

Research Article

Assessment of Patients' Profiles and Factors Associated With Uptake in Social Prescribing in Portugal

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Noncommunicable diseases (NCDs) are shaped by modifiable and nonmodifiable factors. Addressing them requires multisectoral strategies that complement clinical care. Social prescribing (SP) enables health professionals to identify health needs that might benefit from community supports and refer patients to services that promote well-being. This study examined the characteristics of patients referred to an SP programme in Lisbon, Portugal, and factors associated with uptake. We conducted a cross-sectional study including all referrals to two Family Health Units from September 2018 to December 2022, using referral forms and electronic health records. Logistic regression was applied to identify factors linked to uptake, defined as attending at least one SP appointment. Of 1022 referrals, 55.1% resulted in uptake. Compared with patients aged 0–25 years, uptake was more likely among those aged 51–75 years (OR 1.65; 95% CI 0.99–2.75) and those aged > 75 years (OR 2.21; 95% CI 1.42–3.46). Referrals for social or financial reasons (vs. no referred for this reason) (OR 1.47; 95% CI 1.12–1.92), having one chronic disease (OR 1.67; 95% CI 1.13–2.48) or two to three chronic diseases (OR 1.55; 95% CI 1.05–2.29) (vs. no chronic condition), and referrals during the COVID-19 period (vs. prepandemic) (OR 1.47; 95% CI 1.12–1.93) were also associated with uptake. Identifying which patients are more likely to engage can inform targeted outreach to improve participation and ensure the sustainability of SP initiatives.

Keywords: binary regression; noncommunicable diseases; patient uptake; social prescribing

1. Introduction

The increased prevalence of noncommunicable diseases (NCDs), along with the prominent population ageing, is among the most notable global public health challenges [1, 2] and place considerable strain on health systems worldwide. NCDs are the leading cause of global disease burden [1]. Furthermore, poor mental health is increasing in all age groups, and isolation has been identified as a major risk factor [3]. Between 2000 and 2019, the number of global deaths attributed to NCDs increased from 31 million (61.0%)

to 41 million (74.0%) [1]. The latest WHO report states that cardiovascular disease, cancer, chronic respiratory disease and diabetes collectively led to 33.3 million deaths [1]. In addition to mortality, these conditions contribute to decreased healthy and disability-free life expectancy, quality of life and high morbidity and disability [1].

Disease prevention and health promotion play a critical role in mitigating the progression of various health conditions such as NCDs. Within a proactive approach, preventive and health-promoting measures not only contribute to reducing risks and enhancing individual and societal well-

being but also to minimising healthcare costs and alleviating the burden on healthcare systems [4]. NCDs result from a combination of risk factors, some of which can be addressed through interventions [1]. Behavioural risks include tobacco use, alcohol consumption, sedentarism, isolation and unhealthy diet. Additional social determinants of NCDs include socioeconomic factors such as income, housing, environment, transport, education and work [5]. To further understand the influence of social determinants in NCDs, it is necessary to consider the inequalities from which they stem [5]. Evidence demonstrates that low income and reduced agency to adopt healthier lifestyles are associated with increased risk for NCDs [6]. In line with this, research shows that subgroups of the population, including those with migrant backgrounds and experiencing job and housing insecurity, have poorer access to primary healthcare services. This translates into greater rates of acute care utilisation, hospitalisation and readmission [7–11], which inevitably leads to poorer health outcomes and higher healthcare spending [7, 12, 13]. The World Health Organisation (WHO) emphasises that addressing lifestyle factors, improving social conditions and creating supportive environments are fundamental in preventing disease and promoting health [14].

