



Evaluating Social Prescribing

Literature review for the MDSN Evaluation Community of Practice collaborative project

Produced for the Midlands Decision Support Network by The Strategy Unit

October 2022

Prepared by:

Mo Davies Research Assistant imogen.davies6@nhs.net Paul Mason Head of Evaluation paul.mason14@nhs.net

Strategy Unit. Midlands Decision Support Network



Document control

Document Title	Evaluating Social Prescribing
Prepared by	Mo Davies
Checked by	Paul Mason
Date	12 October 2022



Evaluating Social Prescribing

Contents

1.	Backgr	ound	.4
2.	Planning and setup		
	2.1	Coproduction with stakeholders	. 6
	2.2	Developing programme theories	. 6
	2.3	Mixed methods approaches	. 8
3.	Selectio	on of outcome measures	10
	3.1	Individual outcomes	10
	3.2	Service outcomes	15
	3.3	System outcomes	16
	3.4	Community & voluntary sector outcomes	16
4.	Method	ological considerations for quantitative evaluations	17
	4.1	Control groups	17
	4.2	Sample sizes	19
	4.3	Methods for economic evaluations	19
5.	Reporti	ng results	22
6.	Referer	ices	23



1. Background

Social Prescribing (SP) is an intervention, usually delivered in primary healthcare, in which patients experiencing social isolation or low wellbeing are referred to community or cultural activity programmes which may benefit them. This can include arts-based, museum-based, nature-based and exercise-based group activities, as well as community support groups or befriending programmes to reduce loneliness, or wider support services to address social determinants of health. Referrals are often made via a specialist SP link worker with knowledge of the local community sector. In the UK health and social care sector, SP has seen a rapid expansion in the last decade, including some large-scale NHS England trials in the 'New Care Models vanguards' and 'Healthy New Towns' programmes, both launched in 2015 (<u>The King's Fund, 2019</u>). Further expansion of SP is promoted in recent national policy, including the 2019 Long Term Plan which commits to funding access to a trained social prescribing link worker in every GP practice in England by 2023/24, with the aim of referring 900,000 patients by 2024.

Despite this rapid growth, recent systematic reviews of SP evaluations identify continued evidence gaps, particularly around the cost-effectiveness of SP and, fundamentally, the processes of how SP works, why and for whom. Weaknesses in the evidence base include: lack of clarity in identifying the characteristics and aims of the SP intervention being evaluated; a wide variety of approaches to measuring outcomes; and over-reliance on uncontrolled study designs which fail to establish whether the SP intervention has caused any changes seen. In addition, many mixed-methods evaluations fail to show impact, with qualitative data suggesting SP has been beneficial for participants but quantitative data shows no significant changes.

There are major projects currently underway in the UK which may address some of these issues. These include: the ACCORD project (2020-23) led by the <u>Wales School for Social</u> <u>Prescribing Research</u> to produce an evidence-based evaluation framework and reporting standards for SP; and, an ongoing evaluation by researchers from the universities of Exeter, Sheffield, Sheffield Hallam and Plymouth of the £5.8m <u>Green Social Prescribing programme</u>, running 2021-23 in seven Integrated Care Systems (ICSs) across England. In advance of publications from these projects, this review aims to summarise current evidence on best practices in evaluation of SP initiatives, drawing on recent review articles and national guidelines.

The review has been produced to support the Midlands Decision Support Network (MDSN) Evaluation Community of Practice (CoP) collaborative social prescribing evaluation project. The collaborative project aims to share learning from across different SP evaluations being undertaken by members of the CoP in terms of methods (the current stage at the time of



writing) and findings (later stage) to strengthen the evidence base for SP through robust evaluation methods.

Because most of the evaluations that suggest social prescribing is effective draw on qualitative methods (<u>Muñoz et al., 2020</u>), although this review has included some of these approaches, priority was given to papers including quantitative approaches to support the collaborative project in developing robust methods for measuring impact.

The approach taken was to search for review articles on evidence for or evaluations of SP published since the Muñoz et al. (2020) review which summarised the literature published up to 2019. Searches were carried out on the Pubmed and Scopus databases, returning 36 unique results. Ten were selected for inclusion in this review, identified as including quantitative and mixed-methods approaches to SP evaluation. The remaining 26 were excluded due to focusing too narrowly on one type of SP (11), focusing on broader relationships between community and health rather than SP interventions specifically (eight), only including a single study (four), or focusing on design rather than evaluation of SP interventions (three). Other articles, including grey literature, were identified through citations and included where they made an additional contribution to knowledge of best practices in SP evaluations. As a result,31 sources are included in this review.



2. Planning and set-up

2.1 Coproduction with stakeholders

Incorporating stakeholder perspectives is argued to be crucial in carrying out a successful evaluation, including in the MRC-NIHR 'Framework for Developing and Evaluating Complex Interventions' (Skivington et al., 2021). In their review, Elliott et al. (2022) identify coproduction between evaluators, service providers and commissioners as one of five key ingredients of successful SP evaluations, with benefits including:

- 1. The opportunity to develop consensus on evaluation design and study materials prior to beginning the evaluation, increasing the likelihood of acceptance and usability of the evaluation outputs by decision-makers
- 2. Improved participant recruitment through engaging service providers in the evaluation process and gaining their co-operation in identifying study participants, helping to address the issues of small or biased samples in SP evaluations.

