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Social prescribing for older adults in mainland Portugal: Perceptions and future prospects

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ABSTRACT

Background: In order to address health inequalities, which have been exacerbated by the COVID-19 pandemic, and promote older adults' quality of life, it is necessary to explore non-medical approaches such as social prescribing. Social prescribing is a person-centered approach that allows health professionals to refer patients to services provided by the social and community sectors. This study aimed to explore older adults' perceptions of social prescribing in mainland Portugal and to identify factors associated with these perceptions, providing insights for future implementation strategies.

Methods: A cross-sectional study was conducted with 613 older adults aged 65 to 93. Participants' sociodemographic, economic, and health characteristics were assessed, along with their perceptions of social prescribing's benefits and activity interest.

Results: Over 75% of respondents agreed that social prescribing would benefit the health system and their community. Most participants (87.7% and 89.7%, respectively) thought that activities like personal protection and development activities and cultural enrichment would be particularly relevant to them. Factors such as marital status, education, health status, and pain/discomfort levels influenced the perceived relevance of these activities.

Conclusion: This study reveals that older adults in mainland Portugal are open to social prescribing and suggests that tailored interventions considering individual preferences and characteristics can lead to more effective implementation and equal access to social prescribing. Further research and policy efforts should focus on integrating social prescribing into the healthcare system to support healthy aging in Portugal.

1. Background

While biology is undoubtedly relevant in aging, this is also a context-dependent process that varies according to the environment where people live (World Health Organization, 2022a; United Nations D of E and SAPD, 2017). This environment is shaped by social determinants of health at the social, economic, and physical levels, which can influence people's health outcomes (Marmot, 2005). Vulnerable groups seem to be particularly affected by poor social and economic circumstances throughout their lifespan, in a cumulative manner (Wilkinson and

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Marmot, 2003). One such example is older adults, who often face disadvantages on multiple levels (e.g., old age poverty, loneliness, ageism) (United Nations Population Fund, 2012; Mikton et al., 2021). This situation has been worsened by the remarkable impact that the COVID-19 pandemic had on older people, with evidence so far revealing worse self-reported health and mental ill health (i.e., depressed mood, anxiety symptoms), cognitive decline, increased social isolation and loneliness, and income insecurity (United Nations. Policy Brief, 2020; Eurofound, 2022).

According to Muhl's Delphi study's results, social prescribing can be defined as

> A means for trusted individuals in clinical and community settings to identify that a person has non-medical, health-related social needs and to subsequently connect them to non-clinical supports and services within the community by co-producing a social prescription – a non-medical prescription, to improve health and wellbeing and to strengthen community connections· (Muhl et al., 2023).

In this way, social prescribing is a multidimensional approach that empowers patients to have more autonomy and control over their life and health, while leading to more efficient use of health services by promoting community-based integrated care (Polley et al., 2017). To address health inequalities, which were exacerbated by the pandemic, it is necessary to consider alternative and sustainable strategies such as this one, which intervenes beyond the health system and focuses on improving people's circumstances (Marmot, 2005; United Nations. Policy Brief, 2020). Estimates from the United Kingdom show that 20 % of people visit their general practitioner because of non-clinical needs, such as social isolation and loneliness, which impact their health and well-being (Zantinge et al., 2005). However, services traditionally provided by the health system are insufficient to respond to those needs suitably (Polley et al., 2017; United Nations Sustainable Development, 2023).

Everyone can benefit from social prescribing, but those more likely to have negative health outcomes (e.g., chronic conditions) due to certain social determinants may stand to gain the most. As a result, social prescribing may be beneficial for older people who have comorbidities or experience loneliness and isolation because it addresses the underlying causes of their health and quality of life issues, instead of simply treating their symptoms (World Health Organization, 2022b).

Although evidence about social prescribing's positive impact does not seem consistent across studies (e.g., Napierala et al., 2022), an array of literature reports its benefits for older adults. Social prescribing has been associated with decreased negative outcomes (e.g., anxiety) and improved positive outcomes (e.g., well-being, social connectedness) (Morton et al., 2015; Reinhardt et al., 2021; Kim et al., 2021). A systematic review demonstrated increased mental well-being and general health, decreased loneliness and social isolation, and reduced primary healthcare use (Cooper et al., 2022). Moreover, a narrative review (Bild and Pachana, 2022) showed that outdoor and volunteering activities led to more independence and better control over health management. For more studies on social prescribing's positive outcomes for older adults, please see (Arab et al., 2021; Liebmann et al., 2022).