Considering the current complex and far-reaching public health challenges, it is vital to explore alternative integrated care approaches to ensure the prevention and control of NCDs and their underlying risk factors [1]. Multisectoral actions are a key to addressing the broader determinants of health. Additionally, individuals, families and communities should be engaged and empowered to increase social participation and enhance self-care [4]. As Marmot (2005 p. 1103) notes, “if the major determinants of health are social, so must be the remedies” [15]. In this sense, social prescribing (SP) emerges as an innovative approach that allows health professionals to identify a person’s health needs that might benefit from community supports and refer them to a SP consultation [16]. In this consultation, a link worker coproduces with the patient a comprehensive and personalised action plan to guide the person’s trajectory and help them develop more autonomy and control over their health. Based on that plan, the community resources are used to support person to manage own health and wellbeing [17]. Moreover, at the core of SP is a strength-based approach that acknowledges and enhances the natural abilities and resources within individuals and communities [18]. Instead of focussing merely on nonclinical services, SP encourages individuals to actively engage in managing their health. By referring people to services that tap into their strengths, such as social connections, community involvement and personal interests, SP has a potential of helping individuals improve their well-being in a holistic and sustainable manner. As a multidimensional approach to health, SP tackles the social determinants of ill health, potentially leading to better health outcomes while strengthening the connections between the health and other sectors and promoting more cost-effective and sustainable use of health services [19, 20].

There is a growing body of research that indicates the benefits of SP, which include improvements in adoption of healthy lifestyles, reduction in social isolation, promotion of mental health and well-being and enhanced quality of life [21]. To help optimise these initiatives, increasing research has been conducted on the process of implementation of SP programmes, including barriers and facilitators. While factors such as healthcare provider buy-in and the availability of community resources have shown to play a significant role in the effectiveness of SP programmes [22], an aspect particularly under-researched is the patient uptake and adherence to SP, along with the associated factors. Given the potential of SP, it is critical to determine specific factors of SP uptake, such as sociodemographic, health, contextual or behavioural elements, to identify groups which are overlooked, in order to better understand how to promote their engagement and adherence [23]. Although SP has been implemented in Lisbon, Portugal, since 2018 [24], no study has investigated uptake and engagement behaviours in this context. Understanding why some patients fully engage with SP programmes while others do not can provide insights into improving programmes delivery, enhancing participation rates and reducing health inequalities [25, 26]. In this regard, the present study aimed to examine the uptake of SP and associated factors, drawing from a pilot SP project in Lisbon. This knowledge is a key to helping inform the development of tailored outreach strategies and refine the initiatives, thus optimising investment.

2. Methods

2.1. Setting. This study was carried out in two family healthcare units (FHUs) located in Lisbon, Portugal [24]. These units deliver comprehensive healthcare services to a population that experiences situations of vulnerability such as social isolation, difficulties with social integration, unemployment, physical inactivity and economic and housing problems. Notably, these FHUs serve a diverse population in terms of age, socioeconomic status and cultural background.

Referral to the SP programme is initiated when general practitioners, nurses and psychologists recognise any health-related needs that may benefit from community-based support. Subsequently, during the appointment, the health professionals present the SP programme to the patients and enquire about their interest in being referred to an SP appointment. Upon their consent, the health professionals fill the SP referral form on the FHU system, and an automatic email with the referral information is generated and sent to the unit’s link worker, and data are recorded and stored in a Microsoft Excel file. After that, the patient is directed to the service counter to schedule an SP appointment with a link worker.

In this context, the role of link workers in the SP programme in Lisbon is taken by social workers based at the FHUs; hence, these professionals are responsible for receiving and managing referrals to the SP service. During the SP appointment, the link worker and patient perform a detailed assessment of the patient’s needs and coproduce a personalised action plan which includes finding optimal

responses available in the unit, as well as through partners from the social, voluntary sector or the community services and activities. After the SP appointment and referral process, the link worker contacts the patient to follow their pathway and, if necessary, schedule further appointments.

2.2. Study Design. This study employed an observational cross-sectional design and analysed data collected on SP referral and patient uptake through the programme registries. It is well-suited for examining associations between patient characteristics and SP uptake at a single point in time, providing valuable insights into participation patterns. The main characteristic of an analytical cross-sectional study is that it collects data on both exposures (risk factors or independent variables) and outcomes (such as disease or dependent variables) at a single point in time [27]. Since the independent and dependent variables are measured simultaneously, this study cannot establish causal relationships but rather provide a measure of association [28]. This approach leverages existing programme records, ensuring feasibility and efficiency while offering a broad representation of the study population [29]. Furthermore, this study is informed by the Social Determinants of Health model [30], which helps contextualise the factors influencing uptake with SP appointment.