They also argue that there are particular benefits to engaging service users and the public (<u>Elliott et al., 2022</u>). This includes in the selection of outcome measures, where service users may have different perspectives from providers or commissioners on what constitutes a positive outcome. For example, Araki et al.'s (<u>2022</u>) literature review finds that service users' descriptions of the benefits of SP often feature narratives of independence, confidence to gain employment, and self-determination in their own healthcare; these factors may not always be reflected in standardised measures of wellbeing or healthcare utilisation.

Although close involvement of service providers in the evaluation design is recommended, research cautions against using SP link workers to carry out any substantial amounts of data collection. This risks adding unnecessary burden to the link workers (<u>Elliott et al., 2022</u>) and could reduce trust or otherwise alter the relationship between the link worker and service user (<u>Muñoz et al., 2020</u>; <u>Calderon-Larrañaga et al., 2021</u>; <u>Elliott et al., 2022</u>). While it may be possible to involve link workers or voluntary sector professionals in administering very short quantitative surveys, more extensive qualitative interviewing should be conducted by the evaluation team independently of service providers.

2.2 Developing programme theories

Echoing the wider literature on designing effective, robust evaluation, it is recommended that evaluators establish the programme theory, often summarised in a logic model, which



describes and links the inputs, activities, outputs, outcomes and impacts intended for the intervention. This is beneficial for SP evaluations in three ways:

1. Understanding complex interventions to enable process evaluation

SP interventions can require complex referral pathways involving interactions between multiple individuals, including service users, GPs, SP link workers, and professionals in the VCS activities. Husk et al. (2019) suggest the pathway should be split into at least three stages in process evaluations of SP initiatives: agreeing to a healthcare professional's referral to a community activity, first attendance at the activity, and continued adherence to the activity for the length of the SP intervention. In fact, for some initiatives additional stages exist – such as a referral form a GP to an SP link worker, and continued contact between the service user and the SP link worker after beginning the community activity – sometimes with the ability to request a different activity (Calderon-Larrañaga et al., 2021). It is crucial in a process they are evaluating, in order to align research questions, study materials and participants (Elliott et al., 2022) and report details of the intervention in any published evaluation for other researchers to learn from (Pescheny et al., 2020; Costa et al., 2021).

2. Understanding how the intervention is intended to work to enable selection of appropriate outcome measures

SP interventions are varied in target populations and specific aims: some initiatives intend to address loneliness and social isolation in a general population, others target people with particular long-term mental or physical health conditions and aim to improve self-management of their conditions. It is important to understand exactly how the intervention works in order to identify measurable outcomes that are truly relevant to the particular intervention.

For instance, although many SP interventions aim to reduce healthcare utilisation, some evaluations find that healthcare usage has in fact increased (<u>Husk et al., 2019</u>). In some cases this may in fact be the expected result: some SP initiatives for autistic adults specifically aim to increase individuals' self-advocacy abilities (<u>Featherstone et al., 2021</u>), which might be expected to increase rather than decrease healthcare usage in a population with existing unmet need. While it may still be beneficial to evaluate healthcare utilisation changes, it is useful for evaluators to understand beforehand how the activities, outputs and intended outcomes of the intervention are linked, to enable interpretation of potentially unexpected results. Evaluation of healthcare usage is discussed further in section 3.3 below.

The case study below provides an example of an evaluation that carefully considers mechanisms of change as well as final outcomes.



Case study 1: Mechanisms of change in SP

Kellezi et al. (2019) conducted a mixed-methods study of an SP intervention introduced in 2017 in Nottinghamshire, for patients managing chronic illness and experiencing loneliness. Using a mediation analysis to analyse relationships between different outcome measures, they found evidence for a series of important relationships in SP predicted by previous theoretical and qualitative work. These were: an increase in an individual's number of group memberships predicted a higher sense of community belonging at follow-up; secondly, community belonging predicted lower loneliness at follow-up; and finally, lower loneliness predicted a lower level of healthcare utilisation. The study could therefore link an output of participating in the SP activity – increased group memberships – to individual and system-level outcome measures.

Finally, the creation of a programme theory or logic model can also help with separating intended outcomes from longer-term wider impacts, which are part of the goals of the intervention but may not be expected to see measurable change during the timeframe of the evaluation. This is particularly important for SP evaluation, as discourse around SP initiatives often treats SP as a solution to complex problems such as structural health inequalities or the loss of personalisation in primary healthcare (<u>Calderon-Larrañaga et al., 2021</u>), which a small-scale SP initiative cannot reasonably be expected to solve. In keeping with evaluation best practice, the use of a logic model to separate wider impact on society from specific measurable outcomes can help evaluators in deciding appropriate scope for the evaluation.

