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Social Prescription Interventions: A Systematic Literature Review

Intervenciones de prescripción social: una revisión sistemática de la literatura

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ABSTRACT

Introduction: The increasing health disparities underscore the importance of preventive interventions, where social prescription (SP) emerges as a comprehensive intervention for physical, mental, and social health.

Objective: Identify the application procedures, types of interventions, and results of SP studied in the literature between 2019 and 2023.

Materials and methods: In this systematic review, the inclusion criteria consisted of samples of adults with any medical condition, studies available in Portuguese, English, or Spanish, and those describing the direct impact of an SP intervention on clients. The investigation period was from July 12 to September 1, 2023, and the databases used were Academic Search Complete, Web of Science, PubMed, and Scopus.

Results: Eight articles involving 352 participants (SD=442.648) were selected. We identified studies of a qualitative (37.5%), quantitative (37.5%), and mixed (25%) nature. Qualitative studies analyzed the experiences and perceptions of clients and liaison workers regarding the SP intervention, while quantitative studies assessed the effects of SP on variables such as mental and physical health, and social well-being. Mixed studies analyzed physical health, identification, and social belonging. We identified wide-ranging benefits, including improvements in mental and physical health, self-determination, autonomy, and social well-being.

Conclusions: SP has demonstrated the potential to improve health and well-being individually and systemically, thereby increasing the efficiency of healthcare services. However, adaptation to individual needs and the effective integration of healthcare and community support are essential. The limitations suggest the need for future research addressing additional criteria.

Keywords: social prescription, intervention, health organization.

RESUMEN

Introducción: La creciente disparidad en salud subraya la importancia de los programas preventivos, en los que la Prescripción Social (PS) surge como una intervención integral para la salud física, mental y social.

Objetivo: Identificar los procedimientos de aplicación, tipos de intervenciones y resultados de la PS estudiados en la literatura entre 2019 y 2023.

Materiales y métodos: En esta revisión sistemática, los criterios de inclusión incluyeron muestras de adultos con cualquier condición médica, estudios disponibles en portugués/inglés/español y aquellos que describieran el impacto directo de una intervención de PS en los clientes. El período de investigación fue del 12 de julio al 1 de septiembre de 2023 y las bases de datos utilizadas fueron Academic Search Complete, Web of Science, PubMed y Scopus.

Resultados: Se seleccionaron ocho artículos que involucraron a 352 participantes (DE = 442,648). Se identificaron estudios de naturaleza cualitativa (37,5 %), cuantitativa (37,5 %) y mixta (25 %). Los estudios cualitativos analizaron las experiencias y percepciones de los clientes y los trabajadores de enlace con respecto a la intervención de PS, mientras que los estudios cuantitativos evaluaron los efectos de la PS en variables como la salud mental y física y el bienestar social. Los estudios mixtos analizaron la salud física, la identificación y la pertenencia social. Identificamos amplios beneficios, incluidas mejoras en la salud mental y física, la autodeterminación, la autonomía y el bienestar social.

Conclusiones: La PS ha demostrado el potencial de mejorar la salud y el bienestar a nivel individual y sistémico, aumentando así la eficiencia de los servicios de salud. Sin embargo, la adaptación a las necesidades individuales y la integración efectiva de la atención sanitaria y el apoyo comunitario son esenciales. Las limitaciones sugieren la necesidad de futuras investigaciones que aborden criterios adicionales.

Palabras clave: prescripción social, intervención, organización de la salud.

INTRODUCTION

Global health disparities continue to rise, with mental and substance use disorders recognized as major causes of long-term disability worldwide (1-4). Therefore, addressing these disorders through prevention and treatment is crucial and should be a public health priority (5). The World Health Organization (WHO) has emphasized the need for initiatives to diminish health and life-cycle disparities within a generation (6). The Pan American Health Organization (7) points out that conventional medicine struggles to address the rising cases of depression and anxiety, which is understandable since approximately 90% of health determinants are linked to the social and physical environments over a person's life, not just healthcare provision (8). Research in health and primary health care (PHC) has increasingly focused on integrating broader approaches beyond conventional medical treatment, considering patients' overall well-being, including physical, mental, and social health, with social prescribing (SP) emerging as a key approach in this field (9-11).

This concept, although lacking a universally accepted definition, has been extensively studied and described to connect PHC patients with community support resources (11-12). Kimberlee (10) expands on the understanding of SP, defining it as a spectrum of services that includes traditional interventions (e.g. smoking cessation) and broader initiatives (e.g., social exclusion). This approach proves especially beneficial for disadvantaged populations and those with persistent mental health issues (11). It is considered essential for PHC teams, allowing them to address not only the physical but also the psychological and social needs of individuals. For many clients, these professionals are the sole source of help and access to additional services (13).

SP has emerged as a pivotal strategy in PHC, redefining how health services cater to an individual's comprehensive well-being (11). Clients encounter a variety of clinical and non-clinical challenges in primary and secondary healthcare settings, with Bertotti M. et al. (18) emphasizing the significant challenge of supporting patients with complex needs (1,19-21). Clients face challenges ranging from chronic illnesses such as diabetes and mental health issues like anxiety and depression to significant psychosocial problems including loneliness and isolation, alongside obstacles in housing, employability, and debt management (13-17). SP also offers an innovative approach to treating stress-related disorders (1,19-21).

Berwick et al. (22) advocate for the "triple aim" initiative, which seeks to enhance healthcare quality, improve population health, and reduce *per capita* costs through an integrated approach. SP supports these objectives (13) by employing the biopsychosocial model of health, which addresses both the underlying and associated stress factors that impact health and well-being. Also, SP promotes collaboration among healthcare professionals by offering a referral system that addresses patients' psychosocial needs more effectively. This method also aids in developing integrated health services and enables community involvement in care provision (12). By integrating this model into community service practices, various professionals, including social workers, can facilitate these referrals, thereby lessening the societal burden of these issues (13) and reducing expenses for the National Health System (SNS) (11).

Rempel et al. (11) describe the SP implementation process in three phases. The "process" phase involves selecting participants based on need, such as low-level mental health issues, and making referrals that are either facilitated with active assistance or non-facilitated with just a recommendation. The "treatment" phase sees the participants engaging in SP activities. In the "outcomes" phase, results are evaluated, which might include improvements in individual well-being or system-level benefits like better healthcare resource allocation. Healthy London Partnership (23) outlines a five-step guide for SP implementation: (1) identifying the target population and local needs, (2) identifying local partners and community assets, (3) calculating financing, resources, contracting, governance, and risk, (4) defining the business case for investment, and (5) ensuring compliance with national standards and governance. Kurpas et al. (12) stress the importance of mapping health assets before SP implementation to fully understand the community resources available.