Although social prescribing was initially developed in the United Kingdom, it has quickly gained global visibility and it is now being implemented in 17 countries in Europe, Asia, Australia, and North America (Morse et al., 2022). One of those countries is Portugal, where social prescribing has been implemented in Lisbon since 2018 (Hoffmeister et al., 2021). However, despite the country's aged demographics, the considerable impact COVID-19 had on older people (e.g., 80 % reported an increase in anxiety, 73 % felt sadder or more depressed, and 31 % felt lonelier) (Novais et al., 2021) and its' potential to promote active aging and quality of life, social prescribing has not been implemented on a large scale in Portugal. A recent study conducted in a southern region showed promising results in terms of its acceptability with health professionals (Costa et al., 2021), but to the authors' knowledge, no currently available studies explored older people's receptivity to social prescribing in Portugal. With the world's upward aging trend and the discrepancy between average life expectancy and healthy life expectancy, it is undeniable that there must be a shift from the idea of dependency when it comes to aging. To that end, services and interventions must be designed in a way that takes into account the particular and complex needs of older people. Therefore, this study aims to characterize the perceptions of social prescribing in older adults in mainland Portugal and identify if and how social factors and quality of life are associated with their social prescribing preferences.

2. Methods

2.1. Study design and ethics

A cross-sectional study, using a representative sample of older adults in mainland Portugal, was conducted through telephone interviews between September and October 2022. Participants were randomly selected from a list of landline and cell phone numbers, also randomly generated by a specialized polling center. Initially, the minimum sample size was estimated at 384 individuals using the OpenEpi tool, with a 95 % confidence interval and a 5 % margin of error. This sample size was calculated considering a large sample (i.e., over one million individuals) and assuming a prevalence/proportion of 50 %, guaranteeing maximum variability and maximum size. This was substantiated by the most recent population census, which reports that 2.3 million Portuguese residents are aged 65 years old or older (INE, 2021). Inclusion criteria included residence in mainland Portugal and being at least 65 years old. Participants provided oral consent and completed the questionnaire with the help of trained interviewers using a computer-assisted structured telephone interview system. A total of 613 valid questionnaires were collected (74 % response rate), after excluding 1303 older adults who declined to participate in the study (n = 220), did not meet the inclusion requirements (n = 924), or did not answer the phone after three attempts (n = 159). The maximum margin of error associated with a random sample of 613 respondents is 4 % with a confidence level of 95 %.

This study was approved by the Ethics Committee of the Centro Académico de Medicina de Lisboa (Process number 193/22) and complied with the ethical principles in the Declaration of Helsinki, and the General Data Protection Regulation (GDPR).

2.2. Measures

The questionnaire included sociodemographic (e.g., age), economic (e.g., "how do you rate the current financial situation of your household"), and health variables (e.g., "do you have any illnesses or disabilities").

The EuroQol-5D (EQ-5D-3L) (EuroQol, 1990) evaluated the quality of life through a short questionnaire and a visual analog scale. The questionnaire comprises five dimensions: mobility, self-care, usual/daily activities, pain/discomfort, and anxiety/depression, each with a 3-point scale (1 – no problems, 2 – some problems, and 3 – extreme problems). The dimensions can be converted into a summary index, by using a scoring algorithm, ranging from 0 (worst health state) to 1 (best health state). The visual analog scale allows respondents to rate their perceived health on a continuum ranging from 0 (worst imaginable health status) to 100 (best imaginable health status). This scale showed acceptable internal consistency ($\alpha = 0.66$).

After introducing a definition of social prescribing (based on the information provided by The King's Fund in 2017) the following section of the questionnaire enquired 1) how often respondents received recommendations from health professionals to seek activities available in the community to promote their health and 2) how often respondents presented non-clinical concerns during health appointments. Both questions were rated on a 5-point scale (1 – never to 5 – very often).

