

HEALTH (DIS)EQUALITIES AND SOCIAL ISOLATION AND LONELINESS IN THE OLDER PEOPLE: A QUALITATIVE STUDY

Inês Silva Monteiro

LabRP-CIR, ESS, Polytechnic of Porto, Portugal; inesmonteiro@gmail.com

Raquel Simões de Almeida

LabRP-CIR, ESS, Polytechnic of Porto, Portugal; araquel.almeida4@gmail.com

Paula Portugal

LabRP-CIR, ESS, Polytechnic of Porto, Portugal; ppc@ess.ipp.com

Abstract

Demographic ageing is currently a major concern worldwide and has been growing at an accelerated pace, which is why it is important to reflect on the aspects that can be preponderant in the process of growing old. Therefore, this study aims to understand the perspective of elderly people in *Póvoa de Varzim* regarding the factors that influence (in)equality in health, as well as social isolation and loneliness. A qualitative study was carried out and a total of 37 participants were recruited to take part in 4 focus groups, using the intentional non-probabilistic sampling method. The focus groups were analyzed on the basis of thematic analysis. Findings show that the factors that seem to influence health inequalities are related to accessibility to health services (general functioning and appointments), as well as socioeconomic and demographic aspects, which are also at the heart of social isolation and loneliness, alongside community factors. These results have contributed to a better understanding of existing health inequalities and how older people perceive social isolation and loneliness, thus making it possible to understand the helical process inherent in the subject under study. In this way, it has allowed the development of possible actions and/or strategies at the level of policies and the organization of services and communities, in which the Occupational Therapist also plays a fundamental role that will contribute to a transformation of the ageing paradigm and the promotion of a healthy life for older people.

Keywords: qualitative study; older people; health inequalities; social isolation; loneliness

Introduction

Demographic ageing is one of the main concerns in the evolution of 21st century society worldwide (Pinzón-Pulido et al., 2016) and has been growing at a rapid pace in recent years (Srivastava et al., 2021). The Portuguese population has been ageing steadily over the last few decades (Pinto, 2014). According to *PORDATA*, the aging rate in Portugal has increased significantly, with a percentage of 160.5% in 2018 and 183.5% in 2022 (PORDATA, 2023). The elderly population is considered to be vulnerable (Cesari et al., 2017) yet ageing is not in itself synonymous with illness. Nevertheless, it is known that there is a greater prevalence and predisposition to the emergence of health problems that can impair the independence and functional capacity of individuals, resulting in a progressive decline in functionality (Silva et al., 2022). Although the rate of ageing is increasing considerably, an increase in longevity does not mean healthy ageing (Rudnicka et al., 2020). It is therefore important for the elderly population to feel healthy, without the disease factor being a determining factor in the ageing process (Çam et al., 2021). According to the World Health Organization healthy ageing consists of the mode of developing and maintaining functional capacity that enables well-being during aging (World Health Organization, 2017) and it thus becomes a fundamental indicator that this population lives longer with quality of life (Roldán González et al., 2022; Rudnicka et al., 2020). However, the growing proportion of unhealthy older adults in many populations is in fact a universal challenge for society (Partridge et al., 2018; Wagg et al., 2021) and it is important to reflect on and understand the factors that can influence ageing (Silva et al., 2022).

Inequalities in health can be preponderant in the perspective of ageing for individuals and can be related to biological, demographic, socioeconomic conditions and also associated with health services (Pan et al., 2019). Literature evidence that people in precarious economic situations are at greater risk of developing health complications (Kivimäki et al., 2020) and consequently have a greater need for access to health care (Davies et al., 2021). However, due to the disparity in health resources, these individuals with a more vulnerable economic situation have less access to health services, thus

leading to unstable health outcomes (Fan et al., 2019; Pan et al., 2019; Srivastava et al., 2021).

In addition to the negative effects mentioned above, studies show that older adults are prone to being socially isolated (Jaspal et al., 2022) even more so, for example when they are in a fragile socioeconomic situation with lower incomes (Green et al., 2021; Macdonald et al., 2018) or live far away in resource-limited rural/regional areas (Fien et al., 2022; Wang et al., 2022). From this point of view, participation and occupational engagement are widely considered to be a fundamental part of healthy ageing, which becomes elementary if older people are to lead meaningful lives, cooperating with their community (Papageorgiou et al., 2016). Thus, the growing role of Occupational Therapy has been highlighted in the literature, as Occupational Therapists are the professionals qualified to enable or reinforce people's participation through active involvement in occupation and/or meaningful activities. In this way, they are fundamental to achieving the health and well-being of older people, contributing to a sense of satisfaction with life (De Coninck et al., 2017; Gomes et al., 2021; Papageorgiou et al., 2016).

Consequently, awareness of the need to analyze the health of the older people in a multidimensional way is essential (Donovan et al., 2017; Kivimäki et al., 2020; Wagget al., 2021). Thus, this study aims, to understand the perspective of older people in *Póvoa de Varzim* regarding the factors that influence (in)equality in health and social isolation and loneliness, and the extent to which these concepts can be interrelated.

Methods

This is a qualitative study to better understand and explore the perspective of elderly people living in *Póvoa de Varzim* regarding health (dis)equalities and social isolation and loneliness (Tavakol et al., 2014). The participants were recruited using a non-probabilistic purposive sampling method, which aimed to specifically determine the participants who would take part in the study, considering the characteristics of the study (Anunciação, 2021; Pocinho, 2009). In this case, a homogeneous group of elderly people who had common characteristics and shared similar experiences (not institutionalized and who attended an Occupational Center or cooperated with the Parish Council in their area of residence) to take part in a focus group.