SP interventions, as discussed by Rempel et al. (11), enhance health on individual and systemic levels. Individually, they improve mental well-being, and physical health, and manage chronic conditions while also boosting social inclusion. Systemically, these interventions increase health service efficiency, improve delivery and coordination, and reduce unnecessary emergency use. They promote suitable community activities and interventions, improving psychosocial management in primary care and reducing costs and environmental impacts like carbon emissions. These benefits highlight the significant value of SP intervention in public health and policy. To assess the effectiveness of SP interventions, various methods are used, as discussed by this author. Qualitative data from semi-structured interviews and focus groups help understand patient and family experiences. Quantitative assessments involve scales like the Warwick-Edinburgh Mental Well-being Scale and the Hospital Anxiety and Depression Scale, assessing individuals' psychological states. Health service usage data, demographic information, and cost analyses further illuminate the intervention's impact on health and their socioeconomic benefits.

SP models globally involve screening for social needs and community referrals (24-25). Westlake et al. (26) stress the need for clear definitions, particularly for liaison workers, to prevent complex cases from affecting professional well-being and worsening health inequalities. In Australia, holistic SP approaches are implemented in PHC and community services, though lacking definitive oversight (27). Yet, interest is growing (28-30), indicating potential benefits for individual and community well-being.

Key factors for successful SP implementation include a unified vision, consolidated leadership, mutual trust, high engagement, low turnover, and established legal frameworks (31). Challenges like resource scarcity, ambiguous client expectations, resistance from doctors, and concerns about liability and distrust among stakeholders pose difficulties (32-33). SP effectiveness is enhanced by trusted doctor referrals and program features like free services, though limited by program duration and fear of stigmatization (31). Islam (34) notes that full acceptance by health professionals is essential for SP effectiveness, while Mackenzie et al. (35) caution against over-transferring responsibility to clients and highlight socioeconomic inequalities that may restrict access for disadvantaged groups.

Regarding intervention cost-effectiveness, Kiely et al. (36) found limited evidence due to diverse study designs and outcomes. Lynch and Jones (37) analyzed a pilot intervention involving 78 participants divided into "Frequent attenders" (FA) and "Frequent non-attenders" (FNAs), finding direct savings of £78.37 (€90.69) per participant and total savings of £6,113 (€7.07) over five months. Annual projections suggested savings of £6,099.60 (€7,048.51) per participant. Subgroup analysis revealed increased costs for FNAs post-intervention, whereas FAs saw substantial cost reductions, with projected annual savings of £497 (€574.44) per FA and total savings of £10,429 (€12.07) for all FAs.

Despite existing data on SP, Costa et al. (38) highlight the need for more consistent research. Brown et al. (25) agree that while benefits are evident, further studies are required to fully assess SP's effectiveness and impact. Beardmore (39) underscores a significant research gap targeting SP professionals. Lynch and Jones (37) suggest future research should investigate the ideal duration of SP, recommending interventions of at least twelve months. Additionally, there is a recognized gap in best practices for implementing the liaison worker role (1,40,41) to ensure effective integration into community services, enhancing effectiveness and sustainability. Nowak and Mulligan (42) emphasize the need for innovative interventions addressing social needs in primary healthcare.

Rempel et al. (11) stress the importance of clear objectives and appropriate measures for SP interventions to progress from pilot studies to broader applications. Husk et al. (43) note the difficulty in comparing results due to different intervention models and a lack of robust evidence, which complicates generalization and practical implementation. Despite ambitious political goals for SP, robust evidence is needed to verify the effectiveness and impact of SP interventions and understand their mechanisms (12,25,38). Various methodologies, from specific clinical interventions to broader social-determinant-based interventions, are necessary (43). Understanding the most beneficial approach within the national health system is crucial. This systematic review aims to address these aspects.

Furthermore, with the expansion of this type of community intervention, several SPs with different application methods have emerged, due to the need to investigate more about what constitutes a "success" in these systems, as mentioned by Husk et al. (43), further reinforcing the need for this systematic literature review. It aims to identify the intervention application procedures (samples, instruments, and data analysis), the types of interventions, and the underlying results of the SP applied and studied in the literature, in the period from 2019 to 2023.

METHOD

For this systematic review, the PRISMA 2020 guidelines were followed (44). We carried out a literature review, from July 12 to September 1, 2023. Starting from the research equation: *social prescribing* AND *community* AND *primary healthcare*. The objective of this review was to identify intervention studies in a time range from 2019 to 2023, which contained the selected keywords.

As inclusion criteria we defined (1) studies with a sample of adults in the community who attend primary care; (2) with any specific medical condition; (3) from 2019 to 2023; (4) that contain the expression "Social Prescription" or "*Social Prescription*" in the title or keywords; (5) studies published in Portuguese, English, and Spanish; (6) studies that describe a social prescription intervention and that have client results directly from that intervention; (7) the sample must have clients who participated in the intervention. As exclusion criteria we defined (1) studies that do not contain established concepts; (2) narrative review studies; and (3) studies that do not describe a SP intervention and do not present client outcomes underlying the intervention.

The databases used were: Academic Search Complete, Business Source Complete, APA PsycInfo, Psychology and Behavioral Sciences Collection, eBook Academic Collection (EBSCOhost), eBook University Press Collection (EBSCOhost), eBook Collection (EBSCOhost), CINAHL Plus with Full Text, MEDLINE with Full Text, SPORT Discus with Full Text, MedicLatina, Regional Business News, E-Journals, ERIC, Library, Information Science & Technology Abstracts, Teacher Reference Center, eBook Open Access (OA) Collection (EBSCOhost); Web of Science; PubMed; Scopus.

