STUDY PROTOCOL

REVISED Connected Communities | Learning lessons from person-centred community-based support services' implementation: a mixed-methods study protocol.

[version 2; peer review: 1 approved, 2 approved with reservations]

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Abstract

Background

Person-centred community-based support services (PCCBSS) are an array of non-clinical services provided by organisations such as NHS Trusts, voluntary sector organisations, or local authorities.

All PCCBSS involve an individual (variously known as a 'social prescriber', 'link worker', 'signposter', 'navigator', 'connector' or 'neighbourhood coach') who talks with a service user before directing them to a range of relevant community sources of social, emotional, and practical support.

Despite much recent investment in social prescribing, and its increased prominence within the policy context across England, little is understood about how PCCBSS are implemented. Research is required across different contexts to describe PCCBSS implementation; in particular, how social care providers successfully interact to support the implementation of PCCBSS, and how services responded to circumstances imposed by the COVID-19 pandemic.

Purpose

The aim of this post-implementation mixed-methods study is to

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explore how PCCBSS are implemented and become part of usual working practice. Using three services in North West England as case studies, we will examine factors influencing PCCBSS implementation and establish where there is learning for the wider adult social care system.

Focus

The study comprises two work packages (WPs):

WP1: collecting data by reviewing service documents from three PCCBSS case studies;

WP2: interviewing staff and service users (≤20 participants per PCCBSS);

Key implementation data will be systematically abstracted (from WPs1&2) into a coding frame; combining contextual determinants from the Consolidated Framework for Implementation Research (CFIR) with process-related domains from Normalization Process Theory (NPT).

Key outputs

The findings from WP1 and WP2 will be presented in the form of an illustrated 'pen portrait', developed collaboratively with Applied Research Collaboration North West Coast ARC NWC public advisers, to illustrate how implementation evolved for each of the PCCBSS across key time-points in the process (initiation; operation; maintenance). The findings will also inform an online implementation toolkit providing recommendations for setting up future PCCBSS.

Plain Language Summary

Person-centred community-based support services (PCCBSS) are services that direct people to a range of activities that might help them improve their health and wellbeing. There is a lack of understanding about how these support services are put into practice, how services work with each other, and how these services responded to the COVID-19 pandemic.

The aim of this study, named 'Connected Communities', is to find out how existing PCCBSS have been set up, and to provide recommendations for those hoping to do something similar.

There are two parts to the study: work package 1 (WP1) and work package 2 (WP2). WP1 will review existing documents from three PCCBSS, including published and unpublished reports, and extract any relevant information about how the services were set up. WP2 will interview service providers (staff in the PCCBSS who help support individuals) and linked providers (professionals who work in, or with,

the PCCBSS either to refer individuals, or run local community services). These interviews aim to explore how each service compares to others, the experience of working for, or with, the service, and factors that make the service easier or harder to deliver. People who use the service (service users) will also be interviewed to find out what support they received, how well they felt their needs were supported, and their understanding of the service. The information about how the services were set up and delivered will be put into a framework, or selection of implementation factors, looking at the setting, the people involved, the design of the PCCBSS and the process of setting the services up. The findings from this 'Connected Communities' study will inform a list of recommendations, a sort of toolkit, for people wanting to set up similar services in the future.

Keywords
Social prescribing, community-based, implementation, CFIR, NPT, social care, person-centred, social support

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REVISED **Amendments from Version 1**

This article has been revised following peer review.

The title has been reworded to include the term study protocol, stating this from the outset.

The definition of a person-centred community-based support services (PCCBSS) has been refined, with greater information added about the types of services eligible for this study. Additionally, the differentiation between PCCBSS and social prescribing has been expanded to contextualise this piece of work within the wider literature and provide greater clarity.

The introduction was revised, and substantially more references have been added to better reflect the current body of literature pertaining to social prescribing.

More information has been provided regarding why the three case studies included in this study were selected.

The Patient and Public Information section has been restructured to provide clarity on the use of PPI to review and refine the public facing documents, engage in initial coding and analysis, and design and agree plans for dissemination. The structure of the methods has been refined to account for this and to improve the readability of the manuscript.

Greater information has been provided with regards to the Consolidated Framework for Implementation Research (CFIR) and the Normalization Process Theory (NPT) to explain that they are theoretical implementation tools used in this study within a single framework to guide data collection and analysis of the implementation of the three PCCBSS case studies.

More detail has been added to explain where to find the interview topic guide. Wording to this effect has also been added to the body of the text to improve clarity.

Any further responses from the reviewers can be found at the end of the article

Introduction

Person-centred, community-based support services (PCCBSS) are defined as a range of non-clinical services that are provided by statutory and third sector organisations (Featherstone *et al.*, 2022; HM Government Digital Service; NHS England and NHS Improvement, 2020). Community-based support includes an array of personalised activities to support individuals in improving their health and wellbeing. Individuals accessing such support (through professional, or self-, referral) may have a wide range of social, emotional, physical, or practical needs. These services generally involve a 'signposter' who supports individuals to identify their own needs before directing them to relevant local sources of support in their community.

There are many forms of PCCBSS operating across communities, with ever-changing terminology and foci (*e.g.* UK Research and Innovation has recently adopted 'self-driven healthcare' as an umbrella term). PCCBSS present in different models and taxonomies, although the most frequently used term is 'social prescribing', which is now (published after completion of our data collection) internationally accepted to be conceptually defined as "*a means for trusted individuals in clinical and community settings to identify that a person has non-medical, health-related social needs and 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*" (Muhl *et al.*, 2023). Social prescribing is generally a concept considered to be situated within health services and local authorities (with some cross-over with voluntary services), though it is unclear how social care providers successfully interact with health services, local authorities, and voluntary services. For the purposes of the 'Connected Communities' study, we are interested in any services (not exclusively social prescribing) where an individual is (self-)referred to a PCCBSS that uses a signposter to consult with a service user to identify their needs or support individuals to access other services (regardless of setting, referral route, operating organisation or funding model).

The evidence for the effectiveness of social prescribing indicates an absence of high-quality research (Bickerdike *et al.*, 2017; Khan & Tierney, 2024; Napierala *et al.*, 2022; Pescheny *et al.*, 2020; Polley *et al.*, 2022), although studies have reported almost wholly positive impacts from social prescribing (while being limited by a dearth of long-term controlled study availability), with a modest reduction in the use of healthcare resources, and benefits to patients through improvement to their mental and physical health (Dayson *et al.*, 2022; Napierala *et al.*, 2022; National Academy for Social Prescribing, 2022; Polley *et al.*, 2022). Social prescribing is gaining traction though, with NHS England investing to create an effective infrastructure for social prescribing in primary care as part of the more personalised care approach of the NHS Long Term Plan (NHS, 2019). As a result, the aim was that over 1000 trained social prescribing link workers would be in place by the end of 2020/21, enabling at least 900,000 people to be referred to social prescribing by 2023/24 (NHS, 2019). Despite much recent investment in PCCBSS, further evidence is particularly necessary to describe how these services are implemented (Dayson *et al.*, 2022). Moreover, this implementation took place before, during, and after the COVID-19 pandemic, which must be considered. During this period, link workers reported a decline in referrals to libraries and museums, given the temporary closures of venues or social distancing procedures (Tierney *et al.*, 2022), and the cessation of various community activities due to lockdown restrictions (Fixsen *et al.*, 2022). Additionally, some services moved online, creating issues with technological resources or digital literacy for older populations (Tierney *et al.*, 2022), though increased communication and engagement with others (Fixsen *et al.*, 2022).

Consequently, research is required across different PCCBSS delivery contexts to describe PCCBSS implementation, to examine how contextually-bound they are, and how these services were (un)able to respond to circumstances imposed by the COVID-19 pandemic.

Main research question/Aims and objectives

The aim of this post-implementation mixed-methods study is to explore the process of embedding a new person-centred community-based support service into usual working practices, and to identify the contextual factors affecting PCCBSS implementation. With regards to 'Connected Communities', we are specifically interested in any PCCBSS (across a

differentiating range of service intensities, which may (not) include additional support beyond signposting (e.g. models indicated by Husk *et al.*, 2020)) where a signposter consults with a service user, who is (self-)referred, to identify their needs or support to access other local services (regardless of setting, referral route, operating organisation or funding model).

Research sub questions

a) What organisational contextual factors affect services' implementation (internal impacts)?

b) How did PCCBSS adapt to delivery and workflow changes imposed by the COVID-19 pandemic (temporal impact)?

Methods

Study design

This post-implementation mixed-methods study comprises two work packages (WPs): WP1 involves collecting data by reviewing existing service documents from three PCCBSS case studies (identified by convenience snowball sampling of networked member organisations to NIHR ARC NWC, and representative of a local intersecting network of PCCBSS regionally), and WP2 entails interviewing staff and service users (≤20 participants per PCCBSS).

This study combines two widely-used implementation theoretical tools in a single framework for data collection and analysis to identify and explain key aspects of implementing new interventions, as also undertaken in earlier implementation work (Burn *et al.*, 2020; Schroeder *et al.*, 2022).

Key implementation data will be systematically abstracted (from WPs1&2) into a coding frame, combining contextual determinants from the Consolidated Framework for Implementation Research (CFIR) (Damschroder *et al.*, 2009) with process-related domains from Normalization Process Theory (NPT) (May & Finch, 2009). These final findings will form an online implementation toolkit to guide the development of future PCCBSS.

WP1: Documentary review of the implementation of PCCBSS services

Data collection. Three case study PCCBSS, from two operating organisations, were identified through their existing relationship with the Applied Research Collaboration North West Coast (ARC NWC). To be eligible, a PCCBSS must have an identifiable operating organisation, and use signposters (variously termed 'link workers', 'social prescribers', 'community navigators', *etc.*) to support professionally referred and/or self-referred service users to access appropriate individually indicated networks, groups, and resources.