That said, the participants were selected by the institutions that agreed to take part in the study and then selected through specific criteria by the study's principal investigator (Marotti et al., 2008). The inclusion criteria were: elderly people living in the community of *Póvoa de Varzim* and its parishes, aged 65 or over. Exclusion criteria also included: the possibility of having severe cognitive deficits, not understanding the Portuguese language and having incomprehensible speech. The information on the cognitive component was obtained by considering the data available in the institutions. Initially, a review of the most current literature on the subject was carried out in order to construct the semi-structured interview script. This script, made up of semi-open questions aimed at the study's objective, was then reviewed and approved by a panel of experts on the subject. A sociodemographic questionnaire was also drawn up to obtain general information about the characteristics of each participant. Between June and July 2023, the four focus groups and the respective selection of participants. In this phase, the exclusion of cognitive impairment on the part of the professionals working in the institutions was guaranteed. The focus groups took place in person at the *Aver-o-Mar* Occupational Center on June 19, 2023 with ten participants present, at the *Rates* Parish Council on June 29, 2023 with eight participants present, at the *Lapa* Occupational Center on July 12, 2023 with nine participants present and at the *Aguçadoura* Parish Council on July 14, 2023 with ten participants present. In the initial phase of the focus group, the participants began by signing the Declaration of Informed Consent, in accordance with the "Declaration of Helsinki" (WMA, 2018). The participants then completed the sociodemographic questionnaire and, in order to characterize the sample for the study in terms of high levels of feelings of social isolation and/or loneliness, the UCLA (University of California Los Angeles) Loneliness Scale was applied (Pocinho et al., 2010; Russell, 1996).

The group interviews then lasted approximately one hour and were only recorded in audio format, with the prior authorization of the participants, who were also guaranteed anonymity and the rest of the data. Once the focus groups were completed, data collection took place between August and September. At an early stage, the interviews were professionally transcribed in their entirety, along with certain aspects that could not be retained in the recording, such as thoughts and reactions. The interview script consists of open-ended questions related to the main areas and demands of

interest about the personal experience of the various participants and is divided into two parts: the first with questions about accessibility to health services (availability and location of services, consultations and support for health management) and the second with questions about social isolation and loneliness (perception of the definition, experiences of social isolation and loneliness and responses and measures in the community that influence social isolation and loneliness). As mentioned above, sociodemographic data was also collected. Once the transcripts were completed, they were analyzed using thematic analysis. This method makes it possible to identify and analyze themes in the data in an organized way, making it possible to describe the data (experiences, thoughts or behaviors) and interpret various aspects inherent to the research topic, making it richer (Braun et al., 2008; Kiger et al., 2020). Initially, the study's principal investigator explored the transcripts in order to identify themes and sub-themes relevant to the research, which led to a coding system. At this stage, the method of triangulation and peer review was adopted to ensure the reliability of the data, and the coding system was approved by all the researchers. The transcripts were then analyzed by the principal investigator of the study, following this coding system. Finally, a thematic analysis was carried out using the traditional method.

Results

In this study participate 37 older people, 33 of whom were female (89.5%) and the remaining 4 male (10.5%). Their ages ranged from 65 to 90, with an average age of 75 (SD=7.1). Approximately 20 participants were widowed, and the rest were married, with only one participant divorced. Household size ranged from one to six people, and educational attainment varied between primary and higher education. Most of the participants are retired or on disability, with the exception of two who receive a pension and another who survives on savings. Regarding monthly income, there was a greater prevalence of average and poor income, unlike the state of health, where there was a greater prevalence of reasonable income, although there were health problems. Participants reported diabetes, cholesterol, high blood pressure, stroke, cancer, depression, cataracts, respiratory problems, thyroid problems, joint problems and other health problems as their main health problems. The scores obtained on the UCLA

Loneliness Scale show that the participants had low levels of negative feelings of loneliness, which can be explained by the fact that they attended institutions. More detailed information on the participants can be seen in the following table:

Table 1

Sociodemographic characterization of the sample

Participants	male n= 4; female n=33
Age	ages ranged from 65 to 90, with an average age of 75 (SD=7.1)
Area of Residence	<i>Aver o Mar</i> n=10; <i>Rates</i> n=8; <i>Póvoa de Varzim</i> n=9; <i>Aguçadoura</i> n=10
Family Household	one person n=11; two people n=18; four people n=5; five people n=2; six people n=1
Number of Children	without children n=1; one children n=4; two children n=14; three children n= 12; four children n=1; five children n=2; six children n=1; seven children n=2
Marital status	married n= 16; widowers n= 20; divorced n= 1
Education Level	basic education n=35; high school n=1; higher education n= 1
Occupation	retired n= 25; disability pensioners n= 6; other n= 6
Monthly Income	good n= 3; medium n= 17; bad n= 17
Occupational Center	individuals attending the occupational center n=19
State of Health	bad n=5; fair n= 28; good n=4
Health problems	individuals with health problems n=31
Score UCLA	the score ranged from 16 points (minimum value) to 48 points (maximum value)

Discussion

Considering the exponential increase in aging and the consequent proportion of the development of associated clinical complications (Strandberg et al., 2020), the field of health becomes a challenge and therefore access to and use of services in this area are two essential factors for improving outcomes in the health sector (Faraji-Khiavi et al., 2022). In addition, loneliness and social isolation are problems related to ageing and are associated with adverse consequences for physical and mental health (Gardiner et al., 2018) and, consequently, a greater need for health resources (Christiansen et al., 2023). Therefore, as can be seen in Table 2, this study focused on issues related to accessibility to health services and the repercussions on social isolation and loneliness (Table 3).