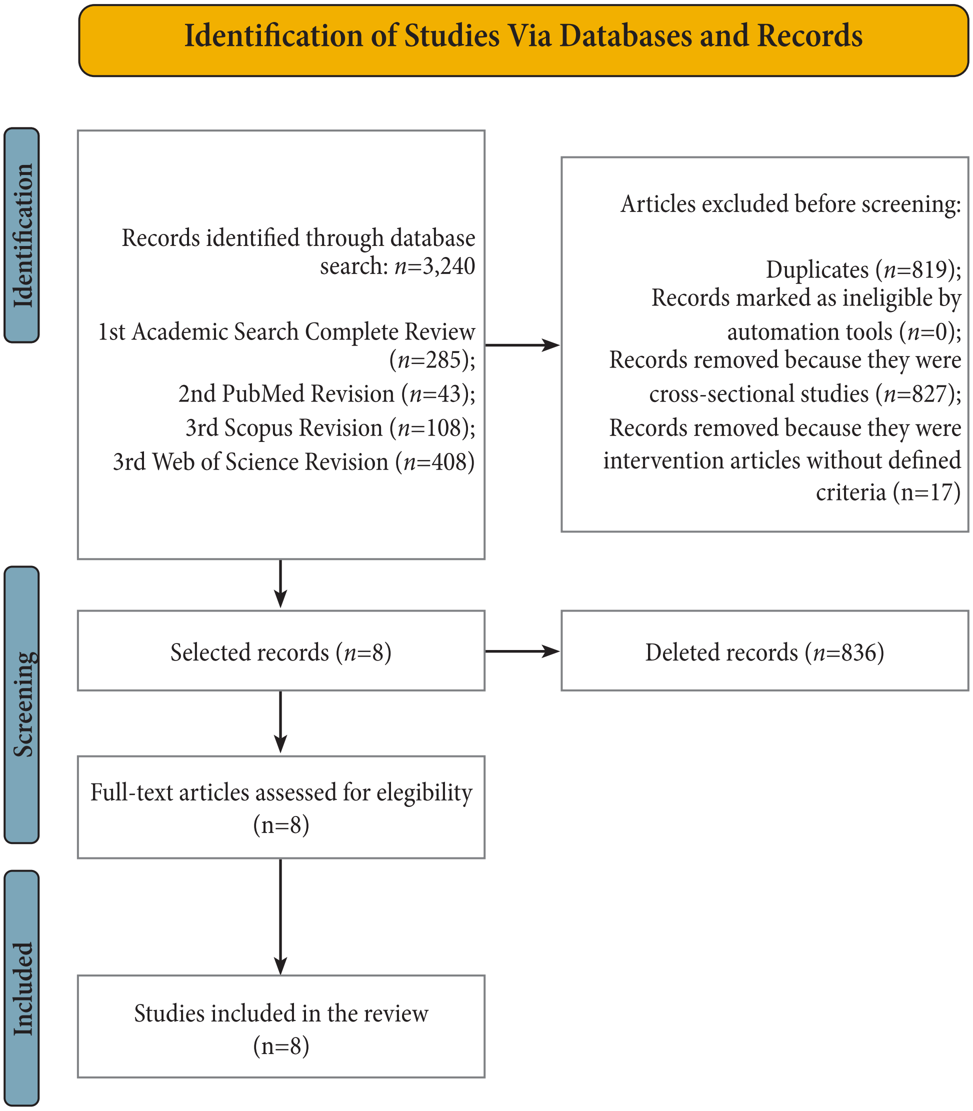
The first selection was carried out based on the titles and abstracts of all articles that appeared in the results. In the second phase, articles that did not meet the inclusion criteria were excluded. The full-text content was read and analyzed in the third phase. The tool used to analyze each article was Microsoft Excel. Two researchers participated in the selection process independently. After reading titles and abstracts and in possible situations of doubt regarding the inclusion/exclusion of a study during the article selection process, a third researcher was consulted.

The Mixed Methods Appraisal Tool (MMAT) (46) was selected for this review to assess the quality of the included studies, as it was specifically designed for use in systematic reviews that encompass a range of study designs, including qualitative research, quantitative studies (randomized, non-randomized, and descriptive), and mixed methods approaches. To provide a more accurate representation of study quality, it is recommended that each MMAT criterion be reported individually rather than as a single overall score. Accordingly, this review does not present an overall quality rating.

We extracted the following information from the study, in the form of a table (journal, sample, location/country, type of article, social prescription carried out, procedure, data analysis, instrument, results, conclusion, limitations, and suggestions).

RESULTS

The scientific articles were used to justify the gaps that underlie the study in question. We identified as results in the databases: Academic Search Complete, Business Source Complete, APA PsycInfo, Psychology and Behavioral Sciences Collection, eBook Academic Collection (EBSCOhost), eBook University Press Collection (EBSCOhost), eBook Collection (EBSCOhost), CINAHL Plus with Full Text, MEDLINE with Full Text, SPORT Discus with Full Text, MedicLatina, Regional Business News, E-Journals, ERIC, Library, Information Science & Technology Abstracts, Teacher Reference Center, eBook Open Access (OA) Collection (EBSCOhost), 285 results, none of which were included because they were duplicates with the Web of Science search or did not meet the inclusion criteria. In PubMed (Medline), 43 articles resulted and after exclusions, as they did not meet the inclusion criteria, four articles were included. In the database Web of Science, 408 results resulted and after exclusions, as they did not correspond to the inclusion criteria, four articles were included. In Scopus, 108 results resulted, all of which were excluded because they were duplicates of the search results in Web of Science. In total, 8 primary source articles were identified for this master's thesis project (see Figure).



Source: own elaboration, adapted from Moher et al. (44).

Figure. PRISMA of intervention literature review

Quality of Studies

Table 1 presents the quality appraisal criteria applied to each included study.

Table 1. Quality of included studies

Methodological Quality Assessment Mixed Methods Appraisal Tool (MMTA)	ualitative Studies		
Qualitative Questions	Hanlon et al. (2021)	Bhatti et al. (2021)	Pollard et al. (2023)
1.1. Is the qualitative approach appropriate to answer the research question?	Y	Y	Y
1.2. Are the qualitative data collection methods adequate to address the research question?	Y	Y	Y
1.3. Are the findings adequately derived from the data?	Y	Y	Y
1.4. Is the interpretation of results sufficiently substantiated by data?	Y	Y	Y
1.5. Is there coherence between qualitative data sources, collection, analysis, and interpretation?	Y	Y	Y
Quantitative Questions	**Quantitative Studies**		
	Elston et al. (2019)	Pescheny et al. (2019)	Sumner et al. (2021)
3.1. Are the participants representative of the target population?	Y	Y	Y
3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)?	Y	Y	Y
3.3. Are there complete outcome data?	Y	Y	Y
3.4. Are the confounders accounted for in the design and analysis?	Y	Y	Y
3.5. During the study period, is the intervention administered (or exposure occurred) as intended?	Y	Y	Y
Mixed Methods Questions	**Mixed Methods Studies**		
	Kellezi et al. (2019)	Calderón-Larrañaga et al. (2023)	
5.1. Is there an adequate rationale for using a mixed-methods design to address the research question?	Y	Y	
5.2. Are the different components of the study effectively integrated to answer the research question?	Y	Y	

Continue...