2.3. Data Collection. This study analysed data from all patient referrals made by health professionals to the SP programme between September 2018 and December 2022. The data were collected from the Microsoft Excel file with pseudo-anonymised information of SP referrals informed by the health professionals. The SP's referral data contain detailed information on the date of the referral, the professional group of the referrer, the underlying reasons, the sociodemographic characteristics and the health-related data. This information was complemented with data on patient uptake with the support of FHU link workers. The unit of analysis in this study was the SP referral, with each referral being assigned a unique ID. The fact that SP referral was chosen as the unit of analysis rather than the patient referred minimises the loss of information regarding different referrals made for the same patient. Patients referred more than once were treated as new referrals if they were made for different reasons. All patient referrals were monitored through patient health number, and when a duplicated referral was identified (i.e., referral made for the same reason, regardless of whether on the same day or different days), the case was excluded from the analysis.

2.4. Variable Definitions. The variables included in this study were related to patient uptake, sociodemographics, health characteristics and referral details. A detailed description of the study variables is provided in Supporting Information 1.

2.4.1. Patient Uptake. Patient uptake was considered as the dependent variable in this study. Uptake is defined as agreeing to be referred to the SP and attending the first

appointment with a link worker [25, 31]. After referral by a health professional, patients can follow different pathways within the SP programme: (1) never book an SP appointment, (2) book an SP appointment but never attend or (3) book an SP appointment and attend at least once. Based on this pathway, for this study focused on patient uptake, we categorised referrals into two groups: those with Pathways 1 and 2 were classified as “patient nonuptake”, while those with Pathway 3 were defined as “patient uptake”.

2.4.2. Sociodemographic Characteristics. Sociodemographic data included sex, age and country of origin. Sex was classified as “female” or “male” and age was calculated based on the difference in years between date of birth and date of referral. Children and young people were also included in order to explore the effect of age on SP uptake. The country of origin was considered “Portuguese” to patients referred that were born in Portugal and “foreign” to those born in other countries. Additional information included patients' preferred language and whether they needed a companion or a translator in consultations.

2.4.3. Health-Related Variables. Health-related variables included high use of primary healthcare, where “no” comprised when the patient was not considered by the referring professional to be a high user of primary healthcare appointments, and “yes” consisted of when the patient was considered by the referring professional to be a high user of primary healthcare appointments. This variable was based on the perception of the referring professional, as no quantitative definition was agreed between the FHUs teams. Other variables were the number and type of chronic diseases. The chronic diseases were organised into groups of diseases according to the data available on the referral form (the groups of chronic diseases were defined by primary healthcare professionals based on the international classification of diseases in force at the time the form was created) [32]. These groups include the following: (i) cardiovascular diseases—hypertension, coronary heart disease and heart failure; (ii) cerebrovascular disease—stroke, dementia and other neurological diseases; (iii) metabolic disease—obesity, overweight, dyslipidaemia and other metabolic diseases; (iv) diabetes—also includes prediabetes; (v) respiratory disease—chronic obstructive pulmonary disease, asthma and other respiratory diseases; (vi) mental illness—depression, anxiety and other mental illness; (vii) osteoarticular disease—arthritis, osteoporosis and other osteoarticular diseases; (viii) oncological disease; (ix) chronic pain and (x) other relevant diseases, such as chronic kidney diseases, genetic disorders, gastrointestinal disorders, infectious chronic diseases and vision and hearing impairments.

2.4.4. Referral Details. The analysis included the number of reasons for referral and the specific reason for each referral. Patients could be referred to the SP for one or more of the 16 reasons which were organised into six groups which are as follows [33]: (1) mental health, including social isolation,

anxiety, depression, sadness and loneliness; (2) integration of migrants; (3) sedentary lifestyle, involving the need or willingness to undertake physical activity; (4) functional dependency; (5) social and financial support, covering social and health benefits, financial difficulties or indebtedness, support in purchasing medicines, food and housing support and (6) unemployment, comprising other labour issues or the need for training or education.

In relation to the referral process, the additional data captured on the referral form included the day of referral and the professional responsible for making the referral (general practitioner, nurse, psychologist, resident doctor and technical assistant). The day of referral was categorised by month and year and then grouped into two periods: before the COVID-19 pandemic (September 2018 to February 2020) and during the COVID-19 pandemic (March 2020 to December 2022).