Table 2

Quotes from participants - Accessibility to health services

Theme 1- Accessibility to health services	
Operation of health services	<p>"Those who need it, at the moment, have to go to the private sector to pay for exams and other things to get by at first, I think it's a little bad (P13)"</p> <p>"I go by bus, I don't have to go anymore, I have to go either by bus or on foot, on foot I can't, I can't stand it, it's too far (...) (P3)"</p> <p>"That's why they should be nicer at the secretariat (P11)"</p> <p>"There's only one thing, that people go to the emergency room and wait for five hours, which I think is wrong (...) (P25)"</p>
How consultations work in health services	<p>"I have two every six months. I have two every six months. We need them (P10).""There are few doctors and they earn very little. (P25)"</p> <p>"Now you have to call Saúde 24, which is very annoying, it leaves you waiting a long time (...) (P31)""With Saúde 24 it's more difficult (P22)"</p> <p>"I don't think it's accessible to many people, because many may have a cell phone but they're not suitable and many don't even know how to go to the electronic prescriptions. (P29)"</p> <p>"it takes time, it can take three months, it can take four months, it can take five months (...) (P34)"</p>
Socioeconomic factors	<p>"It's a disgrace. (P1)"</p> <p>"I spend a hundred euros on medication for myself and I'm on my own. (P3)"</p> <p>"And then we have the health we have, you want money for one thing or another, there isn't any (...) (P32)"</p> <p>"I don't think there's anyone here. (P34)"</p> <p>"Yeah, they don't go. They don't go with us or inform anyone. (P3).""They exploit the poor, that's not right. (P22)"</p> <p>"It's different from abroad, it's very different (P12)"</p>

Table 3

Quotes from participants - Social isolation and loneliness

Theme 2- Social isolation and loneliness	
Knowledge about social isolation and loneliness	<p>"It's halfway to death (P11)"</p> <p>"Loneliness is when you're alone and you see yourself alone (P3)""The loneliness you left behind is there when you arrive (P7)"</p>
Individual factors	<p>"I like the people around me (P6)"</p> <p>"But I have people at home who would help me (P32)""We have friends who help us if we need help (P6)"</p> <p>"I ask my daughter or my son-in-law (P17)"</p> <p>"It would be healthier if my wife hadn't died (P23)"</p> <p>"Me and those two, on Wednesdays we get together in the cafe all afternoon (P17)""I go to the swimming pool, it's all part of being healthy, walking (P12)"</p> <p>"But I have my dog who I talk to a lot (P1)"</p>
Community factors	<p>"We have walks, we have a music teacher, we have gymnastics (P6)""We go for a walk now and then, it's very good (P8)"</p> <p>"That's why this building here was well designed for us to come together and talk, chat and we're all happy (P6)""But for example, I'm going to send this, I don't know if it's going to go, crochet stuff, sewing stuff (P14)"</p> <p>"I'm not good at drawing, handicrafts like that. (P14)"</p> <p>"I'm already more distant from them and I don't have the social interaction that they have, because I'm distant if I was closer to them (...) and I used to socialize with them more (...) (P15)"</p> <p>"I don't think it's fair for people from another parish to take their place there. Each parish (P37)"</p>

With regard to the functioning of health services, there was dissatisfaction on the part of the participants, which was accentuated by the lack of availability of these services,

poor service and the location of these services. It is known that the consecutive increase in ageing implies a greater need to consume health resources, in particular a greater need to use emergency services (Terashima et al., 2018; Thwaites et al., 2019). But in fact, the literature shows that there is inequality in terms of health services between the population living in urban areas and the population living in rural areas, and that the latter suffer disproportionately from adverse health outcomes and are more likely to adopt unhealthy behaviors (Chen et al., 2019; Dodge, 2019; Guo et al., 2020).

The participants' dissatisfaction was reflected in health service consultations, namely consultations with the family doctor, where the literature has also shown that, due to Portugal's socio-economic situation and the considerable and recurring shortage of doctors (Russo et al., 2012), there is a need to increase the number of users of the family doctor, which is associated with an overall compromise of the health services provided and, consequently, the dissatisfaction of the Portuguese population (Maricoto et al., 2021).

Still on the subject of appointments, recently in Portugal, but in specific regions, the health sector has faced a change in the procedure for booking open appointments - only by contacting *Saúde 24* by phone. In fact, the literature has shown that telehealth aims to offer people a more convenient, brief, inexpensive and real-time healthcare option (Manocchia, 2020; Tuckson et al., 2017). But is the elderly population prepared to understand mobile health? In fact, it was found that participants are not familiar with this type of device and the procedures involved, which is why they generally expressed their dissatisfaction and difficulty in this area. Therefore, given the advancement of technology in the health sector, training and education on how to use technology becomes relevant, encouraging older people to consider the advantages for their health (Wilson et al., 2021).

With regard to socio-economic factors, it is known that the elderly population is known to be socio-economically fragile, due to the variety of incomes and high monetary burdens they have, and the same is true of the participants in this study.

These financial difficulties can be a barrier to accessing health services and further compromise their use (Gao et al., 2022; Leung et al., 2022; Wu et al., 2023) and make it impossible for older people to enjoy and participate in meaningful activities outside the home (Eronen et al., 2016). Therefore, also in this study, participants highlight the

importance of economic and social support in the ageing process and how much it can contribute to quality of life and life satisfaction (Şahin et al., 2019).

Concerning social isolation and loneliness, are older people familiar enough with these concepts to be able to identify these kinds of feelings? Although these terms have different meanings, the evidence suggests a significant overlap between them, often being used indistinct (Gardiner et al., 2018), which is also seen in the passages of the participants in the study in question.