Additionally, two brief scales (1 – completely disagree to 7 – completely agree) assessed if respondents thought social prescribing would benefit people's health and well-being, the community's social cohesion, the quality of health care provided (e.g., improving doctor-patient relationships), and the functioning of primary health care units (e.g., reducing the number of unscheduled appointments). In addition, they were asked to rate the usefulness of various social prescribing activities and services.

2.3. Statistical analysis

Data were analyzed using IBM SPSS 27 (IBM Corp. Released 2020. IBM SPSS Statistics for Windows, Version 27.0. Armonk, NY: IBM Corp). Descriptive statistics, absolute and relative frequencies, and inferential bivariate analysis (Kruskal Wallis Test and Chi-Square Test of Independence) were performed. The significance level considered was $P = .05$.

3. Results

3.1. Participant characteristics

Six hundred and thirteen older adults aged 65 to 93 (*Mean* = 72.8; *Standard Deviation* = 5.8) participated in this study, 52.2 % of whom were male. The majority were of Portuguese nationality (94.3 %), married (63.5 %), and shared a residence with at least one other person (52.4 %). Almost half of the participants (41.9 %) believed their household income to be sufficient for their needs, although a sizable segment of the sample (29.6 %) found it difficult or exceedingly difficult to survive on their income. Regarding education, 27.6 % had finished the fourth grade (primary school). Most participants resided in the Lisbon Metropolitan Area (40.1 %). Please see Table 1 for more information.

Table 1
Sociodemographic Characteristics and Overall Health Rating.

	n	%
Sex	613	–
Male	320	52.2
Female	293	47.8
Age, *years (Mean = 72.8; Standard Deviation = 5.7)*	613	–
65-74	405	66.1
75-84	183	29.9
>84	25	4.1
Civil status	613	–
Single	29	4.7
Non-marital partnership	6	1.0
Married	389	63.5
Separated	6	1.0
Divorced	75	12.2
Widowed	108	17.6
Educational level	613	–
No schooling	3	0.5
First cycle of basic education (4th grade, primary school)	169	27.6
Second cycle of basic education (6th grade)	38	6.2
Third cycle of basic education (9th grade)	83	13.5
Secondary education (12th grade)	131	21.4
Undergraduate/Medical degree	33	5.4
Bachelor's degree	131	21.4
Master's degree	13	2.1
PhD	12	2.0
Employment situation	613	–
Employed (full-time or part-time)	38	6.2
Unemployed	4	0.7
Retired	542	88.4
Never worked outside the home	11	1.8
Permanently unable to work	9	1.5
Informal caregiver or other	9	1.5
Household's income situation *(Mean = 3.0; Standard Deviation = 0.9)*	608	–
Very comfortable	17	2.8
Comfortable	156	25.4
Sufficient for the household's needs	255	41.6
Difficult	122	19.9
Very difficult	58	9.5
Overall health rating (*Mean* = 2.8; *Standard Deviation* = 0.8*)*	613	–
Very good	39	6.4
Good	155	25.3
Acceptable	305	49.8
Bad	94	15.3
Very bad	20	3.3

3.2. Quality of life scores

In terms of the EQ-5D, both the perceived health state and perceived health status were relatively high (*Mean* = 0.8; *Standard Deviation* = 5.8; *Mean* = 72.2; *Standard Deviation* = 21.5, respectively). The large majority did not have issues on any of the dimensions, but 35.4 % had some mobility problems, 6.4 % had some trouble washing or getting dressed by themselves, and 20.2 % had some problems performing their usual/daily activities. On top of that, 4.4 % experienced extreme physical pain or discomfort, and 4.1 % were extremely anxious or depressed (please see Table 2).

3.3. Participant opinions on social prescribing

Concerning social prescribing results, respondents stated they rarely (24.0 %) or never (44.5 %) received recommendations from health professionals to use activities available in the local community to promote their health. At the same time, most individuals said they rarely (20.2 %) or never (64.9 %) presented complaints of a non-clinical nature while attending appointments with health professionals. Nonetheless, the majority of participants (66.2 %) claimed they knew which social resources were available in the community from sources such as their parish council and city hall (34.4 %), friends (30.7 %), internet (8.3 %), and family (7.3 %).