2.3 Mixed methods approaches

As with the wider evaluation literature, the MRC-NIHR guidelines on complex health programme evaluations make a strong recommendation towards mixed-methods approaches, incorporating qualitative process evaluation and economic evaluation as well as quantitative impact evaluation (<u>Skivington et al., 2021</u>). This is especially important in SP evaluation, where there is a mismatch between almost universally positive findings in qualitative studies and more mixed results in quantitative studies (<u>Muñoz et al., 2020</u>; <u>Pescheny et al., 2020</u>; <u>Araki et al., 2022</u>).

Elliott et al. (2022) recommend a sequential and iterative approach to mixed-methods SP evaluation where possible, where findings in one area inform the design of the other area. They provide examples where this has occurred successfully in SP evaluations, with insights from quantitative analysis used to recruit a representative sample of participants or produce



interview questions; or exploratory qualitative analysis used to inform the selection of a study design and appropriate tools for quantitative analysis.

A crucial element often missing from mixed-methods SP evaluations is triangulation of the findings from different methodologies (<u>Elliott et al., 2022</u>; <u>Muñoz et al., 2020</u>).



3. Selection of outcome measures

The wide variety of possible SP outcome measures is a major factor contributing to confusion in the SP evidence base (<u>Pescheny et al., 2020</u>). This section provides recommendations on outcome measures at the individual, service, system and wider community levels, which are commonly identified as categories of outcomes in SP evidence reviews (e.g. <u>Vidovic et al., 2021</u>), NHS England guidelines (<u>NHS England, 2020</u>) and in qualitative research with SP professionals (<u>Social Prescribing Network, 2016</u>; <u>Elliott & Wallace, 2021</u>).

3.1 Individual outcomes

At the level of the individual service user, there are several different types of outcome areas identified for SP. These include general health and wellbeing; loneliness and social isolation; and ability to self-manage health and wellbeing. These are shown in Table 1 below, along with examples of validated measures used in SP evaluations identified through this review.

As illustrated in case study 1 above, a single SP evaluation may consider several of these areas, with reduced loneliness and increased social contact often considered intermediate outcomes which can lead to improved health and wellbeing outcomes.

Other individual outcome measures may also be appropriate depending on the target population and precise aims of the SP intervention. For example, SP interventions targeting populations with specific long-term health conditions may measure relevant biomarkers, such as: HbA1c level in people with Type 2 diabetes (Wildman & Wildman, 2021); cortisol levels in people with stress or mental health conditions (<u>Howarth et al., 2020</u>); and respiratory health measures in people with COPD participating in a singing intervention (<u>Helitzer & Moss, 2022</u>).

Medication adherence, levels of physical activity, or attitudes towards self-care behaviours such as exercise and healthy eating may also be measured where an intervention has aimed to improve self-management of health conditions. Although these can be measured quantitatively, this review did not identify any validated measures in these areas that have been used in SP evaluations. Similarly, confidence to gain employment or skills gained are outcomes sometimes evaluated (especially for interventions supporting populations experiencing particular practical difficulties, such as autistic adults struggling to find employment (Featherstone et al., 2021) or recent migrants with limited English language skills (Zhang et al., 2021)), but validated quantitative measures for these were not identified in the SP evaluation literature.



Table 1: Validated quantitative measures of health and wellbeing, loneliness, and self-management behaviours used in SP evaluations.

Area	Example validated measures	Description	Notes
Wellbeing	WEMWBS (Warwick-Edinburgh Mental Wellbeing Scale)	7- (short) or 14- (standard) item questionnaire measuring emotional and functional aspects of mental wellbeing	Most commonly used measure across SP literature reviewed
	ONS4	4-item questionnaire used by UK Office for National Statistics for personal wellbeing, covering life satisfaction, sense of purpose and emotions	Recommended in NHS England Social Prescribing Common Outcomes Framework (2020)
	MYMOP (Measure Yourself Medical Outcome Profile)	Individualised questionnaire in which patient selects their own most difficult two symptoms and most important activity they are prevented from doing by a health condition, to measure over time; also covers general wellbeing and medication use	
	MYCaW (Measure Yourself Concerns and Wellbeing)	Individualised questionnaire in which patient chooses their own 1-2 greatest wellbeing concerns to measure over time	



	UCL Museum Wellbeing Measures Toolkit	6- (short) or 12- (long) item questionnaire on psychological wellbeing, focused on mood or emotion changes during a short activity	Developed specifically to assess effect of museum-related SP activities on psychological wellbeing
General health and disability	WHOQOL-BREF (WHO Quality of Life)	26-item questionnaire on physical, psychological, environmental and social health, aiming for cross-culturally valid estimation of health-related 'quality of life'	
	EQ-5D	5-item questionnaire on health, covering mobility, self-care, usual activities, pain/discomfort and anxiety/depression	
	COOP-WONCA Charts	6-item visual and written questionnaire on functional ability, covering health, wellbeing, fitness, and daily and social activities	
Mental health	PHQ-9	9-item questionnaire measuring severity of depression symptoms	
	GAD-7	7-item questionnaire measuring severity of Generalised Anxiety Disorder symptoms	
	K10	10-item questionnaire, measure of psychological distress including anxiety and depression symptoms (over last month)	
	CORE-10	10-item questionnaire, measure of psychological distress including anxiety and depression symptoms (over last week)	