It is clear that the individual support network, particularly the family, plays a fundamental role in the lives of older people. In fact, the literature has tried to show that people who are socially isolated do not benefit from the support and encouragement of their support network and this has implications for their health (Gable et al., 2022; Zhang et al., 2022).

This study also shows the limiting impact of the absence of a spouse, which is even more evident in males. In fact, other studies have shown that after the loss of a spouse, the absence of support and companionship results in feelings of social isolation and loneliness, contributing to a decrease in life satisfaction and that widowed men suffer more than women (Ben-zur, 2011; Freak-Poli et al., 2022; Yang et al., 2021). In this investigation it is possible to corroborate the benefit that pets have in the lives of elderly people (Pikhartova et al., 2014).

International aging policies have been emphasizing the importance of social connection for health and well-being, with special emphasis on community participation (Bantry-White et al., 2018; Gardiner et al., 2018; Lee et al., 2022). Other studies have tried to show that the creation of new social connections is one of the most rewarding and important components for the elderly population, since individuals can have similar life paths, and thus contribute to a greater sense of belonging (Noone et al., 2022). This is also the case in this study, where the participants are satisfied with the social activities available in the community and which they can enjoy, as well as the importance they play in terms of well-being and health.

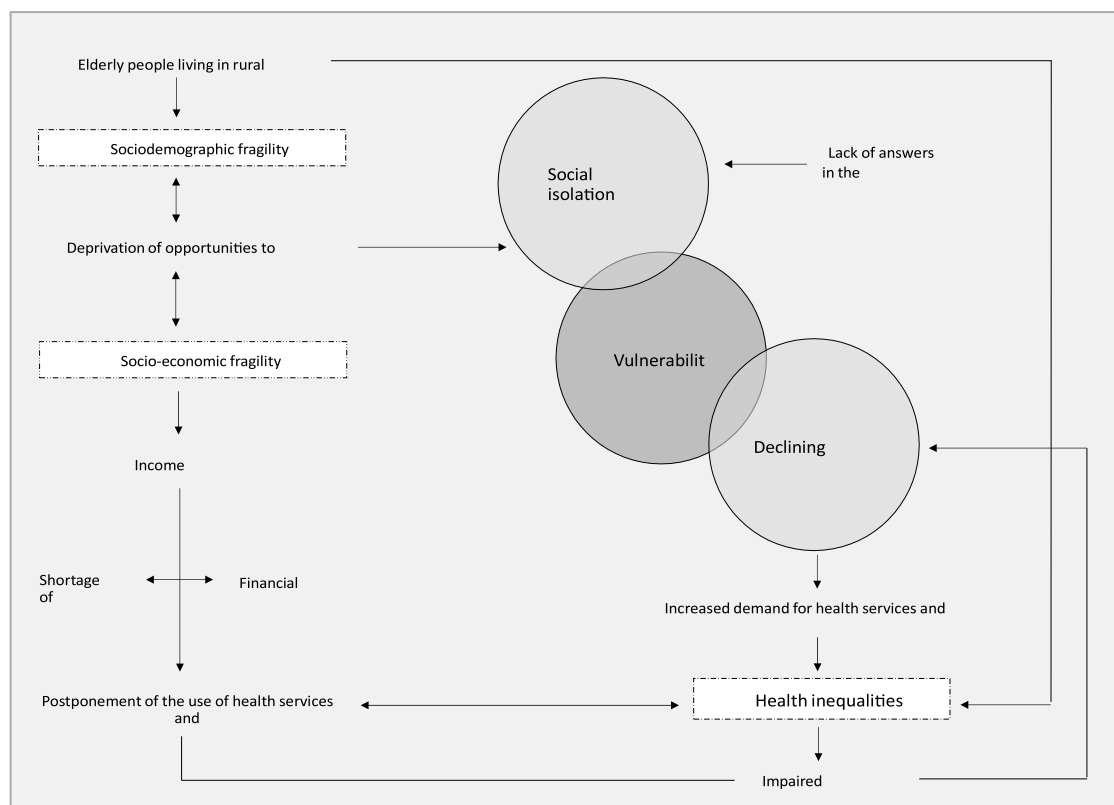
However, there is a noticeable discrepancy in participation opportunities between the different parishes in the municipality, as participants living in more rural areas report a greater need for the municipality to adopt new measures. In addition, evidence shows that individuals aging in rural areas face challenges in terms of health and well-being

(Hussain et al., 2023), as they are subject to geographic isolation, limited public transport and restricted community services and are therefore unable to participate and socialize in the community, negatively influencing social activity (Hughes et al., 2019; Jones et al., 2023).

This study also reinforces the need to improving the infrastructure, develop community interventions, such as cultural, sporting and recreational activities, which contribute to the social participation of the elderly and to support and promote well-being and health (Dare et al., 2019; Jones et al., 2023; Lee et al., 2022; Rodríguez-Romero et al., 2021; Sen et al., 2023; Y. Zhang et al., 2022).

In summary, this means that after interpreting and reflecting on the data obtained in the study alongside the most up-to-date evidence, it can be seen that the issues addressed become a helical process, in that they contribute directly or indirectly to the vulnerability of older people, as can be seen in the Figure 1:

Figure 1 Explanatory helical model



Conclusion

In conclusion, given the need and emergency of protecting the health of the elderly from a multidimensional point of view, it is crucial to take measures that guarantee an equitable response for this population, paying special attention to those who age in rural areas. Thus, also according to the information obtained throughout the study, it is considered pertinent to develop actions and/or strategies at the level of policies and the organization of health services, the availability of social and economic support for older people, their training and qualification for health and the implementation of community interventions.