Over 75 % of participants agreed that social prescribing would benefit the health system and their community (please see Fig. 1), with the items "*social prescribing would make health care more effective*" (89.8 %) and "*social prescribing could benefit the health and well-being of my community*" (85.9 %) having the highest rates of agreement. The most disagreed upon item was "*social prescribing could have an impact in reducing the number of unscheduled appointments*" (8.0 %). Limited evidence was obtained regarding differences in the agreement about social prescribing's benefits according to sociodemographic, economic, and health characteristics. Participants with a higher educational level were more likely to agree that social prescribing has benefits in general ($H_{(7)} = 16.0$; $p = .025$). When considering item-specific results, people with acceptable health status were more likely to agree that social prescribing could benefit the health professional-patient relationship ($\chi^2 = 49.0$; $df = 24$; $p = .002$).

With reference to social prescribing activities (please see Fig. 2), over 75 % of respondents agreed they would be relevant to them, with special significance given to "*personal protection and development activities*" (87.7 %) and "*cultural enrichment activities*" (89.7 %). The most disagreed upon item was "*touristic activities*" (12.7 %). Social activities in recreational organizations were perceived as more relevant by people with acceptable health status (please see Table 3 for all statistical test results). In contrast, physical activity initiatives in the community were considered more relevant by married people and those with moderate pain/discomfort levels. Artistic and creative activities were seen as more relevant by participants who completed primary school, as well as those reporting an acceptable health status, and those with moderate pain/

Table 2
Quality of Life Scores (EQ-5D-3L).

	n	%
Perceived Health State (*Mean* = 0.8; *Standard Deviation* = 0.2)	613	–
Perceived Health Status (*Mean* = 72.2; *Standard Deviation* = 21.5)	613	–
Mobility	613	–
No problems	392	63.9
Some problems	217	35.4
Extreme problems	4	0.7
Self-care	613	–
No problems	571	93.1
Some problems	39	6.4
Extreme problems	3	0.5
Usual/daily activities	613	–
No problems	483	78.8
Some problems	124	20.2
Extreme problems	6	1.0
Pain/discomfort	613	–
No problems	274	44.7
Some problems	312	50.9
Extreme problems	27	4.4
Anxiety/depression	613	–
No problems	408	66.6
Some problems	180	29.4
Extreme problems	25	4.1

discomfort levels. The same trend was observed for technical/technological activities. Participants who had only completed primary school found personal protection and development activities more relevant to them, much like cultural activities. Married people, those who were retired, had moderate pain/discomfort levels, and acceptable health status also thought cultural activities would be important. Lastly, married people and retirees thought touristic activities would be relevant for them. The remaining subgroups did not reveal significant results.

4. Discussion

Despite its potential to support older adults with healthy aging habits and the country's aged population, social prescribing is still not widespread in Portugal. For that reason, this study explored the perceptions of older adults in mainland Portugal about social prescribing and which factors were associated with those perceptions.

Our findings show that the average EQ-5D score was acceptable, meaning that participants ranked their perceived health as fairly high. On top of that, even though most people reported no issues on any of the dimensions, a considerable share of participants had mobility problems and difficulty with their usual/daily activities. These difficulties may be due to chronic conditions, which according to data from 2019 affected more than four in 10 adults in Portugal – a higher proportion than the European Union's average (OECD/European Observatory on Health Systems and Policies, 2021). Alternatively, it could be related to the lingering consequences of the pandemic. A recent European report (Eurofound, 2022) showed that Portugal had the highest proportion of older people reporting worse health and feeling depressed after the pandemic. Furthermore, another study (Novais et al., 2021) evidenced that over a quarter of the participants did not leave their houses since the beginning of the pandemic, which is likely to bring mobility consequences. This reinforces the need to have social prescribing as an additional approach to address complex health problems in a non-clinical way.