2.5. Statistical Analysis. Data from the SP referral forms and FHU electronic records were pseudonymised and exported to an SPSS database. We performed a descriptive analysis to identify patients' sociodemographic and health characteristics, as well as referral details, in the nonuptake and uptake groups. Subsequently, a chi-square independence test was performed to compare categorical variables' proportions in the two groups, using a significance level of 5% for bivariate analyses.

To identify factors associated with uptake, a binary logistic regression model was employed with a 95% confidence interval. Initially, a criterion of $p < 0.20$ was applied to include the independent variables in the initial logistic regression model. The final model was adjusted by sex and age, and the remaining variables were selected using Forward LR selection. Only complete cases in dependent variable were included in the analysis, and the significance level was set at 5%. All statistical analyses were performed using SPSS Version 28.

2.6. Ethical Approval. This study is part of the "Evaluation of the SP project in Health Units in the Lisbon and Tagus Valley region" approved by the Ethics Committee for Health of the Regional Health Administration of Lisbon and Tagus Valley (reference 5 2020/CES/2020).

3. Results

During the study period, 1022 referrals were made to the SP programme. Among these, 66.1% were female, and the mean age was 56.6 years ($SD \pm 23.8$). The most frequent age group was 51–75 years (33.6%). Almost two-thirds of referrals involved patients born in Portugal (65.3%) and 79.9% preferred to communicate in Portuguese. Additionally, 90.9% did not need a companion or a translator during consultations.

Most referrals were made due to one reason (34.0%) and two reasons (28.6%). The most common referral reasons were social and financial support (58.6%), mental health concerns (37.8%) and unemployment issues (19.6%).

Regarding health characteristics, 15.8% of the referred patients were considered high users of primary healthcare consultations and 34.4% had two or three chronic diseases. The most prevalent chronic diseases were cardiovascular disease (34.7%), mental illness (28.2%) and metabolic disease (20.9%). Most referrals were registered during the COVID-19 period (64.6%) and by a general practitioner (89.2%). Overall, 6.4% of referrals ($n = 65$) were related to patients referred more than once during the period of the study.

Of the total referrals, 55.1% ($n = 563$) resulted in SP uptake, defined as attending at least one appointment with a link worker (Table 1). The proportion of SP uptake was significantly ($p < 0.05$) higher among participants aged > 51 years, individuals who preferred communicating in Portuguese, those not requiring a companion or a translator during consultations, referrals due to functional dependency and social and financial support, patients with one to three chronic diseases, including cerebrovascular disease, and those who were referred during the COVID-19 pandemic period.

Data from 1022 referrals were included in the logistic regression analysis. The initial analysis was performed using all the variables with $p < 0.20$ in the comparisons between the groups (Model 1). The results from Model 1 showed that being 51–75 years old, being referred due to social and financial support, having chronic pain and being referred during the pandemic were significantly associated with increased odds of SP uptake. A detailed description of Model 1 is provided in Supporting Information 2.

According to the model adjusted by sex and age, Model 2 (Figure 1), being 51–75 years old (OR 1.65; 95% CI 0.99–2.75; $p = 0.055$, compared to those aged between 0 and 25 years), having been referred for social and financial reasons (OR 1.47; 95% CI 1.12–1.92; $p = 0.006$, compared to those who were not referred for this reason) and having been referred during the COVID-19 period (OR 1.47; 95% CI 1.12–1.93; $p = 0.006$, compared to those referred before COVID-19 period) remained significantly associated with SP uptake. Having one chronic disease (OR 1.67; 95% CI 1.13–2.48; $p = 0.010$) and two-three chronic diseases (OR 1.55; 95% CI 1.05–2.29; $p = 0.029$) compared to those without chronic disease became associated with SP uptake in the adjusted model.

4. Discussion

SP is a holistic initiative with a person-centred approach, which is based on what matters to the individual, their empowerment and motivation [34]. SP initiatives, involving the recommendation of community interventions by healthcare professionals, necessitate patients' acceptance for successful implementation [35]. Its success relies heavily on patient uptake, which is influenced by a complex interplay of sociodemographic, health and programme-related factors [22, 25, 36, 37]. While SP has gained prominence internationally, evidence on patient uptake remains limited [25], particularly in contexts where implementation is recent, such as Portugal [24].