	HADS	14-item questionnaire, measure of anxiety and depression symptoms (over last week)	
Loneliness and social	UCLA Loneliness Scale	20-item questionnaire, measuring feelings of social isolation and loneliness	
	Duke-UNC Functional Social Support	14-item questionnaire, measuring experience of practical social support	
	Hawthorne Friendship Scale	6-item questionnaire, measuring feelings of social isolation and social connection	
	De Jong Gierveld Loneliness Scale	6-item questionnaire, measuring social loneliness (lack of wider social network) and emotional loneliness (lack of close relationships)	
	Campaign to End Loneliness Tool	3-item questionnaire, measuring experience of social relationships, without asking directly about "loneliness"	
	R-Outcomes Loneliness	4-term questionnaire, measuring feelings of loneliness – negative questions only	Developed specifically for
	R-Outcomes Social Contact	4-item questionnaire, measuring relationships with friends and family – positive questions only	use in SP evaluation (<u>Benson et al.,</u> <u>2021</u>)
	PAM: Patient Activation Measure	10- or 13-item questionnaire, measuring knowledge, skills and confidence to self-manage health and wellbeing	Recommended in NHS England Social





Prescribing Common Outcomes Framework (<u>2020</u>)



There is often a trade-off to consider between selecting widely-used general measures – such as the WEMWBS, which is by far the most commonly-used wellbeing measure in SP evaluations – and highly specific validated measures, such as the UCL Museum Wellbeing Measures Toolkit which is designed specifically for use in museum-based SP initiatives. While specific measures may be highly suited to the initiative being evaluated, general measures offer greater comparability with other evaluations.

In the NHS context, the NHS England 'Social Prescribing Common Outcomes Framework' (2020) recommends, for the purposes of comparability, that all SP evaluations should use the ONS4 measure for wellbeing and the PAM measure of "patient activation", or ability to self-manage health and wellbeing, which are both free to access. The guidance does not discourage using other measures in addition to these, if relevant to a particular evaluation. An additional benefit of using ONS4 to measure wellbeing is that UK population-wide estimates are also publicly available (<u>VanderWeele et al., 2021</u>), enabling comparison of the SP intervention population with the general population.

3.2 Service outcomes

Elliott & Wallace (2021) report on a survey study conducted with SP professionals which aimed to identify potential quality indicators for SP. They identify the importance of understanding delivery of the service as well as the outcomes for patients. Examples of service-related indicators suggested by SP professionals include: accessibility for "mentally vulnerable" and "physically vulnerable" individuals; providing appropriate activities for service users based on knowledge of opportunities available; and, redirecting service users to other care pathways where SP would not be appropriate.

In literature reviews of SP services for autistic adults and migrants in the UK, Featherstone et al. (2021) and Zhang et al. (2021) argue that waiting times to receive SP form part of the service user's experience and should therefore be included in evaluation. To understand service performance, waiting times and uptake rates may be measured at each stage of the SP process, including referrals form healthcare professionals to SP link workers and from link workers to community or cultural activities.

Some evaluations of SP initiatives also consider equity in provision of SP services across geographical areas or specific population groups (e.g. <u>Helitzer & Moss, 2022</u>). Recent reviews commissioned by the English National Academy for Social Prescribing find evidence that certain demographic groups are under-represented in uptake of SP, including: men, who make up only 35% of those accessing SP in England (<u>Cartwright et al., 2022</u>); children and young people (<u>Cartwright et al., 2022</u>); and, people from black and minority ethnic backgrounds (<u>Tierney et al., 2022</u>).



Equity often cannot be accounted for in standard methods for economic evaluations (<u>Kimberlee et al., 2022</u>), and therefore may need to be highlighted in qualitative or quantitative analysis as an important outcome of SP initiatives.

3.3 System outcomes

At the system level, many SP evaluations measure changes in healthcare resource utilisation among service users. This is typically measured as the number of consultations each service user has with health services (<u>Costa et al., 2021</u>) typically compared to the service users' own utilisation in a baseline period, such as the 12 months prior to beginning the SP intervention.

The NHS England 'Social Prescribing Common Outcomes Framework' (2020) recommends the following measures of system-level outcomes:

- number of GP consultations
- number of A&E attendances
- number of hospital bed days
- volume of medication prescribed
- morale for staff in referring organisations (e.g. GPs and SP link workers)

Some evaluations have additionally measured utilisation of secondary care outpatient appointments and contacts with specialist mental health services, as well as, more rarely, usage of social care services (<u>Vidovic et al., 2021</u>). Social care services are often excluded as utilisation data may be less standardised or difficult to link to health care records.

3.4 Community & voluntary sector outcomes

In a <u>2016 survey</u> of its members, the national Social Prescribing Network found that benefits to the wider Voluntary and Community Sector (VCS), such as strengthened relationships between the VCS and the NHS and additional volunteering capacity in the VCS through people receiving SP, were considered important outcomes of SP initiatives. Moreover, the existence of local VCS capacity is critical to the success of any SP programme (<u>Costa et al.</u>, <u>2021</u>), and therefore evaluation of outcomes for the VCS may be important to evaluating long-term sustainability of SP initiatives.