5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted?	Y	Y
5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?	Y	Y
5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?	Y	Y
(Criteria to be addressed according to the qualitative component of the study:)		
1.1. Is the qualitative approach appropriate to answer the research question?	Y	Y
1.2. Are the qualitative data collection methods adequate to address the research question?	Y	Y
1.3. Are the findings adequately derived from the data?	Y	Y
1.4. Is the interpretation of results sufficiently substantiated by data?	Y	Y
1.5. Is there coherence between qualitative data sources, collection, analysis, and interpretation?	Y	Y
(Criteria to be addressed according to the quantitative component of the study:)		
3.1. Are the participants representative of the target population?	Y	Y
3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)?	Y	Y
3.3. Are there complete outcome data?	Y	Y
3.4. Are the confounders accounted for in the design and analysis?	Y	Y
3.5. During the study period, is the intervention administered (or exposure occurred) as intended?	Y	Y

Note. Y = Yes; N = No; C = Can't tell.
Source: own elaboration.

Publication Journals

Among the eight articles included in our sample, the journal "BMJ Open" was the most used, with two articles published (25.02%), with the study by Kellezi et al. (47) being the most cited in the literature with 108 citations (see Table 2).

Table 2. Study publication journals

Reference	Publication Journals	Number of Citations
Kellezi et al. (47)	BMJ open	108 quotes
Elston et al. (57)	Primary health care research & development	56 quotes
Pescheny et al. (41)	BMJ open	28 quotes
Hanlon et al. (48)	Chronic illness	39 quotes
Bhatti et al. (50)	BJGP open	25 quotes
Sumner et al. (49)	Public Health	21 quotes
Calderón-Larrañaga et al. (51)	BMC medicine	3 quotes
Pollard et al. (52)	Br J Gen Pract.	1 quote

Source: own elaboration.

Application Procedure

Study Samples. In the eight studies included in this review, we found that the study with the smallest sample had a minimum of 12 (48) and that the largest sample had 665 (47). On average, the study samples collected had 352 participants (*M*=352; *DP*=442,648; *Mdn*=352) (see Table 3).

Table 3. Sample of included studies

<table>
<tr><th>References</th><th>Country</th><th>Group of Health Professionals</th><th>Liaison Workers Group</th><th colspan="4">Experimental Group (clients)</th><th>Specification</th><th>Total per Study (n)</th></tr>
<tr><td>Kellezi et al. (47)</td><td>United Kingdom</td><td>Study 1: general practitioners (GPs) (n=7)</td><td>Study 1: n= 6</td><td colspan="4">Study 1: n=19</td><td>Weight loss clients followed by support for multiple/complex needs including loneliness.</td><td>665</td></tr>
<tr><td></td><td></td><td>Study 1: health technician (n=3)</td><td></td><td colspan="4">Study 2: n= 630</td><td>Without specification, clients who participated in the group intervention and used health services.</td><td></td></tr>
<tr><td>Elston et al. (57)</td><td>United Kingdom</td><td>-</td><td>-</td><td colspan="4">82</td><td>Individuals aged 50 years or over, with two or more long-term conditions.</td><td>82</td></tr>
<tr><td>Pescheny et al. (41)</td><td>United Kingdom</td><td>-</td><td>-</td><td colspan="4">186</td><td>Risk or diagnosis of type 2 diabetes, COPD, mental health problems, loneliness and caregivers.</td><td>186</td></tr>
<tr><td>Hanlon et al. (48)</td><td>Scotland</td><td>-</td><td>-</td><td colspan="4">12</td><td>No specification, only clients referred for intervention. PS carried out in more socioeconomically disadvantaged areas with physical, psychological or social problems.</td><td>12</td></tr>
<tr><td>Bhatti et al. (50)</td><td>Canada</td><td>-</td><td>-</td><td colspan="2">Focus groups n= 88</td><td colspan="2">Interview group n= 8</td><td>No specification, just that they participated in the intervention.</td><td>96</td></tr>
<tr><td>Sumner et al. (49)</td><td>United Kingdom</td><td>-</td><td>-</td><td>Group of Referees n= 245</td><td>Multimorbid Group (from R1): n=100</td><td>Group of Re-referred n= 96</td><td>Multimorbid Group (from R2): n= 50</td><td>No specification, only clients who received the AoP intervention to improve anxiety and depression levels, increase well-being.</td><td>245*</td></tr>
<tr><td>Calderón-Larrañaga et al. (51)</td><td>United Kingdom</td><td>primary care doctors (n= 11)</td><td>n= 11</td><td colspan="4">8</td><td>Clients with diabetes risk of 20 or greater, fasting blood glucose 5.5–6.9 mmol/L, HBA1c 42–47 mmol/mol, diagnosis of non-diabetic hyperglycemia and/or prediabetes, or history of referral to NDPP.</td><td>30</td></tr>
<tr><td>Pollard et al. (52)</td><td>United Kingdom, England)</td><td>-</td><td>20</td><td colspan="4">19</td><td>Clients with type 2 diabetes, usually in combination with other long-term illnesses.</td><td>39</td></tr>
<tr><td colspan="9">Sum</td><td>704</td></tr>
<tr><td colspan="9">Average</td><td>352</td></tr>
<tr><td colspan="9">Standard deviation</td><td>442.64884502277874</td></tr>
<tr><td colspan="9">Median</td><td>352</td></tr>
</table>

Note: *In this study, there were 245 total participants; this is not a cumulative sum because the re-referred patients are the same individuals already accounted for in the referred group.
Source: own elaboration.

Authors like Sumner et al. (49) analyzed 245 clients, with 96 (39.2%) re-referred to the program (R2). Significant differences were found in employment status: more employed (29.5% vs. 15.3%) and fewer unemployed (67.7% vs. 80.0%) in the re-referred group. The average time between referral and re-referral was 119.9 ± 44.83 days. The sample was divided into categories based on medical complaints, including cardiovascular, neoplastic, neurological, mental health/psychiatric, and musculoskeletal conditions. Multimorbidity was found in sample R1 n=110 (44.9%) and sample R2 n=50 (52.08%).

Study Measuring Instruments. In this review, we identified studies of a qualitative, quantitative, and mixed nature. Therefore, not all studies used quantitative instruments. Other studies did not use quantitative instruments, which represent 37.5% of the total sample analyzed (50-52).

