)) and (link* or liais* or collaborat* or partner* or engage* or leverag* or broker* or coordinat* or co-ordinat*))	36511
6	TS=("social determinant*" or "social need*" or "psychosocial need*") OR TS=((health or social or psychosocial or economic) NEAR/2 (equit* or inequit* or equal* or inequal* or depriv*)) OR TS=((social* NEAR/2 (interact* or isolat*)) or loneliness or lonely)	101793
7	#3 AND (#4 OR #5 OR #6)	1113
8	#2 OR #7	2360
9	TS=(ambulatory NEAR/3 (care or setting\$ or facilit* or ward\$ or department\$ or service\$)) OR TS=((general or family) NEAR/2 (practi* or physician\$ or doctor\$)) OR TS=("primary care" or "primary health care" or "primary healthcare") OR TS=(clinic\$ OR visit\$) OR TS=((health* or medical) NEAR/2 (center\$ or centre\$)) OR TI=community OR TS=(community NEAR/3 (service\$ or care or health*))	414733
10	#8 AND #9	1231
11	#1 OR #10	2281
12	TI=qualitative or TS=(qualitative NEAR/2 (stud* or research or analysis)) OR TS=(interview* or "focus group*" or "mixed method*" or "multiple method*" or multimethod* or multi-method*) OR TS=("grounded theory" or ethnograph* or ipa or phenomenolog* or "thematic analysis" or "narrative analysis")	515207
13	#11 AND #12	797

[HMIC Health Management Information Consortium <1979 to July 2021>](#)