The implementation of the three case study PCCBSS will be described using existing documents provided by the services themselves, or identified by the study team, through discussion regarding PCCBSS document outputs and publications. These may include published and unpublished reports, outcome data (*e.g.* numbers of people referred or diverted from accessing services and pre- and post-intervention wellbeing assessments), health inequalities information, GP referral guides, peer-reviewed literature, and logic models. This documentary review will involve indexing relevant evidence to the PCCBSS' implementation and ongoing operation and abstracting key implementation data over a period of 14 months (July 2022–September 2023).

Data analysis. The study team will abstract implementation data from the documents provided through the systematic use of a bespoke, operationalised, and iteratively developed coding framework. This framework (described in detail in the 'Combined CFIR and NPT implementation framework' section) is based on a modification to the Consolidated Framework for Implementation Research (CFIR) (Damschroder *et al.*, 2009) which incorporates process-related domains from Normalization Process Theory (May & Finch, 2009). This combined coding framework allows abstraction of implementation data from the case study PCCBSS regarding the intervention characteristics (adaptability, complexity), outer setting (knowledge of service user need and resources), inner setting (infrastructure and culture), characteristics of individuals (individual identification with operating organisation), and process (indicating actions taken to initiate, embed, operate, sustain, and evaluate the PCCBSS, as a result of its implementation).

Appraisal of PCCBSS implementation components. When identifying reporting factors which impede or support implementation of PCCBSS, it is also desirable to quantify the strength of evidence accorded to each implementation component to elicit the impact of different aspects of implementation.

The CFIR has an existing rating tool (offering an ordinal scale of seven categories) to capture the availability, valence, and strength of influences upon implementation (CFIR Research Team, 2014), which we will apply across our own bespoke combined CFIR and NPT 'Connected Communities' coding frame. Availability is captured by use of rating component 'M' to indicate missing evidence. Valence is expressed through four rating components to indicate positive or negative influences on implementation: X, 0, +, or -. Strength is indicated by two rating components to demonstrate either weak or strong influences on implementation. A score of 1 means there is some evidence, either positive or negative, that lacks specific detail. Whereas a score of 2 means there is strong evidence indicating a positive or negative affect accompanied with specific detail.

We will systematically apply the defined CFIR ratings to content in individual documents, and across our collated documents for review in the following way (Table 1, mirroring CFIR rating application from Stanford University School of Medicine guidance, Assefa & McGovern, 2019):

As these are subjective judgements, where the strength of supporting evidence is disputed amongst duplicate coders

Table 1. CFIR rating application of PCCBSS implementation components.

M	Missing evidence for construct appraisal
2-	Strong evidence impeding implementation (strong barrier)
1-	Some evidence impeding implementation (barrier)
0	No evidence supporting/impeding implementation
X	Mixed sentiment/evidence
1+	Some evidence supporting implementation (facilitator)
2+	Strong evidence supporting implementation (strong facilitator)

(10% of documents reviewed) in the research team, these discrepancies in judgement will be determined through a third coder to adjudicate.

This process will identify any implementation domain content gaps from the documentary review which consequently need further investigation during the WP2 interviews.

WP2: Interviews with PCCBSS service providers and service users

Data collection. WP2 firstly aims to test the conclusions drawn in WP1 and obtain more information regarding the implementation of the PCCBSS that may be missing from the documentary review. Secondly, WP2 aims to explore how the pandemic affected the services, any resultant changes to the existing service, and recommendations to influence how future PCCBSS may be implemented.

Interviews will be carried out with 'service/linked providers' (n=10 per PCCBSS) and service users (n=10 per PCCBSS). Based upon the three identified PCCBSS, a sample size of 60 participants is anticipated. These numbers for recruitment are considered appropriate to provide adequate data to answer our research question(s); however, if these interviews do not sufficiently populate gaps in the framework further interviews will be carried out.

Service providers are recognised staff within the case study PCCBSS who act in signposter roles, leadership, or support functions. Linked providers are closely linked professional people who work in or with the PCCBSS (*e.g.* referrers' in, those who receive referrals out, GP surgeries, voluntary sector hubs, local community services) to support its operation. Eligible service users are defined as any individual who has been (self-)referred to and received support from a case study PCCBSS.

All interviewees will be sought for recruitment via their PCCBSS, through mailing lists and adverts in service premises. Potential participants will be asked to make direct contact with the research team. Both service/linked providers and service users will be purposively sampled to ensure representativeness according to their underlying characteristics: younger adults (18–35 years), middle-aged adults (36–64 years), older adults (65+ years); either sex (M/F); ethnicity (Asian or Asian British; Black, Black British, Caribbean or African Caribbean; Mixed or multiple ethnic groups; White; Other ethnic group (HM Government Digital Service (2023)).

Interviewees must be aged above 18 years and have capacity to verbally consent to take part in a research interview (children are beyond the scope for inclusion in this study, as we are exploring intersections with Adult Social Care, for which they would be ineligible to access). Interviews will be conducted in English owing to limited study resources; however, if a potential participant requires translation support and this resource is already available to the referring PCCBSS or participant by other means, their participation will be facilitated (and translated documentation produced via collaboration with provided translation support). Furthermore, to facilitate sampling a diverse population, reasonable adjustments will be made as required to support participation.

PCCBSS service users who are interviewed will receive a GBP 25 gift voucher to demonstrate recognition of their participation. This level of payment is aligned with NIHR's policy (Version 4.0) on payments to public contributors (NIHR, 2022). Professionals (from healthcare, adult social care, local authority, and VCF organisations) will not be compensated for their time spent taking part in the study (interviews or focus groups).

Interviews may be conducted by telephone, video-conferencing facility (Microsoft Teams) or face-to-face, depending on the preference of the interviewee, and will be scheduled for an hour. Researchers will be flexible to participants' needs and undertake interviews at a time and date convenient to them, *e.g.*, outside of working hours if this is preferable. Face-to-face interviews will take place on service premises. Interviews will be conducted between February 2023 to September 2023.

Interviewees will be allocated an anonymised participant ID which will be applied to all data resulting from their interview to maintain their anonymity and encourage open discourse.

Interviews will be conducted with a pre-determined and piloted topic guide which aligns with the study coding frame domains, and will be informed by the existing CFIR Interview Guide Tool and corresponding NPT Toolkit. The service user topic guide will be discussed with a PPI group from a local case study service for acceptability and clarity. The WP2 topic guide questions used in this study with service/linked providers and service users can be found in the 'Extended data' section below (Christian *et al*., 2023).

Data analysis. Each semi-structured interview will be digitally recorded, transcribed verbatim (through NVivo Transcription, an automated natural language processor using machine-learning technology), and checked for accuracy by the research team against the audio file. While artificial

intelligence (AI) will support transcription activities, AI will not be used in any part of our qualitative analysis. Data will be analysed using framework analysis, a primarily deductive approach that in this evaluation will use CFIR and NPT as the framework, as described below. It is a systematic approach that aims to identify, describe, and interpret key patterns within and across cases, but also has the flexibility to incorporate additional inductive codes for any data which does not 'fit' within the framework. It has five stages: familiarisation with the data, framework identification, data indexing, charting, and mapping and interpretation. Framework analysis is recognized as a useful approach when multiple researchers are working on an evaluation, and for managing large data sets (Ritchie & Spencer, 1994). It will allow for analysis to identify common themes within and across PCCBSS without losing detail on individual sites. NVivo (Version 14) will support data management and analysis. Taguette and QualCoder are examples of open-access alternatives to NVivo that can perform equivalent functions. Rigour trustworthiness will be ensured via verification strategies, including a proportion of transcripts (10%) communally coded in group analysis meetings, and discrepancies resolved through discussion at analysis meetings.

Combined CFIR and NPT implementation framework

Theoretical underpinnings. Use of established implementation theories, models or frameworks can help researchers consider and understand how and why implementation succeeds or fails. There is a choice of theoretical frameworks available to guide implementation questions, which may differ in terms of their theoretical perspective (*e.g.* psychology or sociology), the implementation level (*e.g.* the individual, the team, the organisation) and their purpose (*i.e.* whether they aim to identify drivers of implementation, or whether and to what extent implementation occurred). There may be merit in combining different frameworks where innovations are designed in accordance with multiple theoretical perspectives, target multiple levels of implementation, or pursue multiple purposes (Schroeder *et al*., 2021).

Consolidated Framework for Implementation Research (CFIR). Damschroder's CFIR (Damschroder *et al.*, 2009) provides a menu of 26 contextual implementation determinants under five overarching domains: intervention characteristics (8 constructs), outer setting (4 constructs), inner setting (5 constructs [+9 additional subconstructs]), individual characteristics (5 constructs), and process (4 constructs [+4 additional subconstructs]).

Importantly, not all CFIR constructs are relevant to every situation, so researchers or implementers may need to choose what is most relevant to their case. In relation to the implementation of PCCBSS, the CFIR enables a more nuanced account of extra-individual implementation drivers (albeit less detail at individual level) as well as a rather basic examination of more dynamic implementation 'processes'.

In the context of our 'Connected Communities' study, CFIR is ideally placed to identify potential static contextual determinants for implementation (both barriers and facilitators) across four out of the five domains, namely intervention characteristics, inner setting, characteristics of individuals, and outer setting. The fifth CFIR domain 'process' will not be utilised in our study.

We will operationalise the four retained CFIR domains in the following manner:

Intervention characteristics: PCCBSS will be defined as delivering either high- or low-service intensity, dependent on their activity configuration of core components (fidelities)/ adaptable periphery (flexibilities). This distinction in classification will be determined through discussion by the research team after collection of data from both work packages.

For example, a high-intensity service might require PCCBSS users to complete a defined time-specific duration of received support before being given the opportunity to be trained themselves to deliver PCCBSS activities (*i.e.* 'champions'). Whereas a low-intensity service might only require PCCBSS users to receive a single instance of service interaction or use volunteers to signpost service users to support or other groups/ services.

The definition distinction is useful in providing clarity for our study findings (given not all PCCBSS services are alike in configuration/operation) and future applicability in practice. It also aligns with available literature that acknowledges the breadth of social prescribing activities being understood to be significantly wider than signposting alone (e.g. Kimberlee, 2015 which delineates social prescribing as four types: Signposting, Light, Medium, and Holistic), which echoes our understanding of social prescribing being a higher-intensity PCCBSS than the simpler signposting provided by lower-intensity services.