An example survey for VCS stakeholders has been produced as part of the NHS England 'Social Prescribing Common Outcomes Framework' (2020). Additionally, qualitative work has taken place, such as in the work of White et al. (2015) where healthcare professionals and representatives from the voluntary sector were interviewed in a qualitative study of cross-sector collaboration for SP in the west of Scotland.



4. Methodological considerations for quantitative evaluations

4.1 Control groups

The majority of SP evaluations that include a quantitative (impact) evaluation use before/after experimental designs with no control groups or counterfactual (<u>Muñoz et al.,</u> 2020; <u>Pescheny et al., 2020</u>; <u>Costa et al., 2021</u>; <u>Vidovic et al., 2021</u>). This raises a challenge for establishing causality between SP interventions and any positive changes in health and wellbeing, with alternative explanations including 'regression to the mean' (since baseline wellbeing scores are typically very low for people referred to SP) or a general improvement from the sense that healthcare professionals care about the service user rather than from the specific intervention prescribed (<u>Napierala et al., 2022</u>). This causes particular issues for evaluations of cost-effectiveness of SP, as they require robust causal relationships between interventions and outcomes (Kimberlee et al., 2022</u>).

There are a small number of examples of Randomised Controlled Trials (RCTs) in SP evaluation, with case study examples identified in this review below. However, RCTs present significant practical difficulties, needing to be planned from the beginning of the intervention. There are also ethical concerns in withholding SP from participants who may benefit in order to form a control group for an RCT (<u>Pescheny et al., 2020</u>).

Case Study 2: RCT

Grant et al. (2000) evaluated an initiative in Avon providing SP to individuals with psychosocial problems. They used a randomised controlled trial design which required considerable setup: eligible patients were identified and randomised by their GPs sequentially opening sealed envelopes for each patient, which assigned them to referral to SP (90 patients) or to a control group who received routine care from their GP only (71 patients).

Measures including the HADS, Duke-UNC functional social support scale and COOP/WONCA functional health charts were assessed for both groups at baseline and after one and four months. Significantly larger improvements in wellbeing were seen for the intervention group, though at a higher cost than providing routine care when considering healthcare utilisation.

Case Study 3: Cluster-randomised controlled trial

Mercer et al. (2019) performed a cluster-randomised controlled trial of SP interventions in Glasgow. They compared a group of 288 patients referred to SP link workers with a random sample of 612 patients from other nearby GP practices not participating in the SP intervention, and assessed quality of life using the EQ-5D measure, as well as wellbeing, depression, anxiety and self-reported exercise levels at baseline and after nine months of the SP intervention.

Adjusting for baseline differences between the two groups, they found no significant differences between the intervention group and control group on any measures (although in a sub-group analysis, they did find significant improvements for the sub-group within the intervention group who had a greater number of consultations with the SP link worker).

Other, quasi-experimental, approaches have been used in SP evaluations; while these do not meet the 'gold standard' of an RCT, they are preferable to evaluations without a counterfactual and are recommended in the MRC-NIHR guidelines on complex evaluation where RCTs are impractical (Skivington et al., 2021). These include controlled before/after designs, in which a group of similar controls is identified after the intervention takes place for comparison, and historical cohort studies, in which the population of an area which has had access to SP over several years is compared with a similar population with no access to SP. Examples with learning are provided in case studies 4 and 5 below.

Case Study 4: Controlled before and after study

Dayson & Bashir (2014) analyse the Rotherham Social Prescribing Pilot, which took place from 2012 to 2014. In order to examine the effect of SP on utilisation of secondary care, they used a controlled before-and-after design with two groups: people who completed an SP intervention in the VCS (approximately 1100 people), and people who were referred to the SP service but did not ultimately take up the offer of participating in any community or cultural activity (approximately 500 people).

This second group had initially met the same criteria for referral to the SP service and so had some similarities to the group participating in SP, and were easy for the evaluation team to identify without additional resource usage due to their contact with the SP service. However, the evaluators acknowledge that there may have been systematic differences between those who did or did not take up the offer of SP, and suggest that future evaluations should use better control or comparison groups.



Case Study 5: Historical cohort study

Wildman & Wildman (2021) evaluate an SP initiative in Newcastle upon Tyne specifically targeted at individuals with long-term health conditions. They use a 'natural experiment' cohort study design, in which they compare patients registered at 16 GP practices which offered access to SP from against those at 8 similar GP practices in Newcastle which did not offer any access to the SP initiative.

Using historic routine QOF data for any patients with Type 2 diabetes at these 24 practices from 2011 to 2019, they find a statistically significant improvement in haemoglobin levels among patients at the 16 practices which did offer SP, after the introduction of SP referrals. This difference is visible between the practices that did and did not offer SP, without the researchers tracking which specific individuals in each GP practice participated in SP.

4.2 Sample sizes

There is a high risk of bias in many published SP evaluations due to small sample sizes, biased sampling strategies (such as purposive strategies where SP link workers recommend certain SP participants for inclusion in an evaluation), and high rates of participant attrition (<u>Napierala et al., 2022</u>). Pescheny et al. (<u>2020</u>) recommend that statistical power calculations should be used to choose a suitable sample size for quantitative SP studies before recruiting participants. The potential impact of follow-up timescales and the onerousness of any validated wellbeing measures used (<u>VanderWeele et al., 2021</u>) on participant attrition rates should also be considered in designing the evaluation.