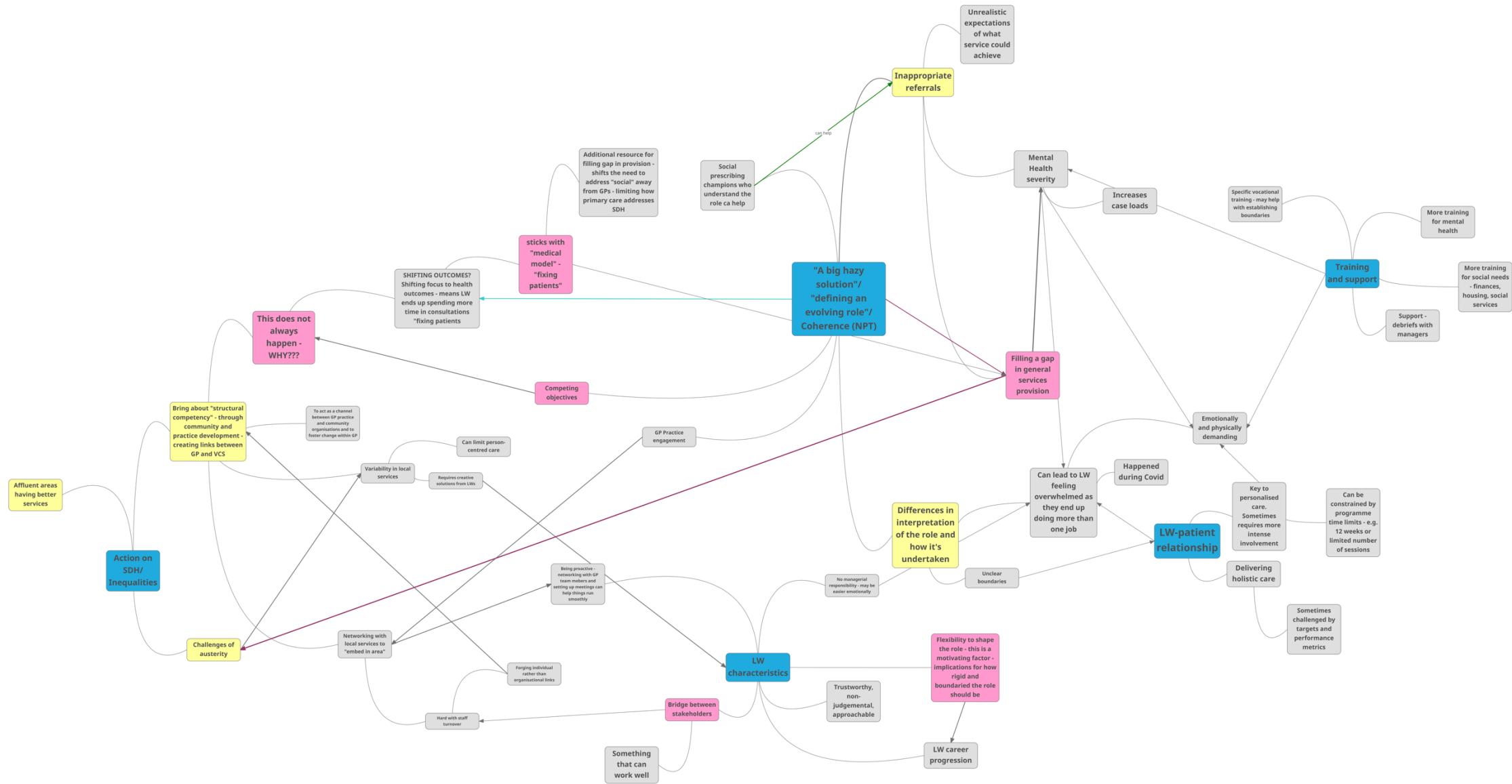
1	exercise referral systems/	3
2	linkworkers/	82
3	social prescri*.ti,ab.	85
4	(link? adj2 (worker? or practitioner? or staff or personnel or officer? or team?)).ti,ab.	124
5	((care or healthcare or community or outreach or patient?) adj5 navigator?).ti,ab.	25
6	(navigator? adj5 (program* or intervention* or service* or system?)).ti,ab.	14
7	((care or healthcare or community or outreach or patient?) adj2 navigat*) and (worker? or practitioner? or staff or personnel or team?)).ti,ab.	15
8	((navigat* adj2 (program* or intervention* or service* or system?)) and (worker? or practitioner? or staff or personnel or team?)).ti,ab.	16
9	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8	298
10	community workers/ or community health workers/	127
11	receptionists/	48
12	health service receptionists/ or general practice receptionists/	21
13	(receptionist? or reception staff or reception personnel).ti,ab.	261
14	(health* adj (assistant? or aide? or advisor? or adviser? or advocate? or co-ordinator? or coordinator? or connector? or officer? or facilitator? or liaison or broker? or coach* or promoter? or mobili?er?)).ti,ab.	715
15	(community adj (assistant? or aide? or advisor? or adviser? or advocate? or co-ordinator? or coordinator? or connector? or officer? or facilitator? or liaison or broker? or coach* or promoter? or mobili?er?)).ti,ab.	50
16	10 or 11 or 12 or 13 or 14 or 15	1156
17	exp primary care/ or community health services/ or family health services/ or primary care groups/ or primary care nurses/ or primary care teams/ or primary care trusts/ or primary health workers/	28992
18	general practitioners/ or family practitioners/ or general practice staff/	9668
19	(ambulatory adj3 (care or setting? or facilit* or ward? or department? or service?)).ti,ab.	529
20	((general or family) adj2 (practi* or physician? or doctor?)).ti,ab.	18366
21	(primary care or primary health care or primary healthcare).ti,ab.	19944
22	(clinic? or visit?).ti,ab.	10738
23	((health* or medical) adj2 (center? or centre?)).ti,ab.	3260
24	community.ti.	12774
25	(community adj3 (service? or care or health*)).ti,ab.	16528
26	17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25	72417
27	16 and 26	555

28	9 or 27	848
29	mixed methods research/ or qualitative research/	1324
30	qualitative analysis/	80
31	interviews/ or observation/ or interviewing/	1317
32	field work/ or focus groups/ or qualitative techniques/	742
33	qualitative.ti. or (qualitative adj2 (stud* or research or analysis)).ti,ab.	5650
34	(interview* or focus group* or mixed method* or multiple method* or multimethod* or multi-method*).ti,ab.	21069
35	(grounded theory or ethnograph* or ipa or phenomenolog* or thematic analysis or narrative analysis).ti,ab.	2766
36	29 or 30 or 31 or 32 or 33 or 34 or 35	24254
37	28 and 36	195

Open Grey

All fields search	Hits	References selected
social prescribing	3	0
social prescriber	0	0
social prescribers	0	0
link worker	5	0
link workers	1	0
links worker	2	0
Links workers	2	0
link working	31	0
patient navigator	0	0
patient navigators	1	0
patient navigation	2	0
care navigator	0	0
care navigators	0	0
care navigation	0	0