Under this domain's Adaptability construct we will address findings relating to research sub-question b) *How did PCCBSS adapt to delivery and workflow changes imposed by the COVID-19 pandemic (temporal impact)?*

Outer setting: We will capture the identified needs and available resources for service users accessing the PCCBSS, with a focus on differing demographics, degree of isolation and poverty. Factors detailed in PESTLE (Political, Economic, Social, Technological, Legal and Environmental) (CIPD, 2023) analyses are anticipated to be captured under this domain.

Inner setting: We will consider all types of PCCBSS host sites (by sector, considering both complexity and integration) and those that provide the majority of referrals to, or receive referrals from, carers centres or GP practices.

Under this domain's constructs we will address findings relating to research sub-question a) *What organisational contextual factors affect services' implementation (internal impacts)?*

Characteristics of individuals involved: We will detail characteristics (attitudes, degree of self-efficacy, and other attributes) of PCCBSS staff, referring services' staff, funder(s),

and other linked providers. Where volunteer signposters are used by the PCCBSS to deliver its activities, they will be considered a staff resource under CFIR domain 'Characteristics of individuals involved', rather than captured among service user details in CFIR's domain 'Outer setting'.

Normalization Process Theory (NPT). NPT (May & Finch, 2009) accounts for implementation through analysing the cognitive and social production and organisation of work, the process of establishing practices into routine elements of everyday life, and of sustaining implemented practice into their social contexts.

NPT has four theoretical tenets:

(i) coherence, which supports individual and collective consensus about an intervention and its purpose;

(ii) cognitive participation, the relational work that influences "implementation and legitimation";

(iii) collective action, the tasks allocated to the various members within the organization to build and sustain use; and,

(iv) reflexive monitoring, the communal appraisal work that aids assessment of the intervention's introduction.

In the context of this 'Connected Communities' study, NPT is used to explore the dynamic processes of how people make sense of, and enact, a new PCCBSS to implement it into usual working practices. We will operationalise the sub-constructs of NPT and substitute these for the excluded CFIR 'process' domain, in accordance with CFIR developers' own guidance (Damschroder *et al.*, 2009). The implementation processes of each PCCBSS will be detailed according to the four NPT domains (16 sub-constructs), which will be operationalised in the following way for our study:

Coherence: We will describe individual and collective sense-making work among service/linked providers around the PCCBSS.

Cognitive participation: We will detail relational work among service/linked providers which builds and sustains a community of practice for the PCCBSS.

Collective action: We will explore the operational qualities of work done by service/linked providers to enact a set of practices for the PCCBSS.

Reflexive monitoring: We will identify examples of appraisal work to assess and understand how introduction of the PCCBSS affects service/linked providers and service users.

Application of the combined CFIR and NPT framework in the 'Connected Communities' study. From the exploration of the above-described frameworks, we saw a clear rationale for combining CFIR with NPT to give more detail to the process elements of implemented PCCBSS.

NPT is key in understanding the process element of implementation which is addressed by CFIR at a rather basic level. This is particularly important as the implementation of social prescribing services requires engagement and collaboration of different individuals, from different organisations, and across different settings.

Combining CFIR with NPT offers a theoretical lens to illuminate how static contextual factors (identified through CFIR) and dynamic implementation processes (captured by NPT) interact and shape each other (Schroeder *et al.*, 2021; Schroeder *et al.*, 2022). More specifically, CFIR will be used as an overall framework to guide data collection as it describes qualities of determinants to consider at multiple levels within and beyond the organisation. Figure 1 details the full combined CFIR and NPT implementation coding framework to be used in the 'Connected Communities' study.

We will expand an existing defined construct under CFIR's Outer setting domain (2.B. Cosmopolitanism) with an additional two sub-constructs to accommodate our focused study aim of identifying: PCCBSS service links to social care (2.B.1), and how these social care links are facilitated (2.B.2). For clarity, we note that there are two constructs under CFIR's 3rd domain (Inner setting) which already include additional sub-constructs (3.D. Implementation climate: 6 sub-constructs; 3.E. Readiness for implementation: 3 sub-constructs), and that these are also included within our bespoke coding frame for this study.

Given that NPT constructs give more granularity to the implementation process, we will integrate all four NPT domains (and 16 sub-constructs) as nodes in the combined framework's process domain, which will provide explanatory strength around why, and how, change occurs to support introducing and sustaining PCCBSS in usual working practices. A full operationalisation of the combined CFIR and NPT implementation coding framework used within this study can be found in the 'Extended Data' section below (Christian *et al.*, 2023).

Recently updated frameworks. We recognise that the team behind the development of NPT 2009 (May & Finch, 2009) has recently published an updated model which incorporates contextual components affecting implementation as a 'coding manual' (May *et al.*, 2022). However, upon comparative scoping by the research team, we reflected that May *et al.*, 2022 was better suited for realist evaluation (owing to its modelling of contexts, mechanisms, and outcomes) and that our combined CFIR + NPT 2009 coding frame more explicitly unpicked and permitted appraisal of specific components affecting implementation.

Furthermore, this new coding manual (May *et al.*, 2022) has yet to be used practically by research teams. Consequently, despite the potential to future-proof our work by adopting the updated NPT model (May *et al.*, 2022), we determined our integrated CFIR and NPT 2009 coding framework was the most appropriate fit for our study.

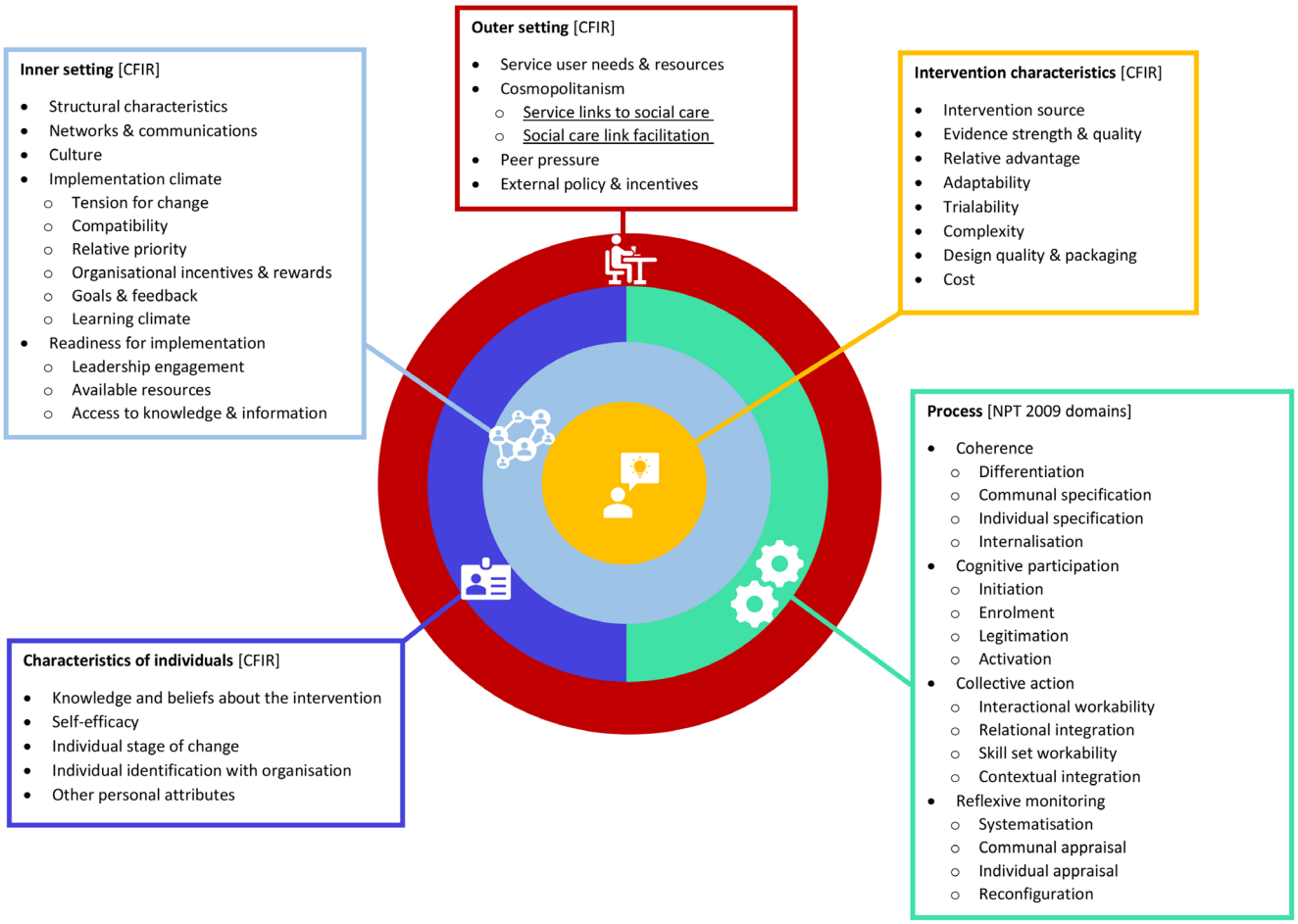

Figure 1. Combined CFIR and NPT implementation coding framework.

Patient and Public Involvement (PPI)

This 'Connected Communities' protocol outlines a National Institute of Health and Care Research (NIHR) Applied Research Collaboration (ARC) National Priority study. The National Priorities Programme (NPP) for adult social care and social work is a collaboration between nine ARC partners across England, comprising of public advisers and researchers with expertise in health and social care. The NPP's public advisory panel selected Topic 9: Using community resources to improve wellbeing, with an average score of 2.77 (Toma *et al.*, 2021). This topic has subsequently been developed in to 'Connected Communities'. The NPP aims to support and stimulate the implementation of evidence-based (evaluated) service change at national and/or supra-regional level in adult social care and social work, as identified by care users and carers, practitioners, professions, researchers, and the wider public (Toma *et al.*, 2021).

PPI will take place at three levels: national, local, and case study level.