4.3 Methods for economic evaluations

In a review of economic evaluations of SP, Kimberlee et al. (2022) identified some examples where Cost Benefit Analysis (CBA) and Social Return On Investment (SROI) analysis have been attempted. Both CBA and SROI can be used to calculate value for money, taking into account cost reductions from reduced healthcare utilisation as well as social value such as wellbeing gains; the main difference is that SROI includes a process of identifying and consulting stakeholders about which social benefits should be included in the calculation. Often, the identified stakeholders are those who have been involved in joint funding of SP intervention. Stakeholders commonly included in SROI evaluations of SP interventions are service users themselves, local authorities, and the Department of Work and Pensions.



As a result, economic evaluations of SP are wide-ranging in their approaches to calculations of social value. Some more basic analyses consider only the direct savings from reduced healthcare utilisation, while SROI analyses may include a much broader list of benefits: improved wellbeing, decreased falls, improved fire safety, reduction in crime, reduction in healthcare utilisation and reduction in statutory service utilisation are all given a monetary value in an Age UK (2018) evaluation of SP for older people in South London. The <u>Social Value UK 'Guide to SROI'</u> provides general guidance on best practice for performing evidence-based and impactful SROI analysis, which may be useful for SP evaluators.

Across health economic analysis, monetary and health and wellbeing values are typically combined using the NICE conversion between one Quality-Adjusted Life Year (QALY) and a monetary amount (<u>Wildman & Wildman, 2019</u>). An example of two different methods for conversion to monetary value are described in case study 6 below.

Case Study 6: Calculating social value for economic evaluations

Bertotti & Temirov (2020) conducted an economic evaluation of an SP service in City & Hackney in London. They used two different approaches to calculating monetary value of changes in wellbeing.

Firstly, they converted improvements on the EQ-5D quality of life measure into additional Quality-Adjusted Life Years (QALY), calculating a cost of £20,100 per QALY gained through the intervention. This is within the interval of £20,000-£30,000 set within the NHS for acceptable value for money.

Secondly, they used a standardised conversion between improvements on the WEMWBS measure of mental wellbeing and financial amounts. They could then include WEMWBS improvements in an SROI calculation along with other costs and social benefits, ultimately calculating an SROI in the first year of the intervention of £3.51 for every £1 spent.

An alternative and more flexible method to combining health and non-health factors in economic evaluation is through Discrete Choice Experiments, in which stakeholders assign relative values to various factors through comparison (Wildman & Wildman, 2019). Discrete Choice Experiments use a specialised survey methodology in which participants are presented with a series of pairs of alternative scenarios, and must choose a preference. In an SP context, these pairs might be, for example 'reduced loneliness' and 'increased confidence to manage health'. This results in a ranking of participants' preferences, with the possibility of assigning monetary values to each preference to include in an economic



evaluation (see case study 7. This enables the combination of multiple factors in a single economic analysis, but privileges local stakeholders' views on which outcomes are most important over the nationally recognised QALY cost conversion.

Case Study 7: Determining social value through Discrete Choice Experiments

An ongoing <u>research programme</u> funded by the NIHR for 2020-2023 will evaluate "agefriendly" initiatives in cities and communities using an SROI approach. They will consult representative panels of the target populations of the initiatives, who will rank different potential health and wellbeing outcomes of age-friendly initiatives in Discrete Choice Experiments. They will then calculate a monetary value for each social outcome, based on the prioritisation by the target population, to use in the SROI calculation.



5. Reporting results

All reviews of social prescribing evaluations describe difficulties in using systematic review or meta-analysis methods due to low quality, vague reporting of study designs. Important features for high quality reporting are listed below.

Characteristics of intervention:

- referral pathways
- role of SP link worker
- length of time of participation in community activity
- target population

Characteristics of evaluation:

- how participants were recruited
- attrition rates and reasons for participant attrition
- demographics of participants
- evaluation frameworks used for planning and collecting data
- how data were collected (including any specific tools used for quantitative data collection, baseline and follow-up measurement periods)
- how data were analysed (including any sub-group analysis)
- make-up of evaluation team
- funding sources for evaluation



6. References

Araki, K., Takahashi, Y., Okada, H. and Nakayama, T. (2022). Social prescribing from the patient's perspective: A literature review. *Journal of General and Family Medicine*. doi:10.1002/jgf2.551. Available at https://onlinelibrary.wiley.com/doi/10.1002/jgf2.551

Benson, T., Seers, H., Webb, N. and McMahon, P. (2021). Development of social contact and loneliness measures with validation in social prescribing. *BMJ Open Quality*, 10(2), p.e001306. doi:10.1136/bmjoq-2020-001306. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8127978/

Bertotti, M. and Temirov, O. (2020). *Outcome and economic evaluation of City and Hackney social prescribing scheme*. Institute for Health and Human Development, University of East London. Available at <u>https://repository.uel.ac.uk/item/887zw</u>