So, when thinking about occupation in conjunction with ageing and everything that goes with it, it is essential to talk about the Occupational Therapist. These professionals can play an active role through psycho-educational programs that promote health by fostering the development of the skills needed to use technology. Also, through individual and/or community interventions that facilitate involvement in meaningful and enriching activities that in some way meet the needs of older people. In this way, contributing to the promotion of occupational justice, supporting and improving the well-being and mental health of older people, favoring a healthy aging. There are still many steps to be taken in order to safeguard the equal rights of older people and ensure that they are treated with dignity.

It should be noted that this study has its limitations, namely the size of the sample, and there was also a scenario of agreement and/or affinity bias, given that the interviews took place with groups of people who were already familiar with each other, recall bias is also possible, given that the questions reflected on topics that were not very common, and social desirability bias should not be ruled out, given the delicacy of the topic of social isolation and loneliness.

This study can be a starting point in identifying the adversities that exist in health services in Portugal, with a view to developing future actions in this direction, as well as the needs experienced by the elderly population in Portugal in the face of social isolation and loneliness. Thus, it would be essential to delve deeper into the perspective of older people living in more rural areas and older people who are more dependent or even institutionalized, and from another angle, to investigate the point of view of other people, such as health professionals or significant members of a community/region, who

also play an important role in this issue. Future studies should explore the role of the Occupational Therapists and others healthcare professionals to foster a health.

Bibliographic References

- Anunciação, L. (2021). *Conceitos e análises estatísticas com R e JASP*.
<https://bookdown.org/luisfca/docs/>
- Bantry-White, E., O’Sullivan, S., Kenny, L., & O’Connell, C. (2018). The symbolic representation of community in social isolation and loneliness among older people: Insights for intervention from a rural Irish case study. *Health and Social Care in the Community*, 26(4), e552–e559. <https://doi.org/10.1111/hsc.12569>
- Ben-zur, H. (2011). *The Journal of Psychology: Interdisciplinary and Applied Loneliness, Optimism, and Well-Being Among Married, Divorced, and Widowed Individuals*. February 2013, 37–41.
- Braun, V., & Clarke, V. (2008). Using thematic analysis in psychology, Qualitative Research in Psychology. *Journal of Chemical Information and Modeling*, 3(2), 77– 101. <http://dx.doi.org/10.1191/1478088706qp063oa>
- Çam, C., Atay, E., Aygar, H., Öcal, E. E., Önsüz, M. F., Işıklı, B., & Metintaş, S. (2021). Elderly people’s quality of life in rural areas of Turkey and its relationship with loneliness and sociodemographic characteristics. *Psychogeriatrics*, 21(5), 795–804. <https://doi.org/10.1111/psyg.12741>
- Cesari, M., Calvani, R., & Marzetti, E. (2017). Frailty in Older Persons. *Clinics in Geriatric Medicine*, 33(3), 293–303. <https://doi.org/10.1016/j.cger.2017.02.002>
- Chen, X., Orom, H., Hay, J. L., Waters, E. A., Schofield, E., Li, Y., & Kiviniemi, M. T. (2019). Differences in Rural and Urban Health Information Access and Use. *Journal of Rural Health*, 35(3), 405–417. <https://doi.org/10.1111/jrh.12335>
- Christiansen, J., Pedersen, S. S., Andersen, C. M., Qualter, P., Lund, R., & Lasgaard, M. (2023). Loneliness, social isolation, and healthcare utilization in the general population. *Health Psychology: Official Journal of the Division of Health Psychology, American Psychological Association*, 42(2), 63–72. <https://doi.org/10.1037/hea0001247>
- Dare, J., Wilkinson, C., Donovan, R., Lo, J., McDermott, M. L., O’Sullivan, H., & Marquis, R. (2019). Guidance for Research on Social Isolation, Loneliness, and Participation

- Among Older People: Lessons From a Mixed Methods Study. *International Journal of Qualitative Methods*, 18, 1–9. <https://doi.org/10.1177/1609406919872914>
- Davies, J. M., Maddocks, M., Chua, K. C., Demakakos, P., Sleeman, K. E., & Murtagh, F. E. M. (2021). Socioeconomic position and use of hospital-based care towards the end of life: a mediation analysis using the English Longitudinal Study of Ageing. *The Lancet Public Health*, 6(3), e155–e163. [https://doi.org/10.1016/S2468-2667\(20\)30292-9](https://doi.org/10.1016/S2468-2667(20)30292-9)
- De Coninck, L., Bekkering, G. E., Bouckaert, L., Declercq, A., Graff, M. J. L., & Aertgeerts, B. (2017). Home- and Community-Based Occupational Therapy Improves Functioning in Frail Older People: A Systematic Review. *Journal of the American Geriatrics Society*, 65(8), 1863–1869. <https://doi.org/10.1111/jgs.14889>
- Dodge, R. E. (2019). Rural health. *Journal of the Florida Medical Association*, 65(4), 247–248. <https://doi.org/10.1377/hlthaff.2019.01365>
- Donovan, N. J., Wu, Q., Rentz, D. M., Sperling, R. A., Marshall, G. A., & Glymour, M. M. (2017). Loneliness, depression and cognitive function in older U.S. adults. *International Journal of Geriatric Psychiatry*, 32(5), 564–573. <https://doi.org/10.1002/gps.4495>
- Eronen, J., Von Bonsdorff, M., Rantakokko, M., Portegijs, E., Viljanen, A., & Rantanen, T. (2016). Socioeconomic status and life-space mobility in old age. *Journal of Aging and Physical Activity*, 24(4), 617–623. <https://doi.org/10.1123/japa.2015-0196>
- Fan, C., Ouyang, W., Tian, L., Song, Y., & Miao, W. (2019). Elderly health inequality in China and its determinants: A geographical perspective. *International Journal of Environmental Research and Public Health*, 16(16). <https://doi.org/10.3390/ijerph16162953>
- Faraji-Khiavi, F., Jalilian, H., Heydari, S., Sadeghi, R., Saduqi, M., Razavinasab, S. A., & Heidari-Jamebozorgi, M. (2022). Utilization of health services among the elderly in Iran during the COVID-19 outbreak: A cross-sectional study. *Health Science Reports*, 5(5). <https://doi.org/10.1002/hsr2.839>
- Fien, S., Linton, C., Mitchell, J. S., Wadsworth, D. P., Szabo, H., Askew, C. D., & Schaumberg, M. A. (2022). Characteristics of community-based exercise programs for community-dwelling older adults in rural/regional areas: a scoping