Appendix 1: Initial mind-mapping and conceptual development



Poorly defined Role

- heterogeneous ways of implementing
- confusion around what they do
↳ ends up filling in for gaps where work needs doing
- unrealistic expectations from others about what they can do
- can lead to inappropriate referrals - "stepping ground for difficult patients"

Link worker characteristics

- professional background - diverse but often from person-centred
- People do not become LWs for monetary gain - more trust (despite low salary, satisfaction high) = love working with people
- Need to be empathetic, good listeners
- creative problem solvers - eg. create services themselves
- proactive
- have local knowledge

Organisational support / buy-in

- Champions advocating for LW matter (links to unregulated profession - how does not have status?)
- sometimes consultant around ST that means no referrals or inappropriate ones
- organisations with clear structures & aims mean LW workload shared better
- LWs working in teams report more support
- those not employed try PC worker training?

TENSIONS

Drawing on multiple SP discourses

- Individual narratives about the role often ideological but conflicted
- holistic support vs. individual empowerment & behaviour change
- worries about "handholding" & creating dependency & really taking care of client individual circumstances

Supposed to be combining evidence based practice with self limited training

- No onward referral options
- Opinions better in more affluent areas → NOT good for the I
- dealing with overflow from unmet health services - which they are not skilled to do
- Seen as "an extra resource to deal with the surplus (only to some advantage if it is not defined)

An unestablished profession

- Not enough training for some of the responsibilities they end up taking on (although it are not properly defined - how can you expect training?)
- more training would help establish boundaries
- not trained to deal with complexity & difficult life situations of patients
- limited career progression & job security
- No professional status
↳ may mean they struggle to connect with mental colleagues in PC

Doomed to fail?

- If light touch, then cannot do anything for health inequalities
- If more holistic, then they will end up "helping" people because other services are not there or cannot cope

Classed experiences of Social prescribing

- Patients not able to engage due to difficult life situations + cannot engage in most areas in future health
- many LWs need to support with heating & food
- hard to "motivate" people in areas of disadvantage

Targets & funding

based on referrals & assessments that favour light-touch approaches

1) What are the experiences & perceptions of link workers carrying out social prescribing?

2) What factors influence the ways in which link workers create networks between primary care and voluntary and community organisations?

3) What factors influence the ways in which link workers interact with patients?

Burden of the role

- emotionally draining - ie. of burnout
- team support key for dealing with this
- unsustainable workloads - can impact quality of service delivery + limit ability of LWs to network

Relational Nature of Link Working


- Relationship with patients key, although these also demanding
- Building new relationships with organisations & staff key to success
- Forging individual rather than organisational links - threat to success - lack of staff continuity in VCS also problematic

Appendix 2: Critical appraisal using the CASP tool.

Reference	Section A: Are the results valid?						Section B: What are the results?		
	Clear aims	Is qualitative methodology appropriate?	Was the research design appropriate to address the aims of the research?	Was the recruitment strategy appropriate to the aims of the research?	Was the data collected in a way that addressed the research issue?	Has the relationship between researcher and participants been adequately considered?	Have ethical issues been taken into consideration?	Was the data analysis sufficiently rigorous?	Is there a clear statement of findings?
Beardmore 2019	yes	yes	yes	yes	yes	no	can't tell	can't tell	yes
Chng et al. 2021	yes	yes	yes	can't tell	yes	no	yes	yes	yes
Fixsen et al. 2020	yes	yes	yes	yes	yes	can't tell	yes	yes	yes
Fixsen et al. 2021	yes	yes	yes	yes	yes	can't tell	yes	yes	yes
Frostick and Bertotti 2019	yes	yes	yes	yes	yes	yes	yes	yes	yes
Girffith et al.	yes	yes	yes	yes	yes	no	yes	can't tell	yes
Griffiths et al. 2023	can't tell	yes	yes	yes	yes	can't tell	yes	can't tell	yes
Hazeldine et al. 2020	yes	yes	yes	yes	yes	yes	yes	can't tell	yes
Holding et al. 2020	yes	yes	yes	yes	yes	can't tell	yes	yes	yes
Khan et al.	yes	yes	can't tell	yes	yes	can't tell	yes	can't tell	yes
Mackenzie et al.	yes	yes	yes	yes	yes	can't tell	yes	yes	yes
Mackenzie et al. 2020	yes	yes	yes	yes	yes	can't tell	yes	yes	yes
Moore et al. 2023	yes	yes	yes	yes	yes	can't tell	yes	can't tell	yes
Morris et al. 2022	yes	yes	yes	yes	yes	can't tell	yes	yes	yes
Pollard et al. 2023	yes	yes	yes	yes	yes	can't tell	yes	yes	yes
Rhodes and Bell 2021	yes	yes	yes	yes	yes	yes	yes	yes	yes
Simpson et al. 2020	yes	yes	yes	yes	yes	can't tell	yes	yes	yes
Skivington et al. 2019	yes	yes	yes	yes	yes	yes	yes	yes	yes
White et al. 2022	yes	yes	yes	yes	yes	yes	yes	yes	yes
Wildman, Moffatt, Penn, et al., 2019	yes	yes	yes	yes	yes	can't tell	yes	yes	yes
Wildman, Moffatt, Steer, et al., 2019	yes	yes	yes	yes	yes	can't tell	yes	yes	yes