Calderón-Larrañaga, S., Milner, Y., Clinch, M., Greenhalgh, T. and Finer, S. (2021). Tensions and opportunities in social prescribing. developing a framework to facilitate its implementation and evaluation in primary care: a realist review. *BJGP Open*. doi:10.3399/bjgpo.2021.0017. Available at https://bjgpopen.org/content/5/3/BJGPO.2021.0017

Cartwright L, Burns L, Akinyemi O, Carder Chatterjee HGil bert H, Tierney S, Elston J, . [On behalf of the NASP Academic Partners Collaborative]. (202 ' Who is and isn't being referred to social prescribing? 2). '. London: National Academy for Social Prescribing. Available at <u>https://socialprescribingacademy.org.uk/our-work/evidencing-social-prescribing/social-prescribing-the-evidence/</u>

Costa, A., Sousa, C.J., Seabra, P.R.C., Virgolino, A., Santos, O., Lopes, J., Henriques, A., Nogueira, P. and Alarcão, V. (2021). Effectiveness of Social Prescribing Programs in the Primary Health-Care Context: A Systematic Literature Review. *Sustainability*, 13(5), p.2731. doi:10.3390/su13052731. Available at https://www.mdpi.com/2071-1050/13/5/2731

Dayson, C. & Bashir, N. (2014). *The social and economic impact of the Rotherham Social Prescribing Pilot.* Sheffield: Sheffield Hallam University. Available at https://www.artshealthresources.org.uk/docs/the-social-and-economic-impact-of-the-rotherham-social-prescribing-pilot/

Elliott, M. & Wallace, C. (2021). Identifying quality indicators for social prescribing: a group concept mapping study report. Available at http://www.wsspr.wales/publications.php



Elliott, M., Davies, M., Davies, J. and Wallace, C. (2022). Exploring how and why social prescribing evaluations work: a realist review. *BMJ Open*, 12(4), p.e057009. doi:10.1136/bmjopen-2021-057009. Available at https://bmjopen.bmj.com/content/12/4/e057009

Featherstone, C., Sharpe, R.A., Axford, N., Asthana, S. and Husk, K. (2021). Health and wellbeing outcomes and social prescribing pathways in community-based support for autistic adults: A systematic mapping review of reviews. *Health & Social Care in the Community*. doi:10.1111/hsc.13635. Available at https://onlinelibrary.wiley.com/doi/10.1111/hsc.13635

Grant C, Goodenough T, Harvey I, Hine C. A randomised controlled trial and economic evaluation of a referrals facilitator between primary care and the voluntary sector. BMJ. 2000 Feb 12;320(7232):419-23. doi: 10.1136/bmj.320.7232.419. PMID: 10669447; PMCID: PMC27287. Available at https://pubmed.ncbi.nlm.nih.gov/10669447/

Helitzer, E. and Moss, H. (2022). Group singing for health and wellbeing in the Republic of Ireland: the first national map. *Perspectives in Public Health*, 142(2), pp.102–116. doi:10.1177/17579139221081400. Available at https://journals.sagepub.com/doi/10.1177/17579139221081400

Howarth, M., Brettle, A., Hardman, M. and Maden, M. (2020). What is the evidence for the impact of gardens and gardening on health and well-being: a scoping review and evidence-based logic model to guide healthcare strategy decision making on the use of gardening approaches as a social prescription. *BMJ Open*, [online] 10(7), p.e036923. doi:10.1136/bmjopen-2020-036923. Available at https://bmjopen.bmj.com/content/10/7/e036923

Husk, K., Blockley, K., Lovell, R., Bethel, A., Lang, I., Byng, R. and Garside, R. (2019). What approaches to social prescribing work, for whom, and in what circumstances? A realist review. *Health & Social Care in the Community*, 28(2), pp.309–324. doi:10.1111/hsc.12839. Available at https://onlinelibrary.wiley.com/doi/10.1111/hsc.12839

Kellezi B, Wakefield JRH, Stevenson C, et al. The social cure of social prescribing: a mixed- methods study on the benefits of social connectedness on quality and effectiveness of care provision. BMJ Open 2019;9:e033137. doi:10 1136/ bmjopen-2019-033137. Available at https://bmjopen.bmj.com/content/9/11/e033137.info

Kimberlee R, Bertotti M, Dayson C, Asthana S, Polley M, Burns L, Tierney S, Husk K. [On behalf of the NASP Academic Partners Collaborative]. (2022). 'The economic impact of social prescribing'. London: National Academy for Social Prescribing.