- At a national level, this study is being funded through the National Priorities Programme for Adult Social Care and Social work. As such, it will be supported by its wider infrastructure, including its public advisers who are service users and carers as part of the wider National Lived Experience Strategy Group.

  We will present aspects of this study at appropriate intervals during the project to ensure consultation, and also capture meaningful views from these key stakeholders about the diverse recruitment materials (especially an easy-read participant information sheet, and participant information video based on 'easy-read' content) created to support inclusion and gain insights to specific service user experiences of PCCBSS context.

- At a local level, PPI will be supported on an ongoing basis by two Public Advisers with experience of community-based support services attached to the project, funded by NIHR Applied Research Collaboration North West Coast.

- At a case study service level, PPI will involve consulting with an existing service user advisory group on the topic guides (before interviews are conducted) and the presentation of the emerging findings.

The public were not involved in the design and conduct of the study, the choice of outcome measures, or recruitment to the study, but will be integral in reviewing and refining public-facing materials, engaging in initial coding and analysis interpretation discussions, and designing and agreeing plans for dissemination of the study findings and recommendations for moving this work forward.

Ethical approval

The 'Connected Communities' project has been favourably reviewed by the Camberwell St Giles Research Ethics Committee (IRAS ID: 314796) due to their qualitative research expertise (date of approval 20/12/2022). All research participants will give verbal informed consent as it is provided immediately before the interview takes place and is considered the definitive, final consent provision (adequacy approved by Ethics Committee). The interviewer will read out each of the statements in the consent form and the participant will have the option to agree or disagree with this statement. All participants are reminded that they have the right to withdraw from the study at any point and verbal consent will only be deemed granted by those participants who agree to participate in the study in accordance with procedures approved by the ethics committee. This study will be conducted in compliance with Health Research Authority (HRA) standards, the study protocol, and Sponsor's regulatory and monitoring requirements.

Key outputs and dissemination

Pen portraits

The analysis from WP1 and WP2 will be presented in the form of an illustrated 'pen portrait' to demonstrate how implementation evolved for each of the PCCBSS. Sheard & Marsh (2019) describes the primary purpose of a pen portrait as 'documenting the journey, story or trajectory of the focus of enquiry in a more or less linear, narrative fashion over the life course of the study'. These pen portraits, modelled on Sheard & Marsh's work (2019) and developed in collaboration with Applied Research Collaboration North West Coast ARC NWC public advisers, will capture key time points in the implementation process for PCCBSS (phases: initiation; operation; maintenance) and provide an overarching engagement profile for each service.

Online implementation toolkit

Furthermore, we will produce an online implementation toolkit for PCCBSS providing recommendations for practice for those looking to implement similar services in the future. Additional resources will potentially include policy briefs and relevant guidelines for services, peer-reviewed scientific journal articles, accessible reports, lay summaries and conference presentations.

Dissemination

We will promote knowledge transfer across the wider National Priority Programme for Adult Social Care and Social Work, the ARCs nationally and partner organisations by using all available contacts (within ARC NWC, and across the research consortium led by the University of Kent (ARC KSS)) and the research team's personal networks. We will maximise this transfer through our established UK (and wider) links, including social media links to the ARC NWC website which will also host the PCCBSS implementation toolkit. We will also seek opportunities to collaborate with the National Academy of Social Prescribing in supporting discussion and dissemination of our resulting PCCBSS implementation toolkit (perhaps via blog, case study or webinar), given social prescribing is covered by its breadth, alongside other lower-intensity person-centred community-based support services.

Study status

The study has started and data collection for WP1 and WP2 is complete and data analysis is currently underway (as of October 2023).

Data availability

Underlying data

No data are associated with this article.

Extended data

OSF: CONNECTED COMMUNITIES | Learning lessons from person-centred community-based support services' implementation. https://doi.org/10.17605/OSF.IO/TJDP7 (Christian *et al.*, 2023).

This project contains the following extended data:

- Operationalisation of CFIR and NPT domains and constructs for Connected Communities .docx
- Connected Communities WP2 Topic guide V1.2 09 01 2023.docx

Author contributions

Danielle L. Christian - Conceptualisation, Methodology, Project administration, Resources, Writing – Original Draft Preparation, Writing – Review & Editing

Kathryn Berzins - Conceptualisation, Methodology, Project administration, Resources, Writing – Original Draft Preparation, Writing – Review & Editing

Jo C. Weldon - Conceptualisation, Data Curation, Investigation, Methodology, Project Administration, Resources, Writing – Original Draft Preparation, Writing – Review & Editing

Madalina Toma - Conceptualisation, Methodology, Writing – Review & Editing

Mark Gabbay - Conceptualisation, Methodology, Funding acquisition, Supervision, Writing – Review & Editing

Caroline Watkins - Conceptualisation, Methodology, Writing – Review & Editing

Julien Forder - Conceptualisation, Supervision, Writing – Review & Editing

Acknowledgements

We would like to thank our Applied Research Collaboration North West Coast ARC NWC public advisers; Dawn Allen and Neil Joseph.

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Open Peer Review

Current Peer Review Status: ? ? ✓

Version 2

Reviewer Report 22 November 2024

https://doi.org/10.3310/nihropenres.14992.r33467

✓ **Michelle Howarth**
Edge Hill University, Ormskirk, England, UK

The authors response to the original review is robust and well evidenced. They have addressed and/or clarified any areas of ambiguity and strengthened their paper. I look forward to reading the results of this study in the future as the potential impact is significant on policy makers and practice seeking to implement and support PCCBSS>

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Social prescribing, person centred approaches, grounded theory,

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

Version 1

Reviewer Report 12 March 2024

https://doi.org/10.3310/nihropenres.14643.r31074

? **Michelle Howarth**
[1] Edge Hill University, Ormskirk, England, UK
[2] Edge Hill University, Ormskirk, England, UK

Overall comments:
This is a well constructed and timely protocol. The findings from the study could have meaningful impact on service delivery and development. The data collection methods and analysis proposed are robust and embed PPI views.
I have made some detailed comments below and indicated potential sources/references for the authors to consider that may strengthen the context and impact of this work.
Some of these comments and suggestions relate to the rationale and terminology such as 'signposter' which has been used to describe a range of roles. The authors need to consider how the use of this term could create ambiguity for the reader/user as a result of the challenges influenced through the person centred paradigm that underpins service design. This is integral to the success of PCCBSS and I feel that more consideration of the influence and impact should be included in the rationale - and also in the implementation/dissemination.

Rationale & Background:
The rationale is strong and this would be a very timely piece of work, however, the background and person centred philosophy needs greater detail.
The PCCBSS philosophy is predicated on a wellbeing conversation that uses a strengths-based approach to understand 'what matters' to someone, rather than focusing on 'what's the matter with them'. This is a fundamental position which I feel is not clear in the rationale. For example, the authors need to highlight how PCCBSS embraces the person centred through the wellbeing conversation. The authors have described this significant process as occurring when someone who *"**talks with** a service user before directing them to a range of relevant community sources of social, emotional, and practical support."*. Talking with someone, doesn't really highlight the power or impact of the wellbeing conversation - or the relationship that is formed over a period of time to ensure that the referral is person centred. This is significant because the individualised nature of the conversation and subsequent referral and service provided is underpinned by the person centred philosophy, which, by its very nature, can lead to the use of a range of metrics to capture impact.

Those who 'signpost' individual do not typically hold a wellbeing conversation so it is not clear why the term the 'signposter has been used'. The authors may need to consider the different models of social prescribing that as published by Kimberlee (see links below) as the PCCBSS should ideally align with the 'holistic' model which is different from 'signposting'. The use of the term 'signposter' could cause ambiguity as signposting is incongruous with the PCC element.

Muhl *et al.* (2023[1]) global conceptual definition of SP may help to provide a lends on the wider complexities associated with SP that the authors could use (see links below).

https://uwe-repository.worktribe.com/output/927254

https://journals.scholarpublishing.org/index.php/assrj/article/view/808

Methods:
The authors propose to use mixed methods within 2 WP's. This will provide a good helicopter perspective and rich insight into the systems and experiences of implementation of SP. I do have a couple of queries about other data sources that maybe helpful.
For example, will the authors also use data from the SP systems which could provide real time and historical data related to the implementation processes - particularly in relation to capturing

outcome metrics for commissioning purposes. Will the authors also include referrals that originate from other health professionals and non-health referrers? This maybe particularly relevant if the PCCBSS targets children and young people.
The authors have stated that they will use the PPI group to discuss the topic guide - this is reassuring as it will ensure that the data captured are meaningful. Will there also be an opportunity through the PPI events to capture key stakeholders views about 'meaningful' approaches to data collection to ensure that significant contextual data isn't missed?

Analysis:
The data analysis strategy is robust and has integrated validated theoretical frameworks to support the analysis. Can the authors clarify whether any AI will be used as part of the qualitative analysis?

Key Outputs & Dissemination:
The outputs strategy is good - but I wonder how the online implementation toolkit will be aligned with the National Academy of Social Prescribing (NASP) and rapid evidence reviews - is there an opportunity to collaborate with NASP to support dissemination?