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NUFFIELD DEPARTMENT OF **PRIMARY CARE HEALTH SCIENCES** Medical Sciences Division 



Understanding Social Prescribing in Socially and Economically Disadvantaged Settings

We would like to speak to social prescribing link workers who work in areas with either high or low levels of socioeconomic disadvantage

What will the study involve?

A single one hour interview via MS Teams about your experiences of working as a link worker:

- How you work with patients
- How you work with staff and local organisations
- Your general thoughts and experiences of social prescribing

If you'd like to take part fill in this form (<http://tiny.cc/ulzzuz>)

You can also email Amadea Turk for more information (amadea.turk@phc.ox.ac.uk)

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Poster version 1.0

Appendix 4: Interview schedule for social network interviews with link workers.

About being a link worker

Question prompts:

1. Can you tell me a bit about how you came to be a link worker? (background, who you work for)
2. Tell me a little bit about your role and what your working day looks like
 - Prompt: Motivations; day-to-day work; employer
3. What kinds of patients/clients do you see – what are the needs they have and the challenges they face?
4. What do you do to help support patients/clients with their needs?

Working with local organisations

1. Can you tell me a little bit about what the area you work in is like?
2. Can you tell me a little bit about the local service provision in your area? E.g. the organisations you refer people to?

Prompts: do they meet patient needs, are there any gaps?

1. How do you identify services to refer patients/clients to?
2. How much time in your week do you have for identifying organisations to refer patients/clients to?
3. How far do you feel this work is appreciated?

Network Questions for Interview Study with Link Workers

People

- 9) Tell me who the people are that you knew before this role, but that you are still in contact with about work?
- 10) Can you tell me the names of the **important** people that you have formed working relationships with since starting your role as a link worker?
- 11) Tell me who you still need to form working relationships with to help you perform your role better?
- 12) Which people have you made referrals or signposted to in the last 6 weeks?
- 13) Which people have made referrals to you in the last 6 weeks?
- 14) Who do you go to for advice and support?

Think about:

- What sector these people are based in
- How long have you worked together
- How often you communicate with them (e.g.daily, weekly, monthly)

Organisations

- 15) Can you tell me the names of the organisations that you have worked with in the last 2 months?
- 16) To what organisations have you referred or signposted people to in the last 6 weeks?
- 17) What organisations do you think you could refer someone but have not yet?
- 18) Which organisations have made referrals to you in the last 6 weeks?

Think about:

- 19) What sector these organisations are based in?
- 20) How frequently you make referrals to each of these organisations (e.g. daily, weekly, monthly)

Other:

Who do you work with to create new services locally?

Alter-alter questions

- 21) Which of these work together?
- 22) Which of these go to each other for advice and support?
- 23) Which of these work together to help create service provision?
- 24) Which of these make referrals to each other?
- 25)

General questions about sociograms

- How do you feel the people and organisations here help you to do your job?
- How do you find working with these people and organisations?
- What do you think are the biggest challenges to working together?
- What would you change about the ways in which these people and organisations work together?

Interview schedule for link worker interview

Understanding social prescribing in socially and economically disadvantaged settings

Topic guide for interviews with link workers

The interview will take the form of a conversation. Interviewees can raise issues of importance to them. Hence, the topic guide may change as data collection progresses.

