



# Article Strategic Assessment of Neighbourhood Environmental Impacts on Mental Health in the Lisbon Region (Portugal): A Strategic Focus and Assessment Framework at the Local Level

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Abstract: Scientific evidence shows that each place/environment generates specific conditions with associated impacts on the mental health and well-being of the population. A holistic, multilevel and integrated environmental approach to mental health enhances the understanding of this phenomena, supporting the local decision-making processes to improve spatial planning of neighbourhood environments. The aim of this study is to develop a strategic assessment framework, based on four municipalities in the Lisbon Region (Portugal), that explores policy and planning initiatives capable of generating favourable neighbourhood environmental conditions for mental health while also detecting risks. Using baseline results of significant statistical associations between individuals' perceptions of their neighbourhood environment and their mental health in the Lisbon Region, a Strategic Focus on Environmental and Mental Health Assessment framework (SEmHA) was built, by applying the methodology "Strategic Thinking for Sustainability" in Strategic Environmental Assessment, developed by Partidário in 2012. Taking into account the promotion of the population's mental health, four critical decision factors of neighbourhood environments were identified: (1) public space quality (e.g., improving sense of place), (2) physical environment quality (e.g., low levels of noise exposure), (3) professional qualification and creation of economic activities (e.g., attracting new economic activities), and (4) services and facilities (e.g., improving access to health and education services). The proposed strategic focus and assessment framework contributes to ensuring that interventions in neighbourhood environments truly achieve community mental health benefits and reduce inequalities, thus helping policy makers to assess impacts at the local level.

**Keywords:** integrated assessment; strategic environmental assessment; health impact assessment; mental health; neighbourhood environment; Lisbon region

# 1. Introduction

Mental health is an inherent component of people's overall health and wellbeing [1,2]. A person's mental health is dependent on their individual characteristics and life experiences, as well as being influenced by the places and environments that support their lifestyles and activities, e.g., residence, work or study places, recreational, leisure and mobility facilities, etc. [3–6]. In recent years, evidence has been collected on holistic, multilevel and integrated environmental approaches to mental health [7,8], particularly as a result of the current COVID-19 pandemic [9–12]. Such knowledge supports the fact that each place (e.g., neighbourhood), through a complex interrelation of multiple factors, generates specific conditions which impact the mental health and well-being of the population [13,14]. It is possible that neighbourhood environments exert an influence on individual mental health through risk reduction, for example, by modifying an individual's behaviour with



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**Copyright:** © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). respect to physical activity [15–17] or through an emotional bond to place (place attachment) [18,19]. Consequently, the natural, built and social neighbourhood environments can either encourage or discourage individual cycling or walking. This effect on behaviours suggests that policies, plans, programs, and their assessment can have a significant impact on mental health determinants by generating actions and creating or changing the conditions that influence mental health [20,21].

Planning healthier places, capable of promoting the health and well-being of their inhabitants, is one of today's greatest challenges, recognized by the Territorial Agenda 2030 [22]. This is particularly important for local interventions in neighbourhood environments. Urban planning processes must be based on knowledge about the environmental characteristics that have potential effects on health and human well-being, and the relationships between them [14,23]. To operationalize the concept of a "healthy place", appropriate variables, methodologies, and instruments must be integrated into these processes [24].

Impact assessment methodologies, in particular Health Impact Assessment (HIA) and Strategic Environmental Assessment (SEA), undertaken together with integrative and sustainability-oriented approaches [25–29], are particularly relevant to addressing the influence of spatial planning on mental health determinants. These instruments aim to assess the potential impacts and effects, or, more strategically, the risks and opportunities of development options, policies, plans, programs, or projects for mental health, starting from the point of view of health determinants (including the characteristics of the neighbourhood environment) and supporting decision-making processes downstream [30–33].

In the last decade, the concern for mental health within HIA processes has grown, although representation of this topic is not yet satisfactory [34,35]. A systematic review, conducted in the United States, regarding the integration of mental health into HIA [35] observed that 73% of the HIA analysed included mental health (114 in 156). However, only 38% of these HIA measured baseline mental health conditions, highlighting that mental health is not reported on, or followed up, at all phases of the HIA [35].

For the purpose of promoting and protecting individual and community mental health, assessment approaches combining environmental and mental health factors should focus on the implications for mental health of strategies, interventions, and political decisions [36]. The integrated analysis of individual, community, and environment, enhances the strategic understanding of mental health phenomena, and supports the improved spatial planning of neighbourhoods in local decision-making processes. Such strategic analysis enables an assessment of planning actions in relation to the risks and opportunities for the mental health and well-being of the community [14,37]. It is therefore fundamental to include the assessment of mental health conditions when developing sustainable actions which are place- and people-oriented [24].

Such strategic and integrated assessments should be driven by guiding factors including, but not limited to: (i) understanding the mental health contextual conditions in an integrated way (e.g., biophysical, behavioural, social, institutional and economic conditions); (ii) analysing the opportunities and risks of development options, motivated by the need to transform problems into benefits; (iii) increasing the opportunities afforded by the neighbourhood environment to make healthy choices, by reinforcing the control, resilience and strengths of the community and their health, (iv) facilitating the participation of individuals as crucial actors, and (vi) promoting inclusion in the community [21,27,38,39].