References
1. Muhl C, Mulligan K, Bayoumi I, Ashcroft R, et al.: Establishing Internationally Accepted Conceptual and Operational Definitions of Social Prescribing Through Expert Consensus: A Delphi Study Protocol.*Int J Integr Care*. 2023; **23** (1): 3 PubMed Abstract | Publisher Full Text
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Is the rationale for, and objectives of, the study clearly described?
Partly

Is the study design appropriate for the research question?
Yes

Are sufficient details of the methods provided to allow replication by others?
Yes

Are the datasets clearly presented in a useable and accessible format?
Not applicable

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Social prescribing, person centred approaches, grounded theory,

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Author Response 05 Nov 2024

Danielle Christian

Dear Professor Michelle Howarth,
Thank you for taking the time to review our article.
We really appreciate your expertise and recommendations for improvement to the manuscript. We have responded to each of your suggested amendments below.
Yours sincerely,
Dr Danielle Christian, on behalf of the authors

Reviewer – The background and person centred philosophy needs greater detail.
The PCCBSS philosophy is predicated on a wellbeing conversation that uses a strengths-based approach to understand 'what matters' to someone, rather than focusing on 'what's the matter with them'. This is a fundamental position which I feel is not clear in the rationale. For example, the authors need to highlight how PCCBSS embraces the person centred through the wellbeing conversation. The authors have described this significant process as occurring when someone who "talks with a service user before directing them to a range of relevant community sources of social, emotional, and practical support.". Talking with someone, doesn't really highlight the power or impact of the wellbeing conversation - or the relationship that is formed over a period of time to ensure that the referral is person centred. This is significant because the individualised nature of the conversation and subsequent referral and service provided is underpinned by the person centred philosophy, which, by its very nature, can lead to the use of a range of metrics to capture impact.
Muhl et al. (20231) global conceptual definition of SP may help to provide a lends on the wider complexities associated with SP that the authors could use (see links below).
https://uwe-repository.worktribe.com/output/927254
https://journals.scholarpublishing.org/index.php/assrj/article/view/808
Those who 'signpost' individual do not typically hold a wellbeing conversation so it is not clear why the term the 'signposter has been used'. The authors may need to consider the different models of social prescribing that as published by Kimberlee (see links below) as the PCCBSS should ideally align with the 'holistic' model which is different from 'signposting'. The use of the term 'signposter' could cause ambiguity as signposting is incongruous with the PCC element.
Kimberlee R: What is social prescribing?. Advances in Social Sciences Research Journal. 2015; 2 (1).
Author response -We appreciate the reviewer's concern, but feel this is another instance where there has been confusion between what people understand to be social prescribing, and the breadth of person-centred community-based support services that our project covers (and is inclusive of social prescribing).
While we acknowledge the wellbeing conversations offer a crucial lens for social prescribers to support their service users, lower-intensity PCCBSS don't necessarily have this requirement (being simply that a 'signposter' role speaks with an individual to establish the support they wish to identify and engage with in their local community – happening superficially with minimal engagement in some cases).
As we are interested in broader service delivery models than social prescribing, it would be untrue for us to state that every 'signposter' conducts wellbeing conversations, despite this happening in higher intensity services. Consequently, we had been deliberately superficial in our descriptor in order to be inclusive. We're not denying that some PCCBSS have this

interaction, but not all do. We wish to highlight also that the suggested conceptual definition reference (Muhl 2023) has replaced our previous (NHS) definition in the Introduction section, and added to the references.
We were grateful for you drawing our attention to Kimberlee 2015, as it provides very helpful information which indicates that signposting is one aspect (of 4) that social prescribers engage in: "*Based on analysis of local practice this article delineates social prescribing interventions into four types: Signposting, Light, Medium and Holistic.*" This is useful for us to reference and refute arguments that using the 'signposter' aspect to define PCCBSS is too basic and prevents application to the breadth of role that social prescribers are engaged in. Signposting is part of their engagement, but as Kimberlee 2015 considers that social prescribing interventions can be holistic, it definitely meets our understanding of person-centred support.
Considering that the breadth of social prescribing activities is understood to be significantly wider than signposting alone echoes our understanding of social prescribing being a higher-intensity PCCBSS than the simpler signposting provided by lower-intensity services. We have made this clearer in the text under CFIR Intervention characteristics: *"The definition distinction is useful in providing clarity for our study findings (given not all PCCBSS services are alike in configuration/operation) and future applicability in practice. It also aligns with available literature that acknowledges the breadth of social prescribing activities being understood to be significantly wider than signposting alone (e.g. Kimberlee 2015 which delineates social prescribing as four types: Signposting, Light, Medium, and Holistic), which echoes our understanding of social prescribing being a higher-intensity PCCBSS than the simpler signposting provided by lower-intensity services."*

Reviewer – Will the authors also use data from the SP systems which could provide real time and historical data related to the implementation processes - particularly in relation to capturing outcome metrics for commissioning purposes. Will the authors also include referrals that originate from other health professionals and non-health referrers? This maybe particularly relevant if the PCCBSS targets children and young people.
Author response -We have explicitly stated that we use existing data provided by services, and that this may include outcome data: *"The implementation of the three case study PCCBSS will be described using existing documents provided by the services themselves, or identified by the study team, through discussion regarding PCCBSS document outputs and publications. These may include published and unpublished reports, outcome data (e.g. numbers of people referred or diverted from accessing services and pre- and post-intervention wellbeing assessments), health inequalities information, GP referral guides, peer-reviewed literature, and logic models."*
We had implied that we are exploring adult use of PCCBSS alone, but appreciate that this may be more helpful to make explicit: [currently, p6 under WP2 methods] *"Both service/linked providers and service users will be purposively sampled to ensure representativeness according to their underlying characteristics: younger adults (18–35 years), middle-aged adults (36–64 years), older adults (65+ years)"*
"Interviewees must be aged above 18 years and have capacity to verbally consent to take part in a research interview."
Immediately following this sentence, we have now added the following text to be more explicit: *"(children are beyond the scope for inclusion in this study, as we are exploring intersections with Adult Social Care, for which they would be ineligible to access)"*

Reviewer – The authors have stated that they will use the PPI group to discuss the topic guide - this is reassuring as it will ensure that the data captured are meaningful. Will there also be an opportunity through the PPI events to capture key stakeholders views about 'meaningful' approaches to data collection to ensure that significant contextual data isn't missed?
Author response - Thank you for this query, unfortunately it is not possible for us to establish other meaningful approaches to data collection owing to use of our framework and methods pre-determining how this would happen (what we would ask and how we would collect data); however, we have indicated the diversity of recruitment materials to support inclusion and gain insights to specific SU experiences of PCCBSS context, and included under the 'national level' PPI section, the following content:
"We will present aspects of this study at appropriate intervals during the project to ensure consultation, and also capture meaningful views from these key stakeholders about the diverse recruitment materials (especially an easy-read participant information sheet, and participant information video based on 'easy-read' content) created to support inclusion and gain insights to specific service user experiences of PCCBSS context."

Reviewer – Can the authors clarify whether any AI will be used as part of the qualitative analysis?
Author response - Great question, and no we have not utilised AI in our qualitative analyses, but it has supported our transcription production. We have made this explicit on p6 under *"Each semi-structured interview will be digitally recorded, transcribed verbatim (through NVivo Transcription, an automated natural language processor using machine-learning technology), and checked for accuracy by the research team against the audio file. While artificial intelligence (AI) will support transcription activities, AI will not be used in any part of our qualitative analysis. Data will be analysed using framework analysis, a primarily deductive approach that in this evaluation will use CFIR and NPT as the framework, as described below."*

Reviewer – The outputs strategy is good - but I wonder how the online implementation toolkit will be aligned with the National Academy of Social Prescribing (NASP) and rapid evidence reviews - is there an opportunity to collaborate with NASP to support dissemination?
Author response - Thank you for this query. Upon reflection and exploration of this comment, we would highlight that we wish to avoid competing/conflicting with or looking to supersede NASP's own online toolkit which is specifically for social prescribing ((https://socialprescribingacademy.org.uk/resources/social-prescribing-self-assessment-development-guide/#msdynttrid=CQAgyYCDN_X1WqWtUzzaTRfQQXtw4dDGldj1Tgu4_sM). To clarify, ours is a broader focus for different types of person-centred community-based support service, and ours contains no self-assessment functions (as the NASP toolkit does), instead being a static resource for consideration of implementation barriers to avoid and implementation facilitators that can be leveraged when establishing future PCCBSS in communities.
Further to this, among NASP's online resources they host blogs, case studies and webinars,

and we are happy to make contact to ask if we can share our findings with them in one of those means as a basis for discussion and dissemination. We intend to do this via our host institution's own Social Prescribing Unit's lead (Mental Health Research and Knowledge Exchange Lead at UCLan) who is closely linked with NASP already. We have addressed this query in the text, in the following manner:
"We will also seek opportunities to collaborate with the National Academy of Social Prescribing in supporting discussion and dissemination of our resulting PCCBSS implementation toolkit (perhaps via blog, case study or webinar), given social prescribing is covered by its breadth, alongside other lower-intensity person-centred community-based support services."

Competing Interests: No competing interests.

Reviewer Report 12 March 2024

https://doi.org/10.3310/nihropenres.14643.r31075

?

Hendrik Napierala
[1] Charité - Universitätsmedizin Berlin, Berlin, Germany
[2] Charité - Universitätsmedizin Berlin, Berlin, Germany

This is a study protocol for a post-implementation mixed-methods study to assess which contextual factors affect implementation of person-centred community-based support services (PCCBSS) and how PCCBSS adapted to changes during the COVID-19 pandemic.

The protocol is well written and clearly structured to support transparent reporting of most of the relevant aspects of the project. I think that the manuscript is suitable for indexing. However, it needs some clarifications.

Here are some comments that hopefully help you in refining the manuscript:

1. I would prefer if the title contains the term study protocol. I do not know if the current title reflects journal standards but it would be easier to distinguish if e.g., found in a database.

2. Is PCCBSS a common term or is it exclusively used in your context? The CUSP framework (1) for Social Prescribing does not necessarily involve someone from the healthcare sector. However, by introducing a new acronym you make it more complex for the reader to distinguish it with "other" concepts (e.g. SP). In my opinion they are both the same and you rather should state how you define Social Prescribing.

3. When citing evidence for the effectiveness you should think about adding more relevant citations. There is a large body of current evidence (e.g. (2-4)). You should also cite relevant projects (5) or evidence (e.g. 6) related to the evidence you want to gather. Currently, the

manuscript does not adequately reflect the body of literature.

4. I do not understand how you want to answer question b). Currently, Figure 1 and the explanations for CFIR and NPT do not directly refer to workflow changes. Shouldn't that be part of the outer setting, for example? Please make it clearer in the protocol. I found no further mentions of the topic in the methods section.

5. I would rather suggest to move the main research questions to the end of the introduction and then start with the study design in the methods section. I would move the PPI and ethical approval to the end.

6. Can you provide the interview guide as supplementary material? This would make it easier to "replicate" your methods and use them in other settings.