The study by Sumner et al. (49) evaluated anxiety, depression, and well-being. Internal consistency (Cronbach's alpha) was assessed at three points. Anxiety was measured using the Generalized Anxiety Disorder Scale (GAD-724) (53), with scores ≥5, ≥10, and ≥15 indicating mild, moderate, or severe anxiety, respectively. Cronbach's alpha values were: T1, α = .83 and .87; T2, α = .91 and .93. Depression was measured with the Patient Health Questionnaire (PHQ-8) (54), with scores 0-4 indicating no symptoms, 5-9 mild, 10-14 moderate, 15-19 moderately severe, and 20-24 severe. Cronbach's alpha values were: T1, α = .84 and .85; T2, α = .83 and .89. Well-being was assessed using the Warwick Edinburgh Mental Wellbeing Scale (WEMWBS) (55), with scores ranging from 14 to 70. Cronbach's alpha values were: T1, α = .91 and .90; T2, α = .90 and .92. This study was the only one to report the internal consistency of the instruments, evaluated according to Santiago's (56) classification (see Table 4).

Table 4. Cronbach's alpha with Santiago Classification (2021)

References	Instrument	Cronbach's Alpha Value	Interpretation
Sumner et al. (49)	Generalized Anxiety Disorder Scale (GAD-724) (53)	T1: α= .83 from .87	Good
		T2: α= .91 e .93	Excellent
	Patient Health Questionnaire eight-item version (PHQ-8) (54)	T1: α= .84 and .85	Good
		T2: α= .83 e .89	Good
	Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) (55)	T1: α= .91 e .90	Great
		T2: α= .90 e .92	Excellent

Source: own elaboration.

Note. Prepared by the authors of the study, based on the interpretation of Santiago (2021) where the reference values are: <.70 (Limited applicability); between 0.70 and 0.79 (Adequate); between 0.80 and 0.89 (Good), and finally, between 0.90 or > 0.90 (Excellent). In the studies by Carter and Youssef-Morgan (2022) and Da et al. (2020), T1 corresponds to the pre-test questionnaire, T2 post-test, and T3 follow-up.

The following measures were used for health outcomes supported in the study of Elston et al., (57): Well-being Star™ (seven domains, each scored from 1 to 10), Patient Activation Measure (PAM)® (13 items, scored from 0 to 100, or levels from 1 to 4) and Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) (14 Likert questions, each scored from 1 to 5) (55) and the Rockwood Clinical Frailty Scale (RCFS) [score from 1 (very fit) to 10 (terminally ill), with frailty ≥5] (58).

Hanlon et al. (48) evaluated the intervention's impact on patients' daily lives using the Outcome Related to Impact on Daily Living (ORIDL) instrument. The impact was categorized into three levels: no change or deterioration, slight improvement not affecting daily life, and moderate or significant improvement affecting daily life. Discrepancies in assessments were resolved through discussion among researchers to ensure credible data analysis. The study provided no further information about the instrument.

The study of Pescheny et al. (31) used the seven-item International Physical Activity Questionnaire (IPAQ) to assess physical activity levels before and after an intervention. The IPAQ measures the frequency and duration of physical activities, including walking, moderate- and vigorous-intensity exercise, and time spent sitting over the past seven days. Energy expenditure was calculated in metabolic equivalents (METs) minutes per week for each activity type and combined total, using specific formulas to convert activities into METs for walking, moderate activities, vigorous activities, and total physical activity, with results presented in rounded integer values.

The study by Kellezi et al. (47) analyzed social identification and belonging through various measures. Clients indicated their membership in up to 10 social groups or none, with the number of memberships calculated. A sense of community belonging was assessed with a question about feeling a sense of belonging, rated from “1- definitely no” to “4- yes.” Loneliness was measured using the UCLA Loneliness Scale (ULS-8) (59), with agreement rated from “1- not at all” to “5- completely,” higher scores indicating greater loneliness. Health service use was measured by asking clients about their primary health care usage in the last three months, using an adapted measure from Kellezi et al. (60), and changes in service use were calculated as reducing usage is a primary goal of SP.

Data Analysis Used in Studies. Each study adopted different methods and statistical analyses to address its specific questions, and this diversity can contribute to a comprehensive and robust approach to evaluating results.

Three studies used qualitative approaches. Pollard et al. (52) explored conceptual elements through iterative coding with NVivo, focusing on data interrelationships, contextual dimensions, and social processes. Bhatti et al. (50) conducted a two-stage qualitative analysis using NVivo (version 12). Hanlon et al. (48) performed a detailed thematic analysis based on the Self-Determination Theory, examining pre-referral circumstances and post-intervention changes.

Three other studies used quantitative approaches. Sumner et al. (49) utilized Student’s t and chi-square tests to examine changes in anxiety, depression, and well-being, along with Pearson correlations and linear regression models, incorporating demographic and clinical variables, initial well-being levels, and previous anxiety and depression scores. Elston et al. (57) conducted several statistical analyses, including Paired t-test, Shapiro-Wilk test, Wilcoxon matched-pairs signed-rank test, Two-sample t-test, Mann-Whitney test, Chi-square test (X2), and Pearson and Spearman correlation tests. Pescheny et al. (41) used Bayesian approaches and zero-inflated negative binomial models to assess changes in energy expenditure, utilizing SPSS V.23 and Open Bugs.

The studies used both quantitative and qualitative methods. Calderón-Larrañaga et al. (51) employed a visual and integrative approach to understanding referral impacts, contextualizing patterns and practices with detailed qualitative data. They used realist logic to classify data as context, mechanism, or result, analyzing their interactions. The context-mechanism-outcome configurations (CMOCs) were continually refined with empirical data, previous reviews, and feedback from researchers and stakeholders. Kellezi et al. (47) conducted two studies: the first used a realist qualitative approach focusing on relationships between psychosocial needs, health service use, and the importance of SP, guided by the social healing framework; the second used repeated-measures ANOVA to compare changes in health service use and group memberships between T0 and T1.

Types of Intervention

Our systematic review identified significant differences in the types of SP interventions (see Table 5), therefore, we categorized them by the type of study in which they were analyzed, originating in three categories: qualitative, quantitative, and mixed studies.