Available at <u>https://socialprescribingacademy.org.uk/our-work/evidencing-social-prescribing/social-prescribing-the-evidence/</u>

Mercer, S.W., Fitzpatrick, B., Grant, L., Chng, N.R., McConnachie, A., Bakhshi, A., James-Rae, G., O'Donnell, C.A. and Wyke, S. (2019). Effectiveness of Community-Links Practitioners in Areas of High Socioeconomic Deprivation. *The Annals of Family Medicine*, [online] 17(6), pp.518–525. doi:10.1370/afm.2429. Available at https://pubmed.ncbi.nlm.nih.gov/31712290/

Muñoz, S., Terje, A. and Bailey, H. (2020). Evaluating social prescribing (Insight 55). IRISS. Available at <u>https://www.iriss.org.uk/resources/insights/evaluating-social-prescribing</u>

Napierala, H., Krüger, K., Kuschick, D., Heintze, C., Herrmann, W.J. and Holzinger, F. (2022). Social Prescribing: Systematic Review of the Effectiveness of Psychosocial Community Referral Interventions in Primary Care. *International Journal of Integrated Care*, 22(3), p.11. doi:10.5334/ijic.6472. Available at <u>https://www.ijic.org/article/10.5334/ijic.6472/</u>

NHS England (2020). Social prescribing and community-based support: Summary guide. Available at <u>https://www.england.nhs.uk/publication/social-prescribing-and-community-based-support-summary-guide/</u>

Pescheny, J.V., Randhawa, G. and Pappas, Y. (2019). The impact of social prescribing services on service users: a systematic review of the evidence. *European Journal of Public Health*, 30(4). doi:10.1093/eurpub/ckz078. Available at https://academic.oup.com/eurpub/article/30/4/664/5519001

Skivington, K., Matthews, L., Simpson, S.A., Craig, P., Baird, J., Blazeby, J.M., Boyd, K.A., Craig, N., French, D.P., McIntosh, E., Petticrew, M., Rycroft-Malone, J., White, M. and Moore, L. (2021). A new framework for developing and evaluating complex interventions: update of Medical Research Council guidance. *BMJ*, [online] 374, p.n2061. doi:10.1136/bmj.n2061. Available at https://www.bmj.com/content/374/bmj.n2061

Social Prescribing Network (2016). Report of the Annual Social Prescribing Network Conference, 26 January 2016. Available at <u>https://www.artshealthresources.org.uk/docs/report-of-the-inaugural-social-prescribing-network-conference/</u>

Tierney S, Cartwright L, Akinyemi O, Carder-Gilbert H, Burns L, Dayson C, Chatterjee H. [On behalf of the NASP Academic Partners Collaborative]. (2022). 'What does the evidence tell us about accessibility of social prescribing schemes in England to people from black and ethnic minority backgrounds?'. London: National



Academy for Social Prescribing. Available at

https://socialprescribingacademy.org.uk/our-work/evidencing-socialprescribing/social-prescribing-the-evidence/

The King's Fund (2019). A citizen-led approach to health and care: lessons from the Wigan Deal. Available at <u>https://www.kingsfund.org.uk/publications/wigan-deal</u>

VanderWeele, T.J., Trudel-Fitzgerald, C., Allin, P.V., Farrelly, C., Fletcher, G., Frederick, D.E., Hall, J., Helliwell, J.F., Kim, E.S., Lauinger, W.A., Lee, M.T., Lyubomirsky, S., Margolis, S., McNeely, E., Messer, N.G., Tay, L., Vish Viswanath, K., Węziak-Białowolska, D. and Kubzansky, L.D. (2021). Current Recommendations on the Selection of Measures for Well-Being. In *Measuring Well-Being*, pp.501–520. doi:10.1093/oso/9780197512531.003.0018. Available at <u>https://academic.oup.com/book/39523/chapter/339353304</u>

Vidovic, D., Reinhardt, G.Y. and Hammerton, C. (2021). Can Social Prescribing Foster Individual and Community Well-Being? A Systematic Review of the Evidence. *International Journal of Environmental Research and Public Health*, [online] 18(10), p.5276. doi:10.3390/ijerph18105276. Available at https://www.mdpi.com/1660-4601/18/10/5276

White, J.M., Cornish, F. and Kerr, S. (2015). Front-line perspectives on 'joined-up' working relationships: a qualitative study of social prescribing in the west of Scotland. *Health & Social Care in the Community*, 25(1), pp.194–203. doi:10.1111/hsc.12290. Available at <u>https://pubmed.ncbi.nlm.nih.gov/26455723/</u>

Wildman, J. and Wildman, J.M. (2019). Combining Health and Outcomes Beyond Health in Complex Evaluations of Complex Interventions: Suggestions for Economic Evaluation. *Value in Health*, 22(5), pp.511–517. doi:10.1016/j.jval.2019.01.002. Available at https://www.valueinhealthjournal.com/article/S1098-3015(19)30036-1/fulltext

Wildman J. and Wildman, J.M. (2021). Evaluation of a Community Health Worker Social Prescribing Program Among UK Patients With Type 2 Diabetes. *JAMA Netw.* doi: 10.1001/jamanetworkopen.2021.26236. Available at <u>https://pubmed.ncbi.nlm.nih.gov/34468751/</u>

Zhang, C.X., Wurie, F., Browne, A., Haworth, S., Burns, R., Aldridge, R., Zenner, D., Tran, A. and Campos-Matos, I. (2021). Social prescribing for migrants in the United Kingdom: A systematic review and call for evidence. *Journal of Migration and Health*, 4, p.100067. doi:10.1016/j.jmh.2021.100067. Available at https://www.sciencedirect.com/science/article/pii/S2666623521000349?via%3Dihub



Midlands Decision Support Network

Email: paul.mason14@nhs.net

Web: www.midlandsdecisionsupport.nhs.uk