Regarding social prescribing, participants said they rarely or never received recommendations from health professionals to use local community activities to promote their health. This is in line with the fact that social prescribing is still quite recent in Portugal, but it could also point to the fact that there is a lack of education and awareness among medical professionals regarding the benefit of non-medical activities on health and well-being. In the same way, participants claimed to rarely or never present non-clinical complaints while attending health appointments, which was a surprising result because data suggests that one in five appointments with general practitioners can be linked to unmet social needs (Zantinge et al., 2005). To our knowledge there is currently no equivalent data available in Portugal, but a recent study showed that one in five patients remained hospitalized after clinical discharge due to social factors (e.g, inadequate family support) (Martins et al., 2023). Thus, it is possible that participants did not recall their appointments accurately or it could be that they believe doctors are disinterested in those subjects; further examination is needed. Despite that, they reported being well-informed about the resources available in the community.

In general, participants seemed to be receptive to social prescribing,

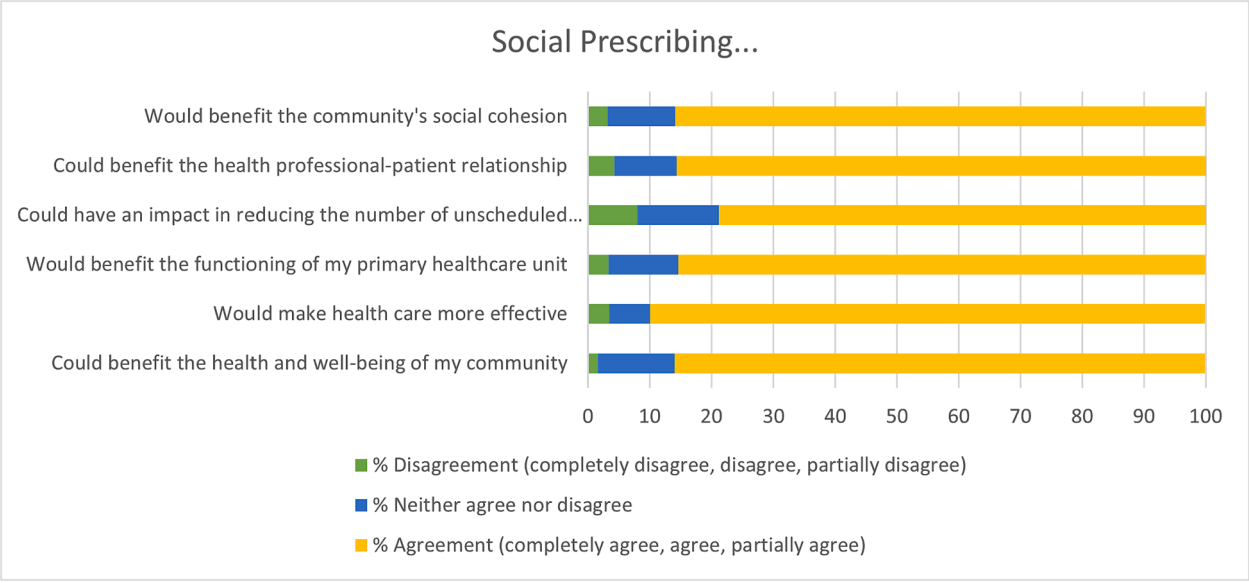

Fig. 1. Perceived Benefits of Social Prescribing for the Community and Healthcare.