TABLE 1: Description of patient characteristics and referral details between nonuptake and uptake groups, absolute values (*n*) and percentages (%).

Variable	Total no. of referrals to SP programme (<i>n</i> and %)	SP nonuptake (<i>n</i> and %)	SP uptake (<i>n</i> and %)	Crude OR (95% CI)	<i>p</i>
Total	1022	459	563		
Sociodemographic characteristics					
Sex					
Female	676 (66.1)	316 (46.7)	360 (53.3)	1	
Male	346 (33.9)	143 (41.3)	203 (58.7)	1.25 (0.96–1.62)	0.100
Age (years)					
0–25	112 (11.0)	67 (59.8)	45 (40.2)	1	
26–50	286 (28.0)	142 (49.7)	144 (50.3)	1.51 (0.97–2.35)	0.068
51–75	343 (33.5)	137 (39.9)	206 (60.1)	2.24 (1.45–3.46)	< 0.001
> 75	281 (27.5)	113 (40.2)	168 (59.8)	2.21 (1.42–3.46)	< 0.001
Country of origin					
Portuguese	667 (65.3)	295 (44.2)	372 (55.8)	1	
Foreign	355 (34.7)	164 (46.2)	191 (53.8)	0.92 (0.71–1.20)	0.547
Patient preferred language					
Portuguese	817 (79.9)	347 (42.5)	470 (57.5)	1	
English and others	205 (20.1)	112 (54.6)	93 (45.4)	0.61 (0.45–0.83)	0.002
Need of a companion or a translator in consultations					
No	929 (90.9)	408 (43.9)	521 (56.1)	1	
Yes	93 (9.1)	51 (54.8)	42 (45.2)	0.65 (0.42–0.99)	0.045
Number of reasons of referral					
One reason	347 (34.0)	160 (46.1)	187 (53.9)	1	
Two reasons	292 (28.6)	133 (45.5)	159 (54.5)	1.02 (0.75–1.40)	0.887
Three reasons	221 (21.6)	100 (45.2)	121 (54.8)	1.04 (0.74–1.45)	0.841
Four or more reasons	162 (15.8)	66 (40.7)	96 (59.3)	1.25 (0.85–1.82)	0.256
Reasons of referral					
Mental health	386 (37.8)	173 (44.8)	213 (55.2)	1.01 (0.78–1.30)	0.963
Integration of migrants	161 (15.8)	85 (52.8)	76 (47.2)	0.69 (0.49–0.96)	0.029
Sedentary lifestyle	143 (14.0)	71 (49.7)	72 (50.3)	0.80 (0.56–1.14)	0.220
Functional dependency	167 (16.3)	63 (37.7)	104 (62.3)	1.42 (1.01–2.00)	0.042
Social and financial support	599 (58.6)	247 (41.2)	352 (58.8)	1.43 (1.11–1.84)	0.005
Unemployment	200 (19.6)	94 (47.0)	106 (53.0)	0.90 (0.66–1.23)	0.508
Health characteristics					
High user of primary healthcare consultations					
No	941 (100)				
Yes	792 (84.2)	375 (47.3)	417 (52.7)	1	
Yes	149 (15.8)	60 (40.3)	89 (59.7)	1.33 (0.94–1.90)	0.113
Number of chronic diseases					
None	292 (28.6)	161 (55.1)	131 (44.9)	1	
One chronic disease	252 (24.7)	99 (39.3)	153 (60.7)	1.90 (1.35–2.67)	< 0.001
Two-three chronic diseases	352 (34.4)	141 (40.1)	211 (59.9)	1.84 (1.34–2.52)	< 0.001
Four or more chronic diseases	126 (12.3)	58 (46.0)	68 (54.0)	1.44 (0.95–2.19)	0.088
Type of chronic diseases					
Cardiovascular disease	355 (34.7)	156 (43.9)	199 (56.1)	1.06 (0.82–1.38)	0.650
Cerebrovascular disease	147 (14.4)	53 (36.1)	94 (63.9)	1.54 (1.07–2.21)	0.020
Metabolic disease	241 (20.9)	97 (45.3)	117 (54.7)	0.98 (0.72–1.33)	0.891
Diabetes	158 (15.5)	77 (48.7)	81 (51.3)	0.83 (0.59–1.17)	0.294
Respiratory disease	92 (9.0)	37 (40.2)	55 (59.8)	1.24 (0.80–1.91)	0.343
Mental illness	288 (28.2)	119 (41.3)	169 (58.7)	1.23 (0.93–1.62)	0.148
Osteoarticular disease	168 (16.4)	69 (41.1)	99 (58.9)	1.21 (0.86–1.69)	0.274
Oncological disease	47 (4.6)	18 (38.3)	29 (61.7)	1.33 (0.73–2.43)	0.352
Chronic pain	52 (5.1)	17 (32.7)	35 (67.3)	1.72 (0.95–3.12)	0.072
Other relevant disease(s)	153 (15.0)	68 (44.4)	85 (55.6)	1.02 (0.72–1.45)	0.900