Table 5. General table of interventions described in studies

Reference	Study					Intervention				
	Study Design	Participants		Study Phases/ Duration	Study Procedure	Intervention Theme	Type of intervention	Duration		Structure and objective of the Sessions
		n	Specificity					Period	Time	
Pollard et al. (52)	Qualitativstudy	39	Liaison workers and customers	No phases	Participant observation, focus groups and individual interviews	Customer support and empowerment	In person	2019- 18 months to 4 years	No information	Assist clients in accessing community services or helping them develop their own programs.
Sumner et al. (49)	Observational longitudinal study	245	Customers	Referral (R1), R1 Multimorbids, Re-referral (R2) and R2 Multimorbids	Application of an instrument to check anxiety, depression and well-being	Arts Interventions on Prescription (AoP)	In person	2017 to 2019- eight weeks	1 time a week	Visual arts (e.g. painting, ceramic, mosaics, photography) or performing arts (e.g. dramaturgy, creative writing, singing)
Bhatti et al. (50)	Qualitative study- Self-Determination Theory (SDT)	96	Customers	No phases	Focus groups and individual interviews	Comprehensive Health and Wellbeing Model	In person	No information		Health and well-being, health equity and community development
Hanlon et al. (48)	Qualitative study- Self-Determination Theory (SDT)	12	Customers	No phases	Qualitative interviews	Programa Links Worker	In person	No information		Improve service and integration with the community
Elston et al. (57)	Longitudinal study before and after 12 months	82	Elderly customers aged 50 and over	12 months before and after the date of each referral	Application of measuring instruments	Holistic intervention: Improve well-being and frailty and Reduce health and social care utilization and costs	In person	Twelve weeks	No information	Setting goals for a healthy life. Key aspects such as listening skills, emotional support, practical advice and assistance, and coaching

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Kellezi et al. (47)	Mixed methods: Study 1: semi-structured interviews; study 2: longitudinal survey.	665	Family doctors, health coordinators, liaison workers and clients	experimental group - referral (T0) and after four months (T1); collection in the first 18 months of the program	Semi-structured interviews and application of instruments	"Social Cure"	Via call and in person	No information		Addressing identification and social belonging to social groups (e.g., family, community or volunteer groups)
Pescheny et al.(41)	Uncontrolled before-and-after study	186	Customers	During initial (baseline) and final (immediately after intervention) consultations between January 2016 and February 2018.	Application of measuring instruments	Improve health and well-being, with an emphasis on physical activity and mental health.	In person	Twelve sessions	The number of sessions and intensity of support provided depended on the individual's needs.	Individual assessment. Counseling services (e.g., debt, housing and employment), physical activities (e.g., walking groups, aerobics and yoga), gardening, social activities (e.g., lunch clubs), stress management and relaxation courses, and creative activities (e.g., art clubs).
Calderón-Larrañaga et al. (51)	Realistic mixed methods assessment	43	PHC clinicians, social prescribers, community organizations and clients	November 2020 to March 2022	Semi-structured interviews, ethnographic observations and documentary analysis; and referral rates and identify independent risk factors	Prevention of type 2 diabetes (T2D)	In person	Sixteen hours spread over nine months		Group sessions, focusing on improving nutrition, physical activity and weight management

Source: own elaboration.

Qualitative Studies. Of which they studied the experience and perceptions of clients and liaison workers about the intervention (48,50,52).

The SP described by Pollard et al. (52) lacked a specific theoretical model; liaison workers assisted clients in accessing community services or developing their interventions. The intervention spanned 18 months to four years in a diverse, economically disadvantaged urban area in Northern England. Evaluation methods included participant observation, focus groups (90-120 minutes) with liaison workers, and interviews (30-120 minutes) with both liaison workers and clients.

Bhatti et al. (50) conducted their intervention within a Comprehensive Health and Wellbeing Model at all Community Health Centers (CHCs) in Canada, focusing on health, well-being, health equity, and community development. They utilized Self-Determination Theory (SDT), which suggests that self-determination boosts motivation and enhances psychological health and well-being through four basic psychological needs: autonomy, relationship, competence, and beneficence. Between January and October 2019, they conducted semi-structured interviews and focus groups for 3, 6, and 12 months to explore the referral process, acceptance, and the impact of SP on clients.

Hanlon et al. (48) also used SDT to explore clients' relationships with Community Links Professionals (CLPs), changes in skills, knowledge, decision-making abilities, and motivation. Conducted through semi-structured interviews between April and November 2016, the study described the "Program Links Worker" intervention in 15 general practices in socioeconomically disadvantaged areas of Glasgow. The intervention operates at three levels: individualized client support tailored to specific needs, efforts at the practice level to increase awareness and use of community resources, and at the community level, bridging ties between clinics and local organizations to create effective referral pathways and promote collaboration.

Quantitative Studies. These studies evaluated the effects of SP interventions on variables such as mental health (anxiety, depression, and well-being) (49), health and social well-being, patient activation, frailty levels, and reducing the impact on health service use (57), as well as physical activity (41), using various measurement instruments. Sumner et al. (49) analyzed the arts-on-prescription (AoP) intervention, which offers up to two referrals for an 8-week arts course, including visual arts (painting, ceramics, mosaics, photography) and performing arts (playwriting, creative writing, singing) to improve general well-being. This study, part of conventional SP in PHC, included clients who participated from 2017 to 2019, assessing changes in anxiety, depression, and well-being levels.

Elston et al. (57) described an intervention where coordinators conducted initial 30 to 40-minute guided conversations focused on client strengths, usually at their homes (80%), to identify needs and determine the appropriate approach: referral, brief conversation, or intensive 'holistic' conversation. This study focused on clients who received a 12-week intensive coaching course in South Devon. Various tools were used in subsequent meetings to help clients set healthy living goals. Coordinators, who are non-health professionals, received training in goal-setting, tool use, outcome measures, and engaging users in a strengths-based way to co-produce a plan and manage risks. Their roles included listening, emotional support, practical assistance, and coaching. They worked with clients for up to 12 weeks, offering support to achieve their goals, including resilience coaching, practical support, and help accessing health, social, and economic resources.

The study of Pescheny et al. (41) analyzed a SP pilot program that started in 2015 in Luton, East of England, aiming to improve health and well-being by focusing on physical activity and mental well-being. General physicians referred clients to navigators who assessed non-medical needs and connected them with community services. Navigators could refer clients to up to 12 non-medical support sessions, such as physical activity, counseling, and social activities, all provided free by third-party organizations. While the focus was on physical activity and mental well-being, referrals to other services were also possible. The study used an uncontrolled before-and-after design, collecting client information at the first consultation (baseline) and the last consultation (immediately post-intervention) from January 2016 to February 2018.

Mixed Studies. These studies collected both qualitative and quantitative data, with different characteristics and objectives. Calderón-Larrañaga et al. (51) aimed to promote improvements in physical health; it is Kellezi et al. (47) in social identification and belonging.

The SP program in the UK, described by Kellezi et al. (47), uses "social healing" to reduce loneliness and promote health and well-being through social group identification and belonging. The study had two parts: the first explored social factors affecting health and PHC access through interviews with doctors, coordinators, liaison workers, and clients, focusing on the relationship between psychosocial needs and service use, and the value of SP. The second part assessed the effectiveness of SP in reducing loneliness by examining clients at referral (T0) and after four months (T1), focusing on psychosocial factors, group membership changes, and health service use, with data collected in person and by telephone.