- Thank the participant for agreeing to be interviewed
- Brief outline of the purpose of the research
- Reassurance about anonymity and confidentiality
- Ask about any concerns before starting
- Make it clear it is ok to stop at any point or to refuse to answer any questions (without giving a reason)
- Check it is OK to start recording the conversation

Questions for semi-structured interview

- 1) If relevant – What has changed since we last spoke? (if speaking with a previous study participant)
- 2) Tell me a little bit about your role and what your working day looks like
Prompt: Motivations; day-to-day work; employer
- 3) How far do you feel part of the practices you work in?
Prompt: Can you give me some examples?
- 4) What kinds of patients/clients do you see – what are the needs they have and the challenges they face?
- 5) What do you do to help support patients/clients with their needs?
- 6) Can you tell me a little bit about the local service provision in your area?
Prompts: do they meet patient needs, are there any gaps?
- 7) How do you identify services to refer patients/clients to?
- 8) How much time in your week do you have for identifying organisations to refer patients/clients to?
- 9) How do your colleagues perceive the work you do?
- 10) What is it like working with these organisations? Can you give me some examples?
Prompts: Primary care and the VCS; processes for establishing and maintaining contact
- 11) What is it like connecting patients to these services?

Prompt: what are the challenges? What things make it easier?

- 12) What would make your job easier?
- 13) What training do you feel is needed in order to be a link worker?

Network Specific Questions to be done with network mapping software Network Canvas

Name generator questions

- 1) Tell me who the people are that you knew before this role, but that you are still in contact with about work?
- 2) Can you tell me about the new working relationships you have made since starting your role as a link worker?
- 3) Can you name any people that do the same job as you?
- 4) Tell me who you still need to form working relationships with to help you perform your role better?
- 5) Which people have you made referrals or signposted to in the last 6 weeks?
- 6) Which people have made referrals to you in the last 6 weeks?
- 7) Who do you go to for advice and support?
- 8) Which people do you work with to create new services locally?
 - a. What sector are they based in?
- 9) How do you know these people?
- 10) How often are you in contact with these people?
- 11) Can you tell me the names of the organisations you have worked with in the last 2 months?
- 12) To what organisations have you referred or signposted people to in the last 6 weeks?
- 13) Which organisations do you think you could refer someone to but have not yet?
- 14) Which organisations have made referrals to you in the last 6 weeks?
- 15) Which organisations do you work with to create new services locally?
- 16) What sector are these organisations based in?
- 17) How often to refer or signpost people to these organisations?

Relationship in network questions/activities

- 1) Which of these people work together? Tap on them to connect them.
- 2) Connect those that go to each other for advice and support.
- 3) Connect those that work together to help create service provision.
- 4) Connect those that make referrals to each other.
- 5) Please add organisations. Place them near people who are associated with the organisation (if present).
- 6) Please link any organisation to a person that works for that organisation by tapping on the person, then the organisation.
- 7) Please link any people to organisations they make referrals to.
- 8) Can you please tap on any people or organisations you feel you can rely on to get back to you if you need anything.

Closing Questions

- 1) What are your reflections on the network map we have just created?
- 2) How well do you feel the people and organisations in your network are working together?
What would you change, if you could?
- 3) What effect do you think these networks and relationships have on patients' experiences of social prescribing?
- 4) What role do you think social prescribing plays in helping to tackle health inequalities?
- 5) Is there anything you feel we haven't covered that you feel might be important for me to know?

Interview schedule for link worker follow-up interview

Understanding social prescribing in socially and economically disadvantaged settings

Topic guide for follow-up interviews with link workers

The interview will take the form of a conversation. Interviewees can raise issues of importance to them. Hence, the topic guide may change as data collection progresses.

- Thank the participant for agreeing to be interviewed
 - Brief outline of the purpose of the research
 - Reassurance about anonymity and confidentiality
 - Ask about any concerns before starting
 - Make it clear it is ok to stop at any point or to refuse to answer any questions (without giving a reason)
 - Check it is OK to start recording the conversation
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1. How has the social prescribing service been going in your practice/area since we last spoke?
 - a. PROMPT: What changes have there been? Can you give me some examples? How have you found these changes to be? What has been their impact? What circumstances led to these changes?
 - b. What changes (if any) have there been in the needs of the patients that you see?
2. How have the working dynamics that we discussed last time changed since we last spoke?