- review. *Aging Clinical and Experimental Research*, 34(7), 1511–1528.
<https://doi.org/10.1007/s40520-022-02079-y>
- Freak-Poli, R., Kung, C. S. J., Ryan, J., & Shields, M. A. (2022). Social Isolation, Social Support, and Loneliness Profiles Before and After Spousal Death and the Buffering Role of Financial Resources. *Journals of Gerontology - Series B Psychological Science and Social Sciences*, 77(5), 956–971.
<https://doi.org/10.1093/geronb/gbac039>
- Gable, S. L., & Bedrov, A. (2022). Social isolation and social support in good times and bad times. *Current Opinion in Psychology*, 44, 89–93.
<https://doi.org/10.1016/j.copsyc.2021.08.027>
- Gao, Q., Prina, A. M., Ma, Y., Aceituno, D., & Mayston, R. (2022). Inequalities in Older age and Primary Health Care Utilization in Low- and Middle-Income Countries: A Systematic Review. *International Journal of Health Services*, 52(1), 99–114.
<https://doi.org/10.1177/00207314211041234>
- Gardiner, C., Geldenhuys, G., & Gott, M. (2018). Interventions to reduce social isolation and loneliness among older people: an integrative review. *Health and Social Care in the Community*, 26(2), 147–157. <https://doi.org/10.1111/hsc.12367>
- Gomes, M. D., Teixeira, L., & Ribeiro, J. (2021). *Enquadramento da Prática da Terapia Ocupacional: Domínio & Processo 4a Edição Versão Portuguesa de Occupational Therapy Practice Framework: Domain and Process 4th Edition (AOTA - 2020) (ESCOLA SUP)*. <https://doi.org/10.25766/671r-0c18>
- Green, M. J., Whitley, E., Niedzwiedz, C. L., Shaw, R. J., & Katikireddi, S. V. (2021). Social contact and inequalities in depressive symptoms and loneliness among older adults: A mediation analysis of the English Longitudinal Study of Ageing. *SSM – Population Health*, 13(July 2020), 100726.
<https://doi.org/10.1016/j.ssmph.2021.100726>
- Guo, B., Xie, X., Wu, Q., Zhang, X., Cheng, H., Tao, S., & Quan, H. (2020). Inequality in the health services utilization in rural and urban China: A horizontal inequality analysis. *Medicine (United States)*, 99(2), 1–7.
<https://doi.org/10.1097/MD.00000000000018625>

- Hughes, C., Bernoth, M., & Winkler, D. (2019). Increasing the social participation of older rural residents: Opportunities offered by "OPTEACH." *Australian Journal of Rural Health, 27*(4), 317–321. <https://doi.org/10.1111/ajr.12527>
- Hussain, B., Mirza, M., Baines, R., Burns, L., Stevens, S., Asthana, S., & Chatterjee, A. (2023). Loneliness and social networks of older adults in rural communities: a narrative synthesis systematic review. *Frontiers in Public Health, 11*. <https://doi.org/10.3389/fpubh.2023.1113864>
- Jaspal, R., & Breakwell, G. M. (2022). Socio-economic inequalities in social network, loneliness and mental health during the COVID-19 pandemic. *International Journal of Social Psychiatry, 68*(1), 155–165. <https://doi.org/10.1177/0020764020976694>
- Jones, C. A., Jhangri, G. S., Yamamoto, S. S., Hogan, D. B., Hanson, H., Levasseur, M., Morales, E., & Légaré, F. (2023). Social participation of older people in urban and rural areas: Canadian Longitudinal Study on Aging. *BMC Geriatrics, 23*(1), 439. <https://doi.org/10.1186/s12877-023-04127-2>
- Kiger, M. E., & Varpio, L. (2020). Thematic analysis of qualitative data: AMEE Guide No. 131. *Medical Teacher, 42*(8), 846–854. <https://doi.org/10.1080/0142159X.2020.1755030>
- Kivimäki, M., Batty, G. D., Pentti, J., Shipley, M. J., Sipilä, P. N., Nyberg, S. T., Suominen, S. B., Oksanen, T., Stenholm, S., Virtanen, M., Marmot, M. G., Singh-Manoux, A., Brunner, E. J., Lindbohm, J. V., Ferrie, J. E., & Vahtera, J. (2020). Association between socioeconomic status and the development of mental and physical health conditions in adulthood: a multi-cohort study. *The Lancet Public Health, 5*(3), e140–e149. [https://doi.org/10.1016/S2468-2667\(19\)30248-8](https://doi.org/10.1016/S2468-2667(19)30248-8)
- Lee, C., Kuhn, I., McGrath, M., Remes, O., Cowan, A., Duncan, F., Baskin, C., Oliver, E. J., Osborn, D. P. J., Dykxhoorn, J., Kaner, E., Walters, K., Kirkbride, J., Gnani, S., & Lafortune, L. (2022). A systematic scoping review of community-based interventions for the prevention of mental ill-health and the promotion of mental health in older adults in the UK. *Health and Social Care in the Community, 30*(1), 27–57. <https://doi.org/10.1111/hsc.13413>
- Leung, A. Y. M., Parial, L. L. B., Szeto, S. S., & Koduah, A. O. (2022). Understanding the role of financial health literacy in midlife and old age: A scoping review. *Health*