7. The protocol was published on OSF after the data collection had ended. Please provide a statement on differences between the primary research proposal and the current protocol. Or state that there were none.

8. I am missing information on funding and potential conflicts of interest.

References

1. Napierala H, Krüger K, Kuschick D, Heintze C, et al.: Social Prescribing: Systematic Review of the Effectiveness of Psychosocial Community Referral Interventions in Primary Care.*Int J Integr Care*. 2022; **22** (3): 11 PubMed Abstract | Publisher Full Text
2. Husk K, Blockley K, Lovell R, Bethel A, et al.: What approaches to social prescribing work, for whom, and in what circumstances? A realist review. *Health & Social Care in the Community*. 2020; **28** (2): 309-324 Publisher Full Text
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4. Bickerdike L, Booth A, Wilson PM, Farley K, et al.: Social prescribing: less rhetoric and more reality. A systematic review of the evidence.*BMJ Open*. 2017; **7** (4): e013384 PubMed Abstract | Publisher Full Text
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Is the rationale for, and objectives of, the study clearly described?

Partly

Is the study design appropriate for the research question?

Partly

Are sufficient details of the methods provided to allow replication by others?
Partly

Are the datasets clearly presented in a useable and accessible format?
Not applicable

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Social Prescribing, Mixed-methods evaluations, pragmatic trials, implementation science

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Author Response 05 Nov 2024

Danielle Christian

Dear Dr Hendrik Napierala,
Thank you for taking the time to review our article.
We have responded to each of your suggested amendments below and really appreciate your expertise and recommendations for improvement.

Reviewer - I would prefer if the title contains the term study protocol. I do not know if the current title reflects journal standards but it would be easier to distinguish if e.g., found in a database.

- Author response - Great suggestion, completely agree, and now inserted: “Connected Communities | Learning lessons from person-centred community-based support services’ implementation: a mixed-methods study protocol”. Thank you.

Reviewer - Is PCCBSS a common term or is it exclusively used in your context? The CUSP framework (Napierala et al., 2022) for Social Prescribing does not necessarily involve someone from the healthcare sector. However, by introducing a new acronym you make it more complex for the reader to distinguish it with "other" concepts (e.g. SP). In my opinion they are both the same and you rather should state how you define Social Prescribing.

1. Napierala H, Krüger K, Kuschick D, Heintze C, et al.: Social Prescribing: Systematic Review of the Effectiveness of Psychosocial Community Referral Interventions in Primary Care.Int J Integr Care. 2022; 22 (3): 11

- Author response - You have not been alone in assuming that PCCBSS is being used as a byword for social prescribing, as Reviewer 1 also made a similar observation. When we commenced this work we established that we were interested in wider services than social prescribing alone, but needed to find an accurate and explicit descriptor that covered the types of services we were interested in; however we were unable to identify anything inclusive enough that already seemed to be in use, which is where the use of ‘person-centred community-based support services’ began to be utilised for our project. As this quite verbose, after initial explanation in individual documents, we then subsequently refer to it as PCCBSS. As this work is focused on describing

PCCBSS (which are broader than social prescribing alone) to cover the breadth of available social interventions that employ the use of a signposter to connect individuals with appropriate local resources, we have consequently addressed this by making our text explicit that we're being inclusive of different referral routes, different host/operating organisations, different funding models.We have clarified this in the text as follows:Introduction – "For the purposes of the 'Connected Communities' study, we are interested in any services (not exclusively social prescribing) where an individual is (self-)referred to a PCCBSS that uses a signposter to consult with a service user to identify their needs or support individuals to access other services (regardless of setting, referral route, operating organisation or funding model)." Main research question/Aims and objectives - "With regards to 'Connected Communities', we are specifically interested in any PCCBSS (across a differentiating range of service intensities, which may (not) include additional support beyond signposting (e.g. models indicated by Husk 2019)) where a signposter consults with a service user, who is (self-) referred, to identify their needs or support to access other local services (regardless of setting, referral route, operating organisation or funding model)."

Reviewer - When citing evidence for the effectiveness you should think about adding more relevant citations. There is a large body of current evidence (e.g. (2-4)). You should also cite relevant projects (5) or evidence (e.g. 6) related to the evidence you want to gather. Currently, the manuscript does not adequately reflect the body of literature.
2. Husk K, Blockley K, Lovell R, Bethel A, et al.: What approaches to social prescribing work, for whom, and in what circumstances? A realist review. Health & Social Care in the Community. 2020; 28 (2): 309-324
3. Muhl C, Mulligan K, Bayoumi I, Ashcroft R, et al.: Establishing internationally accepted conceptual and operational definitions of social prescribing through expert consensus: a Delphi study. BMJ Open. 2023; 13 (7). Publisher Full Text
4. Bickerdike L, Booth A, Wilson PM, Farley K, et al.: Social prescribing: less rhetoric and more reality. A systematic review of the evidence.BMJ Open. 2017; 7 (4): e013384
5. Ebrahimoghli R, Pezeshki MZ, Farajzadeh P, Arab-Zozani M, et al.: Factors influencing social prescribing initiatives: a systematic review of qualitative evidence.Perspect Public Health. 2023. 17579139231184809
6. Chng NR, Hawkins K, Fitzpatrick B, O'Donnell CA, et al.: Implementing social prescribing in primary care in areas of high socioeconomic deprivation: process evaluation of the 'Deep End' community Links Worker Programme.Br J Gen Pract. 2021; 71 (713): e912-e920

- Author response - Excellent suggestions, thank you for indicating their inclusion.

We have selectively incorporated additional available evidence in our updated protocol (although not all, given our project has a broader focus than social prescribing alone and we are wary of giving this more recognised form of PCCBSS significant 'air time' and confusing readers to believe the work is solely another euphemism for social prescribing).
The following publications are consequently now also included in our references:
Husk 2020, Muhl 2023, Napierala 2022, Bickerdike 2017, Khan 2024, Pescheny 2020 and Polley 2022

Reviewer – I do not understand how you want to answer question b). Currently, Figure 1 and the explanations for CFIR and NPT do not directly refer to workflow changes. Shouldn't that be part of the outer setting, for example? Please make it clearer in the protocol. I found no further mentions of the topic in the methods section.

- Author response - Thank you for also drawing our attention to this omission.The operationalisation (in Extended data) of our CFIR/NPT framework constructs for 1.d. Adaptability have captured 'flexibilities/adaptable peripheries' which are the aspects of how PCCBSS addressed impacts of the pandemic.Our research sub-questions relate to internal (Question a) and temporal (Question b) impacts upon the PCCBSS' implementation into usual working practices.We have clarified this in the text as follows:"Research sub questions
  a) What organisational contextual factors affect services' implementation (internal impacts)?
  b) How did PCCBSS adapt to delivery and workflow changes imposed by the COVID-19 pandemic (temporal impact)? "In our analyses, we have used our a priori framework operationalisation (available in Extended data) to cover internal impacts (sub-question A) under Domain 3, Inner setting, and temporal impacts (of which the pandemic is one, sub-question B) as features of Adaptability under Domain 1, Intervention characteristics.
  We have also added text under each of these domains to make this clearer:
  Intervention characteristics: "Under this domain's Adaptability construct we will address findings relating to research sub-question b) How did PCCBSS adapt to delivery and workflow changes imposed by the COVID-19 pandemic (temporal impact)?"Inner setting: "Under this domain's constructs we will address findings relating to research sub-question a) What organizational contextual factors affect services' implementation (internal impacts)?"

We believe we have acted consistently and coherently in our conduct of this research, and hope the clarification in the text against the sub-questions reconciles this reviewer's uncertainty.

Reviewer – I would rather suggest to move the main research questions to the end of the introduction and then start with the study design in the methods section. I would move the PPI and ethical approval to the end.

- Author response - Thank you for this suggestion, we agree with moving the research questions to the end of the Introduction and have also moved the PPI and ethics section to the end of the Methods before the Key Outputs section.

Reviewer – Can you provide the interview guide as supplementary material? This would make it easier to "replicate" your methods and use them in other settings.

- Author response - We completely agree it is important to share the topic guide, and had already done so in the Extended data section, but have now made this clearer by detailing its contents:

"Extended data
OSF: CONNECTED COMMUNITIES | Learning lessons from person-centred community-based support services' implementation. https://doi.org/10.17605/OSF.IO/TJDP7 (Christian

et al., 2023).
This project contains the following extended data:
- Operationalisation of CFIR and NPT domains and constructs for Connected Communities .docx
- Connected Communities WP2 Topic guide V1.2 09 01 2023.docx
Data are available under the terms of the Creative Commons Attribution 4.0 International license (CC-BY 4.0)."
However we acknowledge that we had only explicitly indicated within the body text that the operationalisation of our framework constructs was in the OSF project folder ("A full operationalisation of the combined CFIR and NPT implementation coding framework used within this study can be found in the 'Extended Data' section below (Christian et al., 2023)."), and that we should also do this for the topic guide too. Thank you for spotting this omission. We have addressed it in the text by inserting the following:
"The WP2 topic guide questions used in this study with service/linked providers and service users can be found in the 'Extended data' section below (Christian et al., 2023)."

Reviewer – The protocol was published on OSF after the data collection had ended. Please provide a statement on differences between the primary research proposal and the current protocol. Or state that there were none.

- Author response - We did not publish the protocol on OSF, only the framework operationalisation of constructs and the WP2 topic guide questions - but you are correct that these were made available on OSF after completion of data collection. They were made available to support publication of this protocol, rather than having supplementary materials, as the publishing editorial office had advised us to do.

As such, there are no differences between the published protocol and how we conducted the study – there was no other protocol in use. To address this, we have made explicit in the Extended data section what the OSF uploaded documents are:
This project contains the following extended data:
- Operationalisation of CFIR and NPT domains and constructs for Connected Communities .docx
- Connected Communities WP2 Topic guide V1.2 09 01 2023.docx
Data are available under the terms of the Creative Commons Attribution 4.0 International license (CC-BY 4.0)."