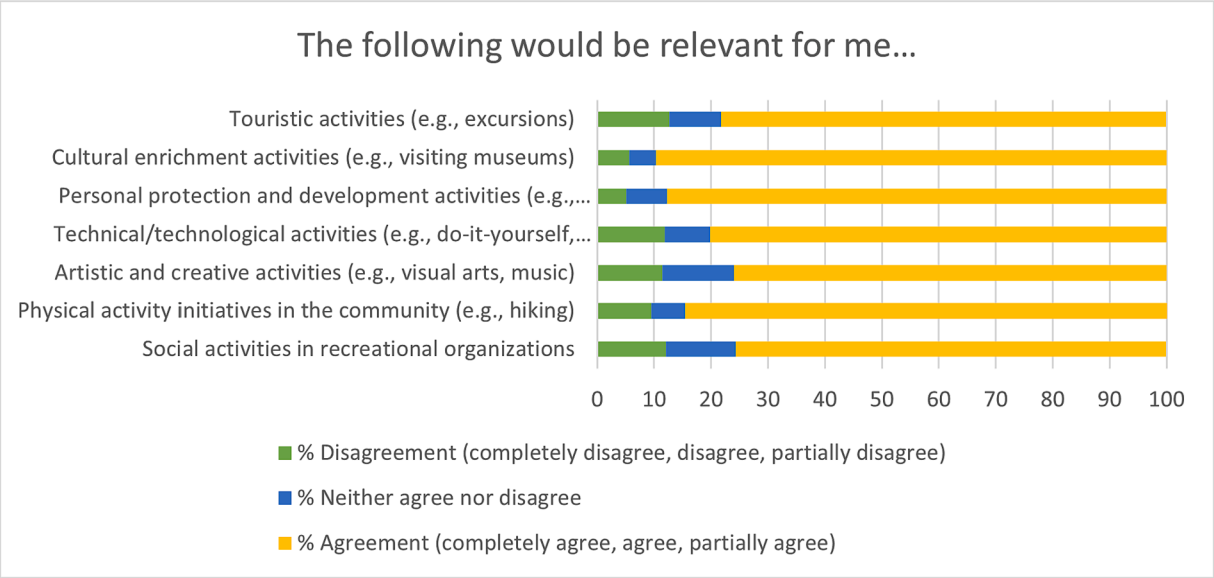

Fig. 2. Perceived Relevance of Social Prescribing Activities (Leisure and Social).

Table 3
Relevance of Social Prescribing Activities by Sociodemographic and Health Characteristics (Chi-square).

	Health status	Civil status	Pain/discomfort levels	Educational level	Employment situation
Social activities in recreational organizations	Acceptable ($\chi^2 = 3.5$; df = 24; p =.031)	–	–	–	–
Physical activity initiatives in the community (e.g., hiking)	–	Married people ($\chi^2 =$ 63.8; df = 30; p <.001)	Moderate levels ($\chi^2 =$ 27.2; df = 12; p <.007)	–	–
Artistic and creative activities (e.g., visual arts, music)	Acceptable ($\chi^2 = 37.0$; df = 24; p =.043)	–	Moderate levels ($\chi^2 =$ 22.5; df = 12; p =.032)	4th grade ($\chi^2 = 90.3$; df = 54; p =.001)	–
Technical/technological activities (e.g., do-it-yourself, computers)	Acceptable ($\chi^2 = 54.9$; df = 24; p <.001)	–	Moderate levels ($\chi^2 =$ 23.1; df = 12; p =.026)	4th grade ($\chi^2 = 85.1$; df = 54; p =.004)	–
Personal protection and development activities (e.g., prevention against falling)	–	–	–	4th grade ($\chi^2 = 111.9$; df = 54; p <.001)	–
Cultural enrichment activities (e.g., visiting museums)	Acceptable ($\chi^2 = 57.0$; df = 24; p <.001)	Married people ($\chi^2 =$ 47.2; df = 30; p =.024)	Moderate levels ($\chi^2 =$ 28.2; df = 12; p =.005)	4th grade ($\chi^2 = 79.1$; df = 54; p =.015)	Retired people ($\chi^2 =$ 111.6; df = 54; p <.001)
Touristic activities (e.g., excursions)	–	Married people ($\chi^2 =$ 57.6; df = 30; p =.002)	–	–	Retired people ($\chi^2 =$ 117.2; df = 54; p <.001)

p <.05.

with the majority agreeing that it would benefit healthcare and the community. This was especially salient for people with higher levels of education, which could reflect a better ability to grasp its potential through higher health literacy, as that seems to increase with the level of education (Verney et al., 2019; Jansen et al., 2018). Looking into specific benefits, people with an acceptable perceived health status thought social prescribing could improve the relationship between themselves and the health professional. People in this category perhaps feel stuck between chronically ill patients, who take up a lot of the doctor's time, and healthy patients who probably do not attend consultations very often. Therefore, it is reasonable that they consider social prescribing as a way of balancing the power dynamic, given that it entails providing appropriate support mechanisms to enable patients to improve their health (Roland et al., 2020).