- and Social Care in the Community*, 30(6), e3921–e3933.
<https://doi.org/10.1111/hsc.14101>
- Macdonald, S. J., Nixon, J., & Deacon, L. (2018). ‘Loneliness in the city’: examining socio-economics, loneliness and poor health in the North East of England. *Public Health*, 165, 88–94. <https://doi.org/10.1016/j.puhe.2018.09.003>
- Manocchia, A. (2020). Telehealth: Enhancing Care through Technology. *Rhode Island Medical Journal* (2013), 103(1), 18–20.
<http://www.ncbi.nlm.nih.gov/pubmed/32013298>
- Maricoto, T., & Nogueira, R. (2021). A new formula for managing family doctors’ patient list in Portugal. *Ciencia e Saude Coletiva*, 26, 2449–2458.
<https://doi.org/10.1590/1413-81232021266.1.40852020>
- Marotti, J., Galhardo, A. P. M., Furuyama, R. J., Pigozzo, M. N., Campos, N. T., & Laganá, D. C. (2008). Amostragem em Pesquisa Clínica: Tamanho da Amostra. *Revista de Odontologia Da Universidade Cidade de São Paulo*, 20(2), 186–194.
- Noone, C., & Yang, K. (2022). Community-based responses to loneliness in older people: A systematic review of qualitative studies. *Health and Social Care in the Community*, 30(4), e859–e873. <https://doi.org/10.1111/hsc.13682>
- Pan, C., Fan, Q., Yang, J., & Deng, D. (2019). Health inequality among the elderly in rural China and influencing factors: Evidence from the Chinese longitudinal healthy longevity survey. *International Journal of Environmental Research and Public Health*, 16(20), 1–16. <https://doi.org/10.3390/ijerph16204018>
- Papageorgiou, N., Marquis, R., Dare, J., & Batten, R. (2016). Occupational Therapy and Occupational Participation in Community Dwelling Older Adults: A Review of the Evidence. *Physical and Occupational Therapy in Geriatrics*, 34(1), 21–42.
<https://doi.org/10.3109/02703181.2015.1109014>
- Partridge, L., Deelen, J., & Slagboom, P. E. (2018). Facing up to the global challenges of ageing. *Nature*, 561(7721), 45–56. <https://doi.org/10.1038/s41586-018-0457-8>
- Pikhartova, J., Bowling, A., & Victor, C. (2014). Does owning a pet protect older people against loneliness? *BMC Geriatrics*, 14(1), 1–10. <https://doi.org/10.1186/1471-2318-14-106>
- Pinto, D. (2014). Impacto do envelhecimento da população na dimensão da lista de utentes dos médicos de família. *Rev Port Med Geral Fam*, 30, 338–339.

- Pinzón-Pulido, S., Garrido Peña, F., Reyes Alcázar, V., Lima-Rodríguez, J. S., Raposo Triano, M. F., Martínez Domene, M., & Alonso Trujillo, F. (2016). Factores predictores de la institucionalización de personas mayores en situación de dependencia en Andalucía. *Enfermería Clínica*, 26(1), 23–30. <https://doi.org/10.1016/j.enfcli.2015.08.003>
- Pocinho, M. (2009). Estatística: teoria e exercícios passo a passo: Amostragem e tipos de amostragem. In *Researchgate: Vol. 1* (Issue January 2009). Researchgate. http://www.researchgate.net/profile/Margarida_Pocinho3/publication/268150358_Estatistica_teorica_e_exercicios_passo_a_passo_Volume_1/links/546a62360cf2f5eb18077bb8.pdf
- Pocinho, M., Farate, C., & Dias, C. A. (2010). Validação Psicométrica da Escala UCLA-Loneliness para Idosos Portugueses. *Interações: Sociedade e Novas Modernidades*, 18, 65–77.
- PORDATA. (2023). *Dados sobre o índice de envelhecimento em Portugal*. <https://www.pordata.pt/portugal/indice+de+envelhecimento+e+outros+indicadores+de+envelhecimento-526>
- Rodríguez-Romero, R., Herranz-Rodríguez, C., Kostov, B., Gené-Badia, J., & Sisó-Almirall, A. (2021). Intervention to reduce perceived loneliness in community-dwelling older people. *Scandinavian Journal of Caring Sciences*, 35(2), 366–374. <https://doi.org/10.1111/scs.12852>
- Roldán González, E., Lerma Castaño, P. R., Aranda Zemanate, A. Y., Caicedo Muñoz, Á. G., & Bonilla Santos, G. (2022). Healthy Lifestyles Associated With Socioeconomic Determinants in the Older Adult Population. *Journal of Primary Care and Community Health*, 13. <https://doi.org/10.1177/21501319221112808>
- Rudnicka, E., Napierała, P., Podfigurna, A., Męczekalski, B., Smolarczyk, R., & Grymowicz, M. (2020). The World Health Organization (WHO) approach to healthy ageing. *Maturitas*, 139(February), 6–11. <https://doi.org/10.1016/j.maturitas.2020.05.018>
- Russell, D. (1996). Ucla Loneliness Scale Version 3 (description of Measure). *Journal of Personality and Social Psychology*, 39, 3–4.