Reviewer – I am missing information on funding and potential conflicts of interest

- Author response - We're sorry you were unable to find this information, it has always been available in the PDF format (bottom of p3) and online – this journal's stylised headings uses the words Competing interests instead of Conflicts of interest, and refers to Grant information rather than Funding:

"Competing interests
No competing interests were disclosed.
Grant information
This project is funded by the National Institute for Health Research (NIHR) under its National Priorities Programme for Adult Social Care and Social Work led by the University of Kent and the Kent Sussex and Surrey ARC (NIHR300099) and awarded to Professor Julien Forder.

'Connected Communities' was selected as 1 of the 5 projects to be delivered under the National Priorities Programme, which ARC NWC and University of Central Lancashire are leading in collaboration with the University of Kent and Kent Sussex and Surrey ARC. The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care."

Competing Interests: No competing interests.

Reviewer Report 02 January 2024

https://doi.org/10.3310/nihropenres.14643.r30895

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Dragana Vidovic
[1] University of Essex, Colchester, England, UK
[2] University of Essex, Colchester, England, UK

1. **Is the rationale for, and objectives of, the study clearly described?**

The aim of this project is to better understand how person-centred community-based support services (PCCBSS) are being implemented and embedded into practice and within other services. The authors correctly identify a lack of understanding of the role and involvement of social care providers in implementing PCCBSS. The current literature and practice lack insights into how PCCBSS is implemented within social care sector as well as across different public services. This work has a potential to significantly contribute to the field of PCCBSS and the overall work of health and social care services.
With that said, there are aspects of the study that require further clarification.
The authors specify that their focus is PCCBSS services who interacted with individuals who self-referred, without providing justification for focusing on self-referral cases in particular (p.5, "Main research question/Aims and objectives"). One the same page 5, authors seems to suggest that they will also include cases where individuals were referred by other services (p.5 "To be eligible, a PCCBSS must have an identifiable operating organisation, and use signposters (variously termed 'link workers', 'social prescribers', 'community navigators', etc.) to support professionally referred and/or self-referred service users to access appropriate individually indicated networks, groups, and resources."). The focus should be clarified.
Referrals to social prescribing / PCCBSS services come from a variety of sources such as GP, social care, community organisations, family members, self-referral and many others. It is fine to focus on a particular referral pathway; however, it is important to justify why a particular focus on self-referral given the variety of referral pathways.
Also, it is not clear if the authors are looking to differentiate between PCCBSS and social prescribing – this would be important to clarify (p. 4, Introduction, 2nd paragraph). I would encourage authors to further elaborate on the definition of social prescribing in the most recent literature, ex: https://bmjopen.bmj.com/content/bmjopen/13/7/e070184.full.pdf

Furthermore, in some sections of the paper authors specify their focus to be on PCCBSS implementation, while in others, the focus is on understanding how PCCBSS can be embedded within the existing frameworks. In the "Key Outputs" section it is clear that the authors are interested in both aspects and that implementing and embedding of PCCBSS entails specific steps/activities. However, in the "Main Research Question/Aims and objectives" these two words are being used interchangeably. A PCCBSS project can be implemented at one point in time or across numerous time periods and can be embedded to a varying degree, from minimal interaction with other services to becoming a part of an overall public health strategy in a region. It is not clear if authors are interested in what organisational contextual factors affect services' implementation (section "Research sub-questions" question a. refers to implementation), what organisational contextual factors affect services' embeddedness, or both? If both, then it needs to be clear that these are distinct processes and not interchangeable (another sub-question needs to be added to include embeddedness).
Lastly, in regards to the research question, "b" regarding COVID-19, (How did PCCBSS adapt to delivery and workflow changes imposed by the COVID-19 pandemic?), it is important to make a distinction between a research question and a process of considering background/contextual factors that might impact on the main research question. Given that PCCBSS were implemented during COVID-19, the impact of the pandemic has to be taken into consideration as the authors suggest on p.4. However, based on the information provided in the introduction, question "b" cannot be introduced as a research question/sub-question.
The literature regarding the claim on the impact of social prescribing on the outcomes of interest could be further expanded to provide a more nuanced understanding of the literature in this area. The National Academy for Social Prescribing webpage provides a detailed overview of the literature across various areas. The quality of the evidence regarding the impact of social prescribing has been steadily improving over the last 3-4 years and is being continually updated and reviewed to improve ways in which evidence is collected, the type of evidence that is being collected and methods of collection needed for effective project evaluation.

1. **Is the study design appropriate for the research question?**

Study design is appropriate for the research question/s, however minor edits are needed to ensure that the study reaches it's full potential. The research question/s should be clarified as mentioned in the response above.
Also, given that given that one of the aims of this work is to provide recommendations for setting up future PCCBSS, more information is needed on how three case studies have been selected. Are the three cases representative enough for findings to be generalizable at the wider regional and national level? How were the three cases selected?
Based on the criteria on p.5, most of the PCCBSS / social prescribing projects would be eligible to be incuded ("To be eligible, a PCCBSS must have an identifiable operating organisation, and use signposters (variously termed 'link workers', 'social prescribers', 'community navigators', etc.) to support professionally referred and/or self-referred service users to access appropriate individually indicated networks, groups, and resources.").
Below, I also provide minor suggestions regarding the Methods section.
The "Methods" section starts with Patient and Public Involvement (PPI), with detailed explanation of the PPI framework and it's importance, yet, it concludes that the public will primarily be involved in only one aspect of the project, namely dissemination. While this is acceptable and understandable, the last sentence of this section comes as a surprise given the previous paragraphs on the importance of PPI framework. The authors could improve this section by providing a brief explanation of the limited nature of public involvement.
In the "Study Design" section where the authors briefly mention CFIR and NPT, it would be useful

to explain in 1-2 sentences what these methods are at the outset (“ex. tools used for support implementation and evaluation of interventions in health and social care”). Theory can mean different things to different readers, and for those readers who might not be familiar with the CFIR or NPT approaches might be left wondering what these refer to.

1. **Are sufficient details of the methods provided to allow replication by others?**

The authors provide a detailed overview of the methods in the “Combined CFIR and NPT implementation framework” section. However, for the replication purposes, it would be useful to have a wording of the questions that will be used to conduct semi-structured interviews to discuss pre-determined topics based on the CFIR and NPT (p.6, paragraph 5).
Also, what is needed for replication, is a clarity regarding how the case studies have been chosen.

1. **Are the datasets clearly presented in a useable and accessible format?**

The description of the data collection steps, work packages and coding rules are sufficient to envision that the data will be organized in a useable and accessible format.

Is the rationale for, and objectives of, the study clearly described?
Partly

Is the study design appropriate for the research question?
Partly

Are sufficient details of the methods provided to allow replication by others?
Yes

Are the datasets clearly presented in a useable and accessible format?
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Public Health, Social Prescribing, Community Connectedness, Loneliness, Civic Participation

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Author Response 05 Nov 2024

Danielle Christian

Dear Dr Dragana Vidovic,
Thank you for taking the time to review our article.
We really appreciate your recommendations for improvement based on your expertise in this area. We have responded to each of your suggested amendments below.
Yours sincerely,
Dr Danielle Christian, on behalf of the authors

Reviewer - It is not clear if the authors are looking to differentiate between PCCBSS and social prescribing – this would be important to clarify (p. 4, Introduction, 2nd paragraph). I would encourage authors to further elaborate on the definition of social prescribing in the most recent literature, ex:
https://bmjopen.bmj.com/content/bmjopen/13/7/e070184.full.pdf
Author response - Thank you for prompting us to clarify this issue in our protocol. Our study is broader than social prescribing alone, which is just one of several forms of person-centred community-based support services that we have explored. We have no objection to citing the newly available conceptual definition of SP from Muhl 2023 (which we have noted in our protocol amendment was published after data collection had been completed in our study. This has replaced the text from the earlier NHS 2020 definition, and Muhl 2023 has been added to the references section (Muhl C, Mulligan K, Bayoumi I, et al. Establishing internationally accepted conceptual and operational definitions of social prescribing through expert consensus: a Delphi study. BMJ Open 2023;13:e070184. doi:10.1136/bmjopen-2022-070184)
PREVIOUSLY WAS "*The most frequently used term is 'social prescribing', which the NHS defines as "local agencies which refer individuals (service users), or permit self-referral, to link worker(s) for engagement with community groups and statutory services who provide personalised practical, emotional, and holistic support to enhance people's health and wellbeing" (NHS England; NHS England and NHS Improvement 2020).*"
NOW is "*PCCBSS present in different models and taxonomies, although the most frequently used term is 'social prescribing', which is now (published after completion of our data collection) internationally accepted to be conceptually defined as "a means for trusted individuals in clinical and community settings to identify that a person has non-medical, health-related social needs and 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" (Muhl 2023).*"

Reviewer - Furthermore, in some sections of the paper authors specify their focus to be on PCCBSS implementation, while in others, the focus is on understanding how PCCBSS can be embedded within the existing frameworks. In the "Key Outputs" section it is clear that the authors are interested in both aspects and that implementing and embedding of PCCBSS entails specific steps/activities. However, in the "Main Research Question/Aims and objectives" these two words are being used interchangeably. A PCCBSS project can be implemented at one point in time or across numerous time periods and can be embedded to a varying degree, from minimal interaction with other services to becoming a part of an overall public health strategy in a region. It is not clear if authors are interested in what organisational contextual factors affect services' implementation (section "Research sub-questions" question a. refers to implementation), what organisational contextual factors affect services' embeddedness, or both? If both, then it needs to be clear that these are distinct processes and not interchangeable (another sub-question needs to be added to include embeddedness).
Author response - Thank you for seeking clarity around our use of the term 'embeddedness' and its relative use with 'implementation'.
As May 2009 states, embeddedness occurs as a result of implementation activity (p540, "Material practices become routinely embedded in social contexts as the result of people

working, individually and collectively, to implement them") – as such they are inherently entangled concepts, with embeddedness being the resulting part of the implementation process (which may happen at a single point in time, or cumulatively from discrete incremental implementation activities), and we have sought to maintain reader clarity by consistently referring to our aim as being around implementation, rather than embeddedness in amending our protocol text.
Our research sub-questions relate to internal (Question a) and external (Question b) impacts upon the PCCBSS' implementation in to usual working practices, and we have made this clear in the text as follows:
"*Research sub questions*
a) What organisational contextual factors affect services' implementation (internal impacts)?
b) How did PCCBSS adapt to delivery and workflow changes imposed by the COVID-19 pandemic (temporal impact)? "
We have also added text under each of these domains to make this clearer:
Intervention characteristics: "*Under this domain's Adaptability construct we will address findings relating to research sub-question b) How did PCCBSS adapt to delivery and workflow changes imposed by the COVID-19 pandemic (temporal impact)?*"
Inner setting: "*Under this domain's constructs we will address findings relating to research sub-question a) What organisational contextual factors affect services' implementation (internal impacts)?*"
We note for transparency though, that we have not amended our framework operationalisation held under the Extended Data section, as we have used these construct definitions in our analyses.