Network Specific Questions to be done with network mapping software Network Canvas

Name generator questions

- 18) Can you tell me about any new working relationships you have made since we last spoke?
- 19) Are there any new people that do the same job as you?
- 20) Tell me who you still need to form working relationships with to help you perform your role?
- 21) Which people have you made referrals or signposted to in the last 6 weeks?
- 22) Which people have made referrals to you in the last 6 weeks?
- 23) Who do you go to for advice and support?
- 24) Which people do you work with to create new services locally?
 - a. What sector are they based in?
- 25) How do you know these people?
- 26) How often are you in contact with these people?
- 27) Can you tell me the names of the organisations you have worked with in the last 2 months?
- 28) To what organisations have you referred or signposted people to in the last 6 weeks?
- 29) Which organisations do you think you could refer someone to but have not yet?
- 30) Which organisations have made referrals to you in the last 6 weeks?
- 31) Which organisations do you work with to create new services locally?
- 32) What sector are these organisations based in?
- 33) How often to refer or signpost people to these organisations?

Relationship in network questions/activities

- 9) Which of these people work together? Tap on them to connect them.
- 10) Connect those that go to each other for advice and support.
- 11) Connect those that work together to help create service provision.
- 12) Connect those that make referrals to each other.
- 13) Please add organisations. Place them near people who are associated with the organisation (if present).
- 14) Please link any organisation to a person that works for that organisation by tapping on the person, then the organisation.
- 15) Please link any people to organisations they make referrals to.
- 16) Can you please tap on any people or organisations you feel you can rely on to get back to you if you need anything.

Closing Questions

- 6) What are your reflections on how the network map of your contacts has changed since we last spoke?

- 7) How well do you feel the people and organisations in your network are working together currently? Have things changed since we last spoke?
- 8) How well have patients been able to access the support provided through your network?
- 9) Is there anything you feel we haven't covered that you feel might be important for me to know?

Interview schedule for patient interview

Understanding social prescribing in socially and economically disadvantaged settings

Topic guide for interviews with patients

The interview will take the form of a conversation. Interviewees can raise issues of importance to them. Hence, the topic guide may change as data collection progresses.

- Thank the participant for agreeing to be interviewed
- Brief outline of the purpose of the research
- Reassurance about anonymity and confidentiality
- Ask about any concerns before starting
- Make it clear it is ok to stop at any point or to refuse to answer any questions (without giving a reason)
- Check it is OK to start recording the conversation.

General Questions

- 1) Can you tell me a little bit about yourself/your life circumstances, and how you came to work with a link worker/social prescriber?
 - a. Prompt: how would you describe your health and wellbeing at the moment?
- 2) Can you tell me a little bit about the area you live in?

Prompts: how long have you lived here? What do you like about it? What would you like to be different? What is the neighbourhood like?
- 3) What has seeing a link worker/social prescribing been like?
 - a. **Prompts:** How do you feel about working with them? What was their approach like? What have you worked on together? What sort of support have they offered you? How have you found their suggestions?
- 4) Have they connected you to groups/organisations in your community?
 - a. If so, what has attending these been like? Can you give me an example and tell me what you have done?
 - b. Can you tell me a bit more about how you've been supported to attend groups?
 - c. How do the groups/activities fit in into your life?
- 5) What do you think could improve your experiences of social prescribing so far?
- 6) How would you describe to other people what a link worker/social prescriber does?
- 7) Is there anything we haven't talked about which you think would be important for me to know about how social prescribing can support people?

Interview Schedule for patient follow-up interview

Understanding social prescribing in socially and economically disadvantaged settings

Topic guide for follow-up interviews with service-users

The interview will take the form of a conversation. Interviewees can raise issues of importance to them. Hence, the topic guide may change as data collection progresses.

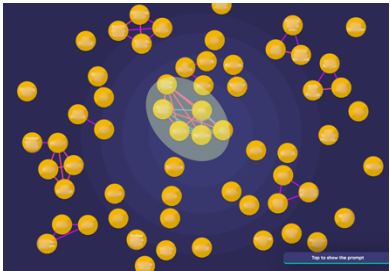
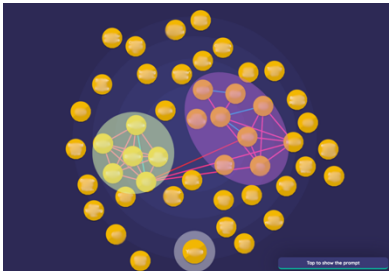
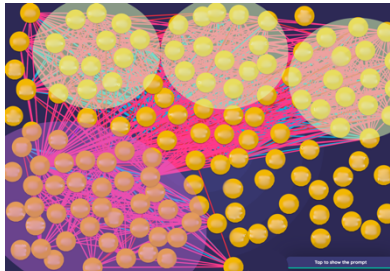
- Thank the participant for agreeing to be interviewed
- Brief outline of the purpose of the research
- Reassurance about anonymity and confidentiality
- Ask about any concerns before starting
- Make it clear it is ok to stop at any point or to refuse to answer any questions (without giving a reason)
- Check it is OK to start recording the conversation.