TABLE 1: Continued.

Variable	Total no. of referrals to SP programme (<i>n</i> and %)	SP nonuptake (<i>n</i> and %)	SP uptake (<i>n</i> and %)	Crude OR (95% CI)	<i>p</i>
Referral details					
Referral period					
Before COVID-19 pandemic	362 (35.4)	189 (52.2)	173 (47.8)	1	
During COVID-19 pandemic	660 (64.6)	270 (40.9)	390 (59.1)	1.58 (1.22–2.04)	< 0.001
Professional that made the referral					
General practitioner	912 (89.2)	412 (45.2)	500 (54.8)	1	
Nurse and technical assistant	110 (10.8)	47 (42.7)	63 (57.3)	1.11 (0.74–1.65)	0.626

Abbreviations: CI, confidence interval; OR, odds ratio.

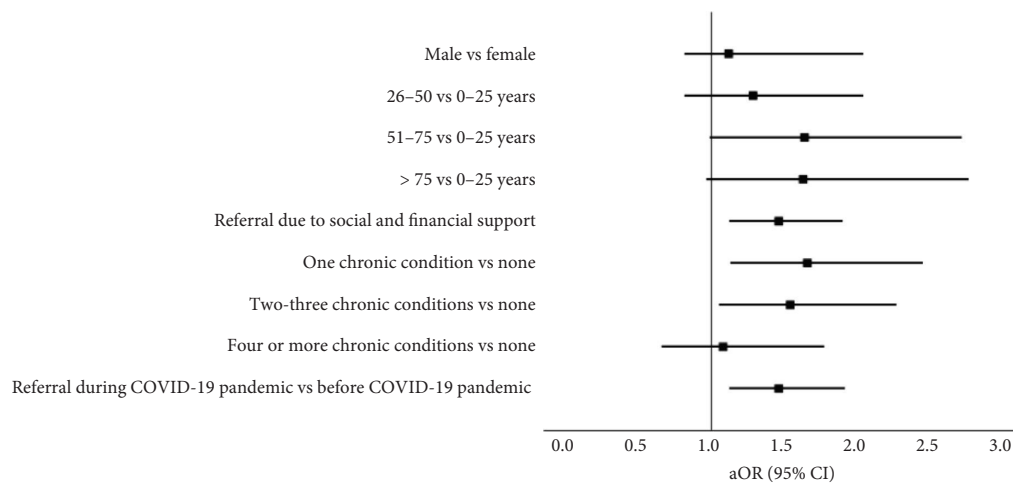


FIGURE 1: Forest plot of data from logistic regression revealing factors associated with SP uptake with corresponding adjusted odds ratios and 95% confidence interval. OR, odds ratio; CI, confidence interval.

4.1. Sociodemographic Determinants of SP Uptake. Our study identifies that individuals aged over 50 years, referred for social and financial reasons, with one to three chronic diseases and referred during the COVID-19 period were more likely to uptake the SP initiative. These findings highlight the importance of tailoring SP interventions to specific demographic profiles to maximise participation and impact.

A study conducted in South West of England on an “Arts on Prescription” initiative found that individuals with lower well-being and multiple referral motives were less likely to attend, despite being among those who could benefit most [23].