Reviewer - The literature regarding the claim on the impact of social prescribing on the outcomes of interest could be further expanded to provide a more nuanced understanding of the literature in this area. The National Academy for Social Prescribing webpage provides a detailed overview of the literature across various areas. The quality of the evidence regarding the impact of social prescribing has been steadily improving over the last 3-4 years and is being continually updated and reviewed to improve ways in which evidence is collected, the type of evidence that is being collected and methods of collection needed for effective project evaluation.
Author response - Thank you for drawing our attention to improving our content in the protocol around recent publications detailing social prescribing evidence quality.
Coincidentally, the second peer reviewer for the protocol is lead author on a systematic review on social prescribing's effectiveness as an intervention, which indicates that evidence quality remains low, and that there continues to be an absence of high-quality research. In exploring this and other available literature, we reflected that despite there being an increasing body of evidence for social prescribing, that it is still of variable quality.
We have included substantially more references to the literature and tightened the statement, which now reads as:
"*The evidence for the effectiveness of social prescribing indicates an absence of high-quality research (Napierala 2022; Khan 2024; Pescheny 2020; Polley 2022; Bickerdike 2017), although studies have reported almost wholly positive impacts from social prescribing (while being limited by a dearth of long-term controlled study availability), with a modest reduction in the use of healthcare resources, and benefits to patients through improvement to their mental and physical*

health (Dayson et al., 2022; Napierala 2022; Polley 2022; National Academy for Social Prescribing 2022)."

Reviewer - The authors specify that their focus is PCCBSS services who interacted with individuals who self-referred, without providing justification for focusing on self-referral cases in particular (p.5, "Main research question/Aims and objectives"). One the same page 5, authors seems to suggest that they will also include cases where individuals were referred by other services (p.5 "To be eligible, a PCCBSS must have an identifiable operating organisation, and use signposters (variously termed 'link workers', 'social prescribers', 'community navigators', etc.) to support professionally referred and/or self-referred service users to access appropriate individually indicated networks, groups, and resources."). The focus should be clarified. Referrals to social prescribing / PCCBSS services come from a variety of sources such as GP, social care, community organisations, family members, self-referral and many others. It is fine to focus on a particular referral pathway; however, it is important to justify why a particular focus on self-referral given the variety of referral pathways.

Author response - We are interested in all types of referral to PCCBSS (which are broader than social prescribing alone) – the mention of self-referral was to be inclusive of the routes service users take to engage with these services, and is in no way limited to focusing on self-referral alone (hence the use of brackets around 'self-').

We have clarified this in the text as follows:

"With regards to 'Connected Communities', we are specifically interested in any PCCBSS (across a differentiating range of service intensities, which may (not) include additional support beyond signposting (e.g. models indicated by Husk 2019)) where a signposter consults with a service user, who is (self-)referred, to identify their needs or support to access other local services (regardless of setting, referral route, operating organisation or funding model)."

Reviewer - In regards to the research question, "b" regarding COVID-19, (How did PCCBSS adapt to delivery and workflow changes imposed by the COVID-19 pandemic?), it is important to make a distinction between a research question and a process of considering background/contextual factors that might impact on the main research question. Given that PCCBSS were implemented during COVID-19, the impact of the pandemic has to be taken into consideration as the authors suggest on p.4. However, based on the information provided in the introduction, question "b" cannot be introduced as a research question/sub-question.

Author response - We respectfully disagree, as our research sub-questions relate to internal (Question a) and temporal (Question b) impacts upon the PCCBSS' implementation into usual working practices.

We have clarified this in the text as follows:

"Research sub questions
a) What organisational contextual factors affect services' implementation (internal impacts)?
b) How did PCCBSS adapt to delivery and workflow changes imposed by the COVID-19 pandemic (temporal impact)? "

In our analyses, we have used our a priori framework operationalisation (available in Extended data) to cover internal impacts (sub question A) under Domain 3, Inner setting,

and temporal impacts (of which the pandemic is one) under Domain 1, Intervention characteristics.
We have also added text under each of these domains to make this clearer:
Intervention characteristics: *"Under this domain's Adaptability construct we will address findings relating to research sub-question b) How did PCCBSS adapt to delivery and workflow changes imposed by the COVID-19 pandemic (temporal impact)?"*
Inner setting: *"Under this domain's constructs we will address findings relating to research sub-question a) What organisational contextual factors affect services' implementation (internal impacts)?"*
We believe we have acted consistently and coherently in our conduct of this research and hope the clarification in the text against the sub-questions reconciles this reviewer's uncertainty.

Reviewer - Given that given that one of the aims of this work is to provide recommendations for setting up future PCCBSS, more information is needed on how three case studies have been selected. Are the three cases representative enough for findings to be generalizable at the wider regional and national level? How were the three cases selected?
Author response - Thank you for seeking clarification on our selection of the case study PCCBSS, we have addressed this in the text, but wish to highlight that we have not claimed the case study services will be generalisable to the wider region or nation.
Our study extension period permits us to consult other PCCBSS in focus groups to sense-check applicability of our localised regional findings against more diverse populations (e.g. age, ethnicity, rurality) nationally than the North-West Coast's population allows for, and we will refine our toolkit content based on these discussions, but that is a subsequent piece of work discrete from this study.
The content now reads as:
"*WP1 involves collecting data by reviewing existing service documents from three PCCBSS case studies (identified by convenience snowball sampling of networked member organisations to NIHR ARC NWC, and representative of a local intersecting network of PCCBSS regionally), and WP2 entails interviewing staff and service users (*≤20 participants per PCCBSS)."

Reviewer - The "Methods" section starts with Patient and Public Involvement (PPI), with detailed explanation of the PPI framework and it's importance, yet, it concludes that the public will primarily be involved in only one aspect of the project, namely dissemination. While this is acceptable and understandable, the last sentence of this section comes as a surprise given the previous paragraphs on the importance of PPI framework. The authors could improve this section by providing a brief explanation of the limited nature of public involvement.
Author response - We can see how the reviewer has come to this assumption and perhaps done ourselves an injustice in the section by not making the 3 levels of PPI actively undertaken clearer.
We have changed the formatting to support identifying these aspects more readily.
We have also amended the final sentence to better describe the PPI involvement around coding/analysis interpretation of findings, and local level statement to include review and

amendments of public-facing materials – now reads:
"*The public were not involved in the design and conduct of the study, the choice of outcome measures, or recruitment to the study, but will be integral in reviewing and refining public-facing materials, engaging in initial coding and analysis interpretation discussions, and designing and agreeing plans for dissemination of the study findings and recommendations for moving this work forward.*"

Reviewer - In the "Study Design" section where the authors briefly mention CFIR and NPT, it would be useful to explain in 1-2 sentences what these methods are at the outset ("ex. tools used for support implementation and evaluation of interventions in health and social care"). Theory can mean different things to different readers, and for those readers who might not be familiar with the CFIR or NPT approaches might be left wondering what these refer to.
Author response - We appreciate this clarification and have addressed this by inserting:
"*This study combines two widely-used implementation theoretical tools in a single framework for data collection and analysis to identify and explain key aspects of implementing and embedding new interventions, as also undertaken in earlier implementation work (Burn et al., 2020; Schroeder 2022):*"
New study added to references:
Burn AM, Vainre M, Humphrey A, Howarth E. Evaluating the CYP-IAPT transformation of child and adolescent mental health services in Cambridgeshire, UK: a qualitative implementation study. Implementation Science Communications (2020)1:89. https://doi.org/10.1186/s43058-020-00078-6
Already referenced:
Schroeder D, Luig T, Finch TL, Beesoon S, Campbell-Scherer DL. Understanding implementation context and social processes through integrating Normalization Process Theory (NPT) and the Consolidated Framework for Implementation Research (CFIR). Implementation Science Communications (2022)3:13. https://doi.org/10.1186/s43058-022-00264-8

Reviewer - The authors provide a detailed overview of the methods in the "Combined CFIR and NPT implementation framework" section. However, for the replication purposes, it would be useful to have a wording of the questions that will be used to conduct semi-structured interviews to discuss pre-determined topics based on the CFIR and NPT (p.6, paragraph 5).
Author response - We completely agree it is important to share the topic guide, and had already done so in the Extended data section:
"Extended data
OSF: CONNECTED COMMUNITIES | Learning lessons from person-centred community-based support services' implementation. https://doi.org/10.17605/OSF.IO/TJDP7 (Christian et al., 2023).
This project contains the following extended data:
- Operationalisation of CFIR and NPT domains and constructs for Connected Communities .docx
- Connected Communities WP2 Topic guide V1.2 09 01 2023.docx
Data are available under the terms of the Creative Commons Attribution 4.0 International license (CC-BY 4.0)."
However, we acknowledge that we had only explicitly indicated within the body text that the

operationalisation of our framework constructs was in the OSF project folder *("A full operationalisation of the combined CFIR and NPT implementation coding framework used within this study can be found in the 'Extended Data' section below (Christian et al., 2023).")*, and that we should also do this for the topic guide too. Thank you for spotting this omission. We have addressed it in the text by inserting the following:
"The WP2 topic guide questions used in this study with service/linked providers and service users can be found in the 'Extended data' section below (Christian et al., 2023)."

Competing Interests: No competing interests.