Similarly, the study by Calderón-Larrañaga et al. (51) studied the "National Diabetes Prevention Program (NDPP)" in Tower Hamlets, East London, for clients at high risk of type 2 diabetes. The program aimed to improve nutrition, physical activity, and weight management through group sessions totaling at least 16 hours over nine months. Qualitative data were collected via semi-structured interviews, ethnographic observation, and document analysis to assess SP delivery and its impact on clients. Quantitative data included referral rates and identification of independent risk factors in adults without diabetes from 35 practices between December 2016 and February 2022. From November 2020 to March 2022, the study examined the association between high risk of T2D and referrals, using criteria like early gestational diabetes and specific blood glucose levels. Clients were followed until referral to SP, NDPP, death, deregistration from the doctor's office or study termination.

They then carried out an iterative analysis of the data to identify emerging themes, validated by triangulating the results. Through this visualization, they extracted deep insights into referral patterns in this population. By adopting a realist approach, it was possible to distinguish the role of contexts, mechanisms, and outcomes in the data. This analysis was enriched by collaborative reviews with the research team and stakeholders, thereby refining the interpretation of the results.

DISCUSSION

Initially, the primary objective of this systematic review was to identify intervention application procedures (including samples, instruments, and data analysis), types of interventions, and the underlying outcomes of SP as applied and studied in the literature from 2019 to 2023. In examining methods used to assess the impact of interventions on client health and well-being, our findings align with Rempel et al. (11), revealing that 37.5% of studies used quantitative measures, another 37.5% employed qualitative methods such as interviews and focus groups, and 25% integrated both approaches.

Regarding the sample characteristics, study samples ranged from 12 to 665 participants, with a mean of 352 (SD = 442.65). Overall, 62.5% of the studies utilized quantitative instruments, while 37.5% did not. For those reporting internal consistency, Cronbach's alpha values ranged from 0.83 to 0.93, indicating good (0.80–0.89) to excellent (≥0.90) reliability. In terms of data analysis, predominantly involved qualitative methods (n=3), such as NVivo analyses, alongside quantitative approaches (n=3) including t-tests, chi-square tests, Pearson correlations, and regression models. Additionally, two studies employed mixed-methods analyses combining realist logic with repeated measures ANOVA.

Consistent with previous literature (24,25), SP models vary across contexts and countries. Although 75% (n=6) of the studies reviewed were conducted in the United Kingdom, all included studies (100%) addressed social needs screening and referral to community resources (see Table 3).

Consequently, we identified several favorable outcomes (see Table 6) from different types of SP, thereby corroborating Kiely et al., (36). Specifically, among the results are the promotion of mental health, with a reduction in levels of anxiety and depression (49); improved physical health status, achieved through physical activity, counseling services and social activities (41), as well as improvements in diet, physical activity and weight management (51). Moreover, gains were observed in self-determination (48,50,) and autonomy (52). Regarding social well-being (49), with the integration of the client with the community (48) and social identification and belonging, which leads to a reduction in social isolation (47). Finally, improvements in client activation and fragility levels were noted, effectively reducing the impact on the use of healthcare services (49). These results corroborate Husk et al., (43), statement that SP allows for different methodologies, whether specific or broader. They also align with the review by Rempel et al. (11), which identify that SP results in improved health and overall wellness at both individual and systemic, in addition to increasing the efficiency of health services, resulting in reduced PHC costs.

Table 6. Impacts/results of interventions

Variables	**Reference**							
	Pollard et al. (52)	**Sumner et al. (49)**	**Bhatti et al. (50)**	**Hanlon et al. (48)**	**Pescheny et al. (41)**	**Kellezi it et al. (47)**	**Elston et al, (57)**	**Calderón-Larrañaga et al. (51)**
Well-being		+		+			+	
Anxiety		-						
Depression		-						
Chronic health condition	+							
Social connections			+			+		
Feeling of community			+					
Self-determination			+	+				
Behavioral change				+				

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Autonomy				+				
Physical activity					+			
Social isolation						-		
Loneliness						-		
Type 2 Diabetes Prevention	+							+

Note. (+) indicates qualitative improvement or an increase in quantitative levels; (-) indicates a reduction in quantitative levels or report of a qualitative decrease.
Source: own elaboration.

Specifically, the intervention reported by Bhatti et al. (50), positive results for clients were achieved by emphasizing individual and community self-determination to promote health. CHCs provide individualized care and a safe environment, making patients feel welcomed and able to discuss their issues freely. The intervention aligned with clients' needs, promoting collaboration and respect. In consequence, outcomes included stronger social connections, increased community feeling, reduced isolation, and better support. Clients also improved their self-management of health and psychological health, gaining skills to manage anxiety, depression, and other conditions. Volunteers, called "champions," found purpose in supporting others, thereby enhancing the community sense. These outcomes aligned with the Self-Determination Theory, meeting clients' needs for competence, relationships, and beneficence.

Self-determination was also studied by Hanlon et al. (48) in the Program Links Worker and its impact on behavioral change and well-being. They found varying results: six clients reported significant improvements in daily life, two had mild improvements, and four noticed no changes. Also, key improvements were linked to empathetic relationships with the CLP. Initially, clients felt socially isolated and incapable, but after the intervention, they reported increased competence and confidence in engaging in new activities or rediscovering old interests. In this regard, the program enhanced clients' autonomy, helping them express priorities and gain more control over their lives. The theme of charity emerged, with two clients getting involved in community activities. Significant changes were linked to a shift from external to internal motivation, while fewer changes were associated with physical or material barriers.

The study by Kellezi et al. (47) likewise highlights the importance of holistic health approaches, integrating physical, social, and mental care. In this context, SP was valuable in combating social isolation and improving well-being, supported by family doctors. Link workers and Health Coordinators noted SP's role in reintegrating clients into the community, with clients reporting positive experiences of support and social connection. However, adjusting activities to individual needs is crucial to avoid negative experiences. SP implementation led to reduced use of PHC and increased participation in community activities, enhancing community belonging and mitigating loneliness. These indirect benefits of SP, such as building a sense of community, are key to understanding the decreased demand for health services.

The study by Elston et al. (57) also showed significant improvements in your clients' health and social goals and indicators. Most clients achieved their goals within twelve weeks, with a notable improvement in mental well-being. Regarding the Patient Activation Measure (PAM), researchers found a reduction in client frailty. More than 60% of clients showed significant improvements in quality of life, and regression analysis indicated that client baseline characteristics could predict changes in social care costs. This result stands out to the fact that customers having long-term health conditions. The authors of this study highlight the need to consider individual characteristics when predicting costs and emphasize the considerable impact of well-being coordinators in supporting clients at the time of intervention.