4.2. Role of Age in SP Uptake. In our study, age emerged as a significant factor in SP uptake, with individuals aged 51–75 years showing higher uptake compared with those aged 0–25 years. This aligns with previous research indicating that older adults are more likely to adhere to wellness and exercise referral programmes, particularly when referred for physical health conditions [38, 39]. We speculate that the higher prevalence of comorbidities, reduced functional ability and limited social participation among older people [40] may contribute to their receptiveness to interventions such as SP, which aim to address the complex needs [41].

Moreover, SP programmes often prioritise older populations due to the growing challenges of ageing, such as loneliness and isolation [42–45]. A study in the Western Pacific region emphasise the need for culturally adapted SP models that promote equity and engagement among older adults [44]. Additionally, it is important to dedicate time and attention to discussing people’s situation before referral as critical components in SP programmes, which is essential for building trust and managing expectations, thereby affecting patient uptake and outcomes [45].

Conversely, children and young people remain underrepresented in SP initiatives [33, 46]. Barriers include lack of clearer policies and procedures, insufficient training, knowledge and supervision for professionals and inadequate funding for young people to participate in activities [47]. Research suggests that inappropriate referrals, limited interpersonal skills among professionals to engage young people and lack of youth-focused activities hinder uptake in younger populations [46–48].

4.3. Role of Socioeconomic Factors in SP Uptake. Patients referred for social and financial support, whose primary needs included housing, food security and medication access, demonstrated higher SP uptake, suggesting that SP serves as a critical resource for individuals facing socioeconomic vulnerabilities. Therefore, these subgroups of

patients referred to the SP need urgent solutions to help them obtain capital and other resources to sustain their present living conditions [49]. Gibson et al. highlight that individuals experiencing poverty tend to prioritise interventions that offer immediate relief, reinforcing the relevance of SP in addressing social determinants of health [49]. Referrals unrelated to basic needs—such as those for social isolation, sedentarism and mental health—may require additional motivational support and clearer communication about the benefits of SP to uptake and adherence, starting in the first consultation with the health professional.

4.4. Impact of Chronic Diseases on SP Uptake. Our results indicate that people with one to three chronic diseases are more likely to take up an SP initiative than those without a chronic disease, reflecting the value of SP's integrated approach for individuals managing complex health conditions [50]. SP offers not only healthy lifestyle support, such as weight management, dietary recommendations and physical activity but also social and emotional resources that complement clinical care [51, 52]. This is particularly relevant for patients with multimorbidity, who often face fragmented healthcare experiences and unmet psychosocial needs [53–55].

However, the discussion surrounding this result is multifaceted. While our finding suggests a positive correlation between chronic illness and SP uptake, a deeper examination is warranted. Previous research has described that it is essential to consider potential variables of interest, such as socioeconomic status, accessibility to healthcare services and severity of illness, which may influence both chronic disease status and participation in SP programmes [52, 53]. Furthermore, the relationship between chronic illness and SP uptake can be mediated by factors such as perceived social support, health literacy and patient empowerment [52]. Academic literature underscores the significance of addressing these complexities when interpreting health-related behaviours among populations with chronic illnesses [34, 56].

The type of chronic disease does not appear to influence uptake, which could be considered positive since there appear to be no limitations in uptake due to specific diseases. In contrast, we expected to find a higher uptake in patients with chronic diseases that SP programmes can be more relevant for, such as diabetes or mental health conditions, but this was not found in our results. These findings can be explained by limitations in the patients' understanding of the need for SP and the benefits of this approach [25, 57]. Also, it may reflect broader health inequities, as highlighted by Marmot's work on the social determinants of health, which emphasises that individuals in socioeconomically disadvantaged groups—who often experience a higher burden of chronic disease—face greater barriers to accessing and engaging with health interventions, including SP [15, 58].

4.5. SP Uptake During the COVID-19 Pandemic. Being referred to SP during the COVID-19 period was a factor that promoted SP uptake. The economic consequences of the COVID-19 pandemic have broadened existing health inequalities by affecting the most vulnerable [59]. Restrictions on movement, economic instability and increased mental health issues created a heightened need for community-based support [59–62].

By doing so, the intervention of SP allowed the identification of groups of people who would benefit immediately from SP and optimised resources to provide a quick and efficient response to these patients [63]. In addition, the support offered by link workers was an essential resource for vulnerable people [64]. The role of voluntary organisations and social workers in creating a societal response to the crisis during this period helped support vulnerable and older populations [65], demonstrating SP's adaptability in crisis contexts. As suggested by our results, the pandemic underscored the importance of strong community networks and the role of SP in fostering resilience [59].