Pertaining to social prescribing activities, the majority of participants believed that the leisure time activities presented would be relevant for them. People with acceptable health agreed that several activities e.g., creative, would be relevant, which could indicate that older adults with worse health conditions are not being included in common social prescribing activities. This would be aligned with what has been previously reported in the literature, stating that older adults are deterred from participating in leisure activities due to poor health (Dhurup, 2012; Peng et al., 2016). Married people also believed that some social prescribing activities, including excursions and cultural visits, would be relevant for them. Couples who are married may place higher importance on leisure for different reasons. On the one hand, it allows them to spend quality time with each other. On the other hand, if the relationship is strained, leisure group activities provide them with an opportunity to spend time apart and gain social support from others (Shiovitz-Ezra and Leitsch, 2010). Those who reported moderate pain/discomfort agreed that engaging activities (e.g., community exercise, cultural pursuits) would be relevant for them. We propose that these people may be instinctively drawn to leisure activities as they could help distract them from the pain/discomfort, allowing them to focus on something else and enjoy themselves. Participants with lower education (fourth grade) thought most social prescribing activities would be relevant for them, namely creative, personal protection/development, technical/technological, and cultural activities. A great number of social prescribing activities are carried out in a group setting, which addresses loneliness and isolation while providing cognitive stimulation. It is possible that this group of participants thought social prescribing would be relevant because of its social core, this being consistent with previous evidence where people believed increased social connection was one of its largest benefits in general (Bild and Pachana, 2022) and even a vital element in cultural activities (Tierney et al., 2022). Finally, retired people agreed that tourist activities like excursions would benefit them.

This information is paramount and must be taken into account to promote older people's health, since the literature shows that older groups who engage in tourism have better physical and mental health, are more independent, and better able to carry out daily activities (Ferrer et al., 2016).

4.1. Strengths and limitations

This study served as an important stepping-stone for social prescribing dissemination efforts in Portugal, by describing older adults' perceptions about that approach in every mainland region. Likewise, this study helped to lay the foundation for subsequent and effective social prescribing interventions, by establishing older adults' openness to it and exploring which activities seemed more beneficial, as well as who found them particularly relevant.

Nevertheless, the present research has some limitations. It could have proved valuable to include open-ended questions in the survey to explore some of the results more in-depth (e.g., understanding why older people did not present non-clinical complaints to their doctors). Additionally, it is worth mentioning that only people who could manage a telephone conversation were included in the study, which might reflect the skewness in the percentage of people who had acceptable health status. As such, further research using alternative methods is warranted to gather the points of view of those older adults with cognitive decline (e.g., dementia) for whom speech might be difficult. Future studies could also continue to explore this topic by building upon the descriptive results from this study and assessing which factors predict older adults' adherence to social prescribing.

5. Conclusion

The present study outlined that older people in Portugal seem to have a positive perception of social prescribing and its potential to improve the community's health, while also highlighting that older adults are not a homogeneous group, but rather have different preferences regarding social prescribing activities according to their sociodemographic, economic, and health characteristics. Consequently, this should be taken into account to achieve tailored interventions and to ensure effective implementation and equal access to social prescribing for everyone.

CRediT authorship contribution statement

Andreia Costa: Writing – review & editing, Writing – original draft, Validation, Supervision, Project administration, Methodology, Funding acquisition, Formal analysis, Conceptualization. **Joana Henriques:** Writing – review & editing, Writing – original draft. **Violeta Alarcão:** Writing – review & editing, Validation, Methodology, Conceptualization. **Teresa Madeira:** Writing – review & editing, Formal analysis. **Ana Virgolino:** Writing – review & editing. **Adriana Henriques:** Writing – review & editing, Validation, Methodology, Conceptualization. **Rodrigo Feteira-Santos:** Writing – review & editing. **Marie Polley:** Writing – review & editing. **Miguel Arriaga:** Writing – review & editing, Validation, Methodology, Conceptualization. **Paulo Nogueira:** Writing – review & editing, Validation, Supervision, Project administration, Methodology, Funding acquisition, Formal analysis, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

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