- Russo, G., Ferrinho, P., de Sousa, B., & Conceição, C. (2012). What influences national and foreign physicians' geographic distribution? An analysis of medical doctors' residence location in Portugal. *Human Resources for Health, 10*, 1–11. <https://doi.org/10.1186/1478-4491-10-12>
- Şahin, D. S., Özer, Ö., & Yanardağ, M. Z. (2019). Perceived social support, quality of life and satisfaction with life in elderly people. *Educational Gerontology, 45*(1), 69–77. <https://doi.org/10.1080/03601277.2019.1585065>
- Sen, Q., & Lei, Z. (2023). The impact of community care services on older people's psychological health: an empirical study in Liaoning Province, China. *Frontiers in Public Health, 11*(August), 1–10. <https://doi.org/10.3389/fpubh.2023.1199830>
- Silva, M. S. A., Silva, M. C. P. E., & Sogame, L. C. M. (2022). Socioeconomic and health conditions associated with the family function of older adults. *Revista Gaucha de Enfermagem, 43*, e20210252. <https://doi.org/10.1590/1983-1447.2022.20210252.en>
- Srivastava, S., Debnath, P., Shri, N., & Muhammad, T. (2021). The association of widowhood and living alone with depression among older adults in India. *Scientific Reports, 11*(1), 1–13. <https://doi.org/10.1038/s41598-021-01238-x>
- Srivastava, S., Purkayastha, N., Chaurasia, H., & Muhammad, T. (2021). Correction to: Socioeconomic inequality in psychological distress among older adults in India: a decomposition analysis (*BMC Psychiatry, (2021), 21, 1, (179)*), 10.1186/s12888-021-03192-4). *BMC Psychiatry, 21*(1), 1–15. <https://doi.org/10.1186/s12888-021-03231-0>
- Strandberg, T. E., & Nieminen, T. (2020). Future Perspectives on the Role of Frailty in Cardiovascular Diseases. In *Advances in Experimental Medicine and Biology* (Vol. 1216). https://doi.org/10.1007/978-3-030-33330-0_14
- Tavakol, M., & Sandars, J. (2014). Quantitative and qualitative methods in medical education research: AMEE Guide No 90: Part II. *Medical Teacher, 36*(10), 838–848. <https://doi.org/10.3109/0142159X.2014.915297>
- Terashima, M., & Carter, A. J. E. (2018). Correlation of age and rurality with low-urgency use of emergency medical services (LUEMS): A geographic analysis. *Canadian Journal of Emergency Medicine, 20*(6), 874–881. <https://doi.org/10.1017/cem.2017.364>

- Thwaites, R., Glasby, J., Le Mesurier, N., & Littlechild, R. (2019). Interviewing older people about their experiences of emergency hospital admission: methodology in health services research. *Journal of Health Services Research and Policy*, 24(2), 124–129. <https://doi.org/10.1177/1355819618801696>
- Tuckson, R. V, Edmunds, M., Ph, D., & Hodgkins, M. L. (2017). *Special Report -Telehealth*. 1585–1592.
- Wagg, E., Blyth, F. M., Cumming, R. G., & Khalatbari-Soltani, S. (2021). Socioeconomic position and healthy ageing: A systematic review of cross-sectional and longitudinal studies. *Ageing Research Reviews*, 69(May), 101365. <https://doi.org/10.1016/j.arr.2021.101365>
- Wang, S., Zhao, M., Shi, Y., Zhang, M., Ying, J., Li, H., Li, Y., Xing, Z., Zhang, H., & Sun, J. (2022). Associations of frailty, loneliness and the quality of life of empty nesters: Across-sectional study in rural areas. *International Journal of Nursing Practice*, 28(4),1–10. <https://doi.org/10.1111/ijn.12947>
- Wilson, J., Heinsch, M., Betts, D., Booth, D., & Kay-Lambkin, F. (2021). Barriers and facilitators to the use of e-health by older adults: a scoping review. *BMC Public Health*, 21(1), 1–12. <https://doi.org/10.1186/s12889-021-11623-w>
- WMA. (2018). *WMA Declaration of Helsinki – Ethical Principles for Medical Research Involving Human Subjects – WMA – The World Medical Association*. <https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/>
- World Health Organization. (2017). *Global strategy and action plan on ageing and health*. <http://apps.who.int/bookorders>.
- Wu, L., Liu, Q., Fu, R., & Ma, J. (2023). Unmet healthcare needs, health outcomes, and health inequalities among older people in China. *Frontiers in Public Health*, 11. <https://doi.org/10.3389/fpubh.2023.1082517>
- Yang, F., & Gu, D. (2021). Widowhood, widowhood duration, and loneliness among older adults in China. *Social Science and Medicine*, 283(July 2020), 114179. <https://doi.org/10.1016/j.socscimed.2021.114179>
- Zhang, X., & Dong, S. (2022). The relationships between social support and loneliness: A meta-analysis and review. *Acta Psychologica*, 227(May), 103616. <https://doi.org/10.1016/j.actpsy.2022.103616>

Zhang, Y., Su, D., Chen, Y., Tan, M., & Chen, X. (2022). Effect of socioeconomic status on the physical and mental health of the elderly: the mediating effect of social participation. *BMC Public Health*, 22(1), 1–12. <https://doi.org/10.1186/s12889-022-13062-7>

The authors have no conflicts of interest to declare.