4.6. Strategies for Improving SP Uptake. To optimise SP implementation, proactive measures are needed to engage populations less likely to participate. Personalised outreach, such as telephone contact with participants prior to consultation or as an addition to mailed invitations, has been shown to improve recruitment and engagement, particularly among disadvantaged groups [66, 67]. In the SP context, initial contact with link workers can help bridge communication gaps and build trust.

Moreover, awareness-raising actions and health education are also crucial, especially for groups with lower uptake (e.g., young people and people without chronic diseases) [68, 69]. Empowering individuals to take an active role in managing their health fosters a sense of ownership and enhance adherence [70]. Achieving this cultural shift requires collaboration among healthcare providers, policymakers and communities to promote patient-centred care [71].

4.7. Monitoring and Evaluation of SP Initiatives. Robust monitoring and evaluating the implementation and results of SP initiatives are essential components for improving programmes [50]. Challenges include inconsistent data recording, lack of standardisation and limited integration with electronic health systems [72]. These issues hinder the feasibility and quality of SP evaluations. Investing in digital tools and streamlining documentation processes can enhance data collection, exchange and analysis [73].

Additionally, the workload and time constraints faced by professionals involved in SP may impact the documentation and follow-up of referred patients [74]. Strategies to support professionals and improve resource organisation are necessary to ensure the sustainability and effectiveness of SP initiatives [75].

4.8. Strengths and Limitations. This study identifies SP uptake profiles, which may help to inform improvements in project implementation. Also, this study includes an extensive SP referral database, contributing to the strengthening of knowledge at a time when SP is growing rapidly but there is still a lack of a consistent body of evidence on the processes and impacts. Although this project is based in a specific context, its results can be useful for understanding and informing projects in other settings. By considering the temporal aspect and categorising referral periods before and during the COVID-19 pandemic, this study provides insights into potential variations in patients' and health professionals' behaviours and SP uptake over time, which is valuable for adapting interventions to changing circumstances.

However, limitations of this study must be acknowledged. This study focused on two specific FHUs in Portugal, and patient referral profiles, uptake characteristics and demographics can vary across different regions and healthcare settings, thus impacting the external validity of the study. Moreover, the current study did not specifically discuss psychosocial factors, which can be a limitation to a broader understanding of the SP uptake. The uptake of health interventions involves a complex interplay of factors, with psychosocial influences playing a relevant role in patients' initiation, completion and improvement of treatment. Further research on these factors is therefore essential. Additionally, the reliance on data from patients referred by healthcare professionals to the SP programme introduces potential selection bias. Those who were not referred to or did not have access to consultations were not included in the analysis, which may have impacted the study's representativeness of potential users of SP, particularly for more disadvantaged and vulnerable populations.

5. Conclusions

SP uptake is shaped by a multifaceted set of factors, including patients' sociodemographic, health-related conditions and referral backgrounds. This study identified that SP uptake was more likely among patients aged 51–75 years, those referred for social or financial reasons, those with chronic diseases and those referred during the COVID-19 period.

These findings offer valuable insights for the design and implementation of SP programmes. By recognising which patient profiles are more inclined to uptake SP, healthcare providers and policymakers can develop targeted outreach strategies to improve referral practices, enhance engagement and reduce health inequalities. Tailoring SP interventions to address urgent social needs and chronic health conditions may increase their relevance and effectiveness, particularly among vulnerable populations. A more targeted and efficient allocation of resources could ensure that SP interventions are directed where they are most needed to address specific challenges in healthcare delivery and enhance patient uptake. Furthermore, these findings may support the design, planning and implementation of new initiatives, promoting more sustainable dissemination and implementation of SP

while providing essential insights to inform policy decisions and guide future research.

Data Availability Statement

The data are not publicly available due to privacy and ethical restrictions.

Conflicts of Interest

The authors declare no conflicts of interest.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section. (*Supporting Information*)

Supporting Information 1 contains a table with detailed descriptions of the study variables and their data sources. Supporting Information 2 includes a table with the results of the initial analysis performed using all variables associated with SP uptake with p values less than 0.20 (Model 1).

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