General Questions:

- 1) How have things been since we last spoke? What changes have there been in your life?
 - Prompts: in terms of your health and wellbeing; life circumstances
 - 7) Are you still seeing them? If not, what was stopping seeing the link worker like?
- 2) What would you say the impact of social prescribing has been on your life?
 - Prompts: think about social connections; how you feel about yourself or your circumstances; confidence
- 3) Have you used the services/activities that the link worker suggested?
 - Have you continued to use them? If not, why? How have they or not fitted into your life more broadly? Can you give me examples?
- 4) Has seeing a social prescriber had an impact on others in your life?

Appendix 6: The joint-display of the cross-case analysis and integration of qualitative and network components of the dataset.

Link Worker Approach	Personal and Relational (less professional)	Boundaried and Professional (more professional)	Middle Ground
<p>Key qualitative findings</p>	<p>Involved relational care: Intensive support provided by the link worker, often getting involved on a highly personal level with patients.</p> <p>Creative problem solving: Ability to improvise and think creatively to address gaps in the system. Examples include repurposing spaces, repurposing resources (such as students who need to gain work experience) to provide additional activities.</p> <p>System Navigation: Supports patients to navigate red tape in systems—such as appointment bookings, benefit applications. Draws on network contacts ‘gold dust contacts’ to bypass barriers.</p> <p>Sustainability of the practice: <i>Lack of structural integration</i>—link worker finds it challenging to support patients whose problems stem from wider systemic issues such as patients with housing or financial difficulties. <i>Vulnerability to changing policies:</i> This link worker relied highly personal and involved approaches to care (such as giving patients a lift in their car). When the rules changed and meant they could no longer do this, the service they provided suffered. <i>Emotionally intensive and taxing</i>—intensive involved support can be draining for the link worker</p>	<p>Boundaried and professional empathy and care: The link worker provided a consistent and reliable approach. Support to patients was often provided through a weekly structured weight management group the link worker ran. This link worker appeared to have firmer boundaries around getting involved in patients’ lives. They would sometimes go ‘beyond the call of duty’ however these instances were carefully chosen and justified.</p> <p>The link worker practice is bounded by organisational policies and wider systemic context: Contracts between employing organisations and limits to hours work had an impact on link worker practice. There were differences in the affluence of the two practices the link worker served. Space limitations meant the link worker was not often physically present in the more deprived practice. Changing contracts meant that the link worker needed to stop working at the more deprived practice at the third interview timepoint. Focus on monitoring and evaluation on multiple IT systems was burdensome for the link worker.</p> <p>Navigating existing systems: Large focus of the role is on holding knowledge of local systems and services and signposting patients accordingly, less of a focus on bypassing</p>	<p>Intentionality and alignment with broader system efforts: The link worker operates in a local context where there is systemic commitment to joint action on social determinants of health. The link worker is ideologically aligned with grassroots approaches, committed to supporting systemic change.</p> <p>Some creative problem solving—commitment to relational and community care: Some creative problem solving and involved relational care when needed. These help support patients experiencing difficult life circumstances. Involves undertaking tasks such as support completing job or benefit applications, and giving patients lifts to appointments. However, because the broader system is supportive of such approaches, they are legitimised and contribute to systemic efforts rather than being a stop-gap. The link worker is committed to community development, seeing it as a more sustainable way to support patients. They are able to leverage the wider system’s commitment to joint working to apply for funding to support projects.</p> <p>Sustainability of practice: The link worker dropped their hours of working at the final research visit. This coupled with the discontinuation of funding for a community garden project had an impact on patient</p>