Similarly, Sumner et al. (49) found significant improvements in mental health at all levels. Both anxiety and depression significantly decreased, while overall wellness increased after participation in the program. These improvements persisted in subsequent evaluations and were observed in clients with and without multimorbidity, including those who were re-referred. The study provided a longitudinal analysis over multiple referral cycles, showing that benefits decreased over time until clients were re-referred to the AoP intervention, at which point improvements were observed again. In light of this, positive effects may not be permanent and may require continued reinforcement to maintain impact. They concluded that anxiety and depression levels can be improved even in people with complex medical needs.

Specifically, different studies focused on describing interventions for clients diagnosed with or at risk of type 2 diabetes, in which several positive outcomes were obtained through different methodologies (41,51,52). This findings corroborate the results of other studies that established SP as a treatment alternative for clients with multimorbidity (1,19,20,21).

The SP described by Calderón-Larrañaga et al. (51) was crucial in preventing type 2 diabetes in high-risk individuals, adopting a holistic and adaptive approach that went beyond traditional healthcare. This intervention explored clients' socioeconomic contexts, offering services beyond lifestyle recommendations, such as employment and housing support. The prevention of T2D through SP highlighted the importance of continuous care and maintaining healthy lifestyles. The client-centered approach emphasized the value of trustworthy relationships and long-term support, showcasing SP as an innovative and empathetic care practice. By integrating SP into the community and PHC system, effective communication among sectors and professionals was facilitated, promoting consistent care based on patient's needs. This study enriched the literature on holistic models, addressing a gap highlighted by Aggar et al. (27), and confirmed the model's effectiveness and benefits.

Furthermore, the intervention reported by Pescheny et al. (41) included activities like walking and moderate-to-intense exercise, which increased energy expenditure levels (measured in MET minutes per week). They found an inverse relationship between age and energy expenditure at all activity levels, with older individuals demonstrating lower MET scores. In addition, employment negatively impacted energy expenditure in most MET categories; specifically, employed individuals having lower MET scores compared to the unemployed, except for moderate physical activity where results were inconclusive. This suggests significant challenges for employed users to engage in physical activity due to time constraints, thereby emphasizing the need for SP activities with flexible schedules, including before and after work and weekends. However, the analysis did not show a uniform impact of these variables on all forms of physical activity.

In contrast, the intervention studied by Pollard et al. (52) had no specific model; its goal was to support clients in developing their interventions. In this context, several challenges included relationship dynamics among participants, clients' understanding of workers' roles, and the essence of SP. There were tensions and varied understandings of the intervention, highlighting the need for a clear SP model, as reported by Westlake et al. (26). Workers' actions varied, resulting in two approaches: "support versus empowerment." This dichotomy raised concerns about creating dependency versus fostering personal responsibility. Without a specified model, workers identified the most effective approach for clients. The model focused on motivating and empowering clients was prominent, partly due to time pressures on liaison workers to generate referrals and complete assessments.

Regarding the financial structure, this model depended directly on the completion of assessments. Thus, the need to complete enough assessments to be appropriately financially rewarded, created an environment where the number of assessments completed per month was highly valued, even being referred to as "the wall of shame". This emphasis on goals and assessments generated dissatisfaction among liaison workers, many of whom resisted this pressure to prioritize clients' well-being. Moreover, discontent with this focus on goals contributed to high staff turnover, complicating continuity of care and negatively impacting the client experience. These data corroborate the challenges reported in previous studies (32,33).

Experiences varied significantly between customers, influenced by factors such as social class and other forms of inequality. As highlighted in the literature by Mackenzie et al., (35). These differences highlighted a failure in the intervention, as, while effectively satisfying the needs of some clients, for others in more unfavorable circumstances, it proved to be ineffective. Some liaison workers recognized this discrepancy and suggested the need for a more personalized approach; however, time constraints and focus on goals often limit liaison workers' ability to meet customers' varied needs.

Finally, the "Triple Aim" of Berwick et al. (22) was verified in the total sample of this review, which includes improving healthcare, population health, and decreasing per capita costs. In contrast, the study by Elston et al. (57) was the only one that studied the impact on the use of health services; interestingly, it identified that in the use of health and social assistance services, an increase was observed, mainly in care hospitals, community, and social. Contrary to the theorical frameworks established by Berwick et al. (22) and Rempel et al. (11), the total health and social assistance costs also increased significantly post-intervention. A detailed analysis revealed that increases in healthcare costs—mainly due to hospitalizations and greater demand for community services for worsening conditions—were the main contributors to this growth. Nevertheless, well-being coordinators played an important role in improving continuity of care and reducing social isolation.

CONCLUSION

In summary, the results of this systematic review highlight the fundamental role of SP interventions in promoting public health and formulating health policies. Qualitative studies explored the experiences and perceptions of clients and liaison workers, illustrating the importance of personalized support and the impact of SP on access to community services and program development tailored to individual needs. Additionally, quantitative studies evaluated the effects of interventions on mental health, social well-being, patient activation, and frailty levels, showing significant improvements in these areas. These studies demonstrated SP's potential to reduce health service use and promote a healthy lifestyle through physical activities and mental well-being. Mixed-method studies provided a holistic approach, combining qualitative and quantitative data to understand SP's impact better, identifying emerging themes, and validating results through triangulation.

Ultimately, this analysis confirms that SP interventions produce significant positive results in mental health, general well-being, and community integration, providing important guidance for developing SP interventions that meet individuals' health and well-being needs and reinforce health systems' sustainability and effectiveness. The benefits highlight the importance of personalized and safe care, starting with a thorough assessment of individuals' social and health needs. Effective implementation of SP interventions relies on strategic partnerships with community organizations, facilitating access to a wide range of non-clinical services tailored to specific needs. Collaboration between health professionals, liaison workers, and social services is crucial to meet individuals' needs. Also, robust monitoring and evaluation systems are essential to ensure SP interventions continually adapt to better respond to individuals' needs and achieve public health objectives. Careful implementation, based on solid evidence and collaborative practices, maximizes SP's benefits, aligning with effective and inclusive public health goals.

LIMITATIONS

This study has important limitations to be considered. The main limitation of this study is the scarce number of articles included in the adopted selection criteria; specifically, despite other articles with important reports being identified—for instance, from liaison workers—in this study, we prioritized verifying the direct impact of a given intervention on its participants. Furthermore, it was not possible to access some of the identified articles. Including a broader spectrum of databases or languages in our search could result in obtaining a greater number of primary studies and, in turn, provide a more comprehensive view of existing SP in healthcare services. The use of different search terms could also have expanded the sample studied. Finally, there was no effort to verify the existence of publication bias.

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