		<p>systems as exemplified in the tactical approach.</p> <p>Sustainability of the practice: <i>Vulnerability to changing policies—may have impact on health equity:</i> changes to contracts designed to maximise efficiency meant that the link worker could not continue working at the disadvantaged practice. This had implications for trust building which was necessary for working with patients experiencing high levels of disadvantage.</p>	<p>experiences. However, the link worker felt that patients had better support available overall in the community due to systemic efforts.</p>
Network Visualisation	 <p>Distinct clusters with limited connectivity and a high proportion of isolates.</p>	 <p>Clusters represent the VCS and PCN link worker works with/for. There is limited interconnectivity between the clusters and a high number of isolates in the network.</p>	 <p>A large dense network with high levels of connectivity between different organisations, representing joined-up intersectoral working.</p>
Network Metrics	<p>Network Size (Interview 1/2/3): – 68/76/69 Isolates (Interview 1/2/3): 6/22/23 Average Degree (Interview 1/2/3): 4.0/3.69/3.6</p>	<p>Network Size (Interview 1/2/3): – 57/68/65 Isolates (Interview 1/2/3): 17/28/34 Average Degree (Interview 1/2/3): 9.6/9.8/4.4</p>	<p>Network Size (Interview 1/2/3): – 66/146/139 Isolates (Interview 1/2/3): 8/63/39 Average Degree (Interview 1/2/3): 32/23.9/40.8</p>
Network Interpretations	<p>Largely stable network size across the three interview timepoints, however the number of isolates in the network increases at each interview.</p>	<p>Largely stable network size across the three interview timepoints, and the number of isolates in the network increases at each interview.</p>	<p>The network is large and characterised by many connections between different actors.</p> <p>There are also dense connections between different organisations and sectors,</p>

	<p>Contacts are made in response to specific problems rather than longer-term collaborations.</p> <p>A strong reliance on personal contacts (specific to the individual link worker rather than the social prescribing service) to help navigate systems—this is also reflected in the network structure many isolates.</p> <p>Networks with high numbers of isolates may not be that sustainable as they require a lot of work to maintain and may be vulnerable to changes if the link worker left.</p> <p>Pockets of connectivity represent traditional referral pathways such as those between primary and secondary care. Relying on traditional ways of working like this may not lead to the systemic change and intersectoral action required for action on the social determinants of health.</p> <p>Other pockets of connectivity reflect some of the short-term collaborations for creating short-term services.</p>	<p>Clusters of connectivity in the network represent the organisations the link worker works with—the GP practice and the VCS organisation.</p> <p>There is limited connectivity between the two organisations.</p> <p>The connectivity in the network decreases at the final interview timepoint</p>	<p>highlighting the wider local systemic commitment to joint working.</p> <p>The network evolved across the three timepoints demonstrating the intentionality of their practice in bridging systems, increasing their own knowledge and alignment with the broader strategic vision of interorganisational integration.</p> <p>Despite the small decrease in network size at interview 3 (reflecting the end of a community project and a reduction in the link worker’s hours), the density of network connections increases, suggesting that the network overall may be resilient to disruptions.</p>
<p>Overall Integration</p>	<p>The high number of isolates in the network represents the link worker’s opportunistic creative problem solving. Some of these are what they term ‘gold dust’ contacts as discussed in the qualitative interviews.</p> <p>The high number of isolates in the network which rely on the presence of the link worker to be joined together point to a network that is fragile. If the link worker leaves, the links</p>	<p>A defining feature of this practice was being holders of knowledge, signposting patients to resources in the community through existing pathways and structures. This practice is mirrored in their network structure, where the link worker connects or brokers the peripheral isolates to the core clusters rather than fostering broader network connectivity.</p>	<p>The large dense networks and its growth over time reflects the intentional systemic commitment to intersectoral working on the social determinants of health and community development. It also reflects the link worker’s commitment to strengthening these efforts and building communities.</p>

	<p>between the individuals in the network will also disappear. This is pertinent in the context of tactical approaches which are emotionally intensive and risk link worker burnout.</p>	<p>The clusters in the network represent the two organisations the link worker works with/for directly. This reflects the organisationally (strategically) bounded approach.</p> <p>The increase in network fragmentation (increase in number of isolates) at the final interview timepoint reflects the changes and service disruptions to the link worker's working pattern due to contracts changing.</p> <p>This network structure highlights the vulnerability of approaches that are overly aligned with organisational strategies.</p>	<p>These dense networks and this middle ground approach and systemic commitment that builds may be more likely to be sustainable in the longer-term and deliver systemic change.</p>
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