Since the mid-20th century, impact assessment instruments (e.g., Environmental Impact Assessment—EIA and HIA, and later SEA) emerged as opportunities for the application of intersectoral action in health [40–42]. This is based on the evidence that interventions and policies outside the exclusive domain of the health sector have repercussions on health and health equity [42–44]. This understanding ultimately led to the initiative "Health in All Policies" [45–47]. Moreover, HIA tools are equity-focused and influenced by the concepts of social justice and spatial justice [39,48]. These research approaches and instruments are crucial to supporting knowledge and improving responses during periods of crisis such as the current COVID-19 pandemic [49–53].

In Portugal, research on the impacts of environmental factors on mental health started two decades ago, driven by research projects such as Health Impact Assessment (HIA) in Employment Strategies (2009–2014), SMAILE (2013–2015), and Mental Health-Crisis Impact (2015–2017). These projects generated insights about the local and economic factors regarding mental health in the context of crisis [54–60], particularly important and useful evidence to support research and mental health impact assessment during the COVID-19 health crisis [61,62].

In light of the above, this study intends to contribute to the scientific knowledge by asking what neighbourhood environment development strategies best promote mental health at the local level. Thus, its aim is to develop a Strategic Focus on Environmental and Mental Health Assessment (SEmHA) framework. This framework will look at policy and planning initiatives capable of generating favourable conditions for mental health, and at the same time, detect the constraining conditions that can generate risks to mental health. In order to assess local planning strategies, a methodology to establish a strategic focus on environmental neighbourhood conditions that are associated with mental health was developed. The idea for the SEmHA builds upon the methodological framework for "Strategic Thinking for Sustainability" in a SEA (first stage-context and strategic focus) developed by Partidário [27]. The research was carried out in four municipalities in the Lisbon Region (Portugal), after a period of economic crisis, by conducting, firstly, a survey to analyse the impact of neighbourhood environments on the mental health of the population. Secondly, results from the survey supported the design of the SEmHA framework. Conclusions are drawn on the advantages of the SEmHA for the promotion of population mental health and health equity.

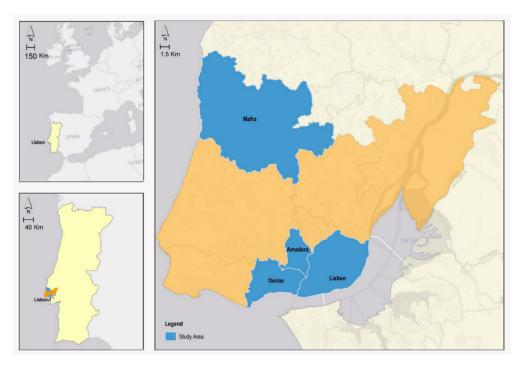
# 2. Materials and Methods

# 2.1. Study Area

The study area consists of the municipalities of Amadora, Lisbon, Mafra, and Oeiras, which were selected from the Region of Lisbon (Greater Lisbon, NUT III—2002) (Figure 1). These areas represent consolidated urban areas (Lisbon), recent urban growth areas (Amadora, Oeiras), and rural areas (Mafra), according to their distinct geographical and socioeconomic characteristics presented in Table 1. Lisbon displayed high population density (2020); however, the municipality lost population between 1991 and 2011. Amadora and Oeiras showed high values of inhabitants per km<sup>2</sup>, but with opposite profiles, Amadora being the municipality with the highest values regarding population variation, number of foreign nationals, deprivation, unemployment, overcrowding number of school leavers, and also the lowest educational attainment. The lowest population density was observed in Mafra.

	Lisbon	Amadora	Oeiras	Mafra
Population density (inhab./km <sup>2</sup> ) 2020	5093.4	7799.8	3875.0	292.5
Population variation (%) 1991–2011	-17.5	-3.8	13.7	75.4
Population under 15 years old (%) 2020	16.9	15.8	15.1	16.1
Elderly living alone (%) 2011	15.0	10.8	10.6	7.8
Population of foreign nationality (%) 2011	5.8	10.2	5.4	4.8
Unemployment rate (%) 2011	11.8	15.0	10.8	9.1
School leavers rate (%) 2011	1.8	2.7	1.2	1.4
Population with higher education (%) 2011	33.6	16.3	33.4	17.4
Overcrowded living quarters (%) 2011	12.1	17.7	11.4	9.9
Population living in small areas with high material deprivation (%) 2001 [63]	9.6	19.34	0.0	9.4

Table 1. Geographical and socioeconomic characteristics of the study area by municipalities.



**Figure 1.** Location of the study area: the four municipalities), Amadora, Lisbon, Mafra, and Oeiras, from the Region of Lisbon (Greater Lisbon, NUT III—2002).

# 2.2. Data Collection

In order to create a baseline of environmental neighbourhood conditions associated with individuals' mental health, a survey was carried out between August 2014 and February 2015, targeting the population aged 18 and older living in the four municipalities. The statistical population consists of 808,110 inhabitants [64], of which data from 1066 residents was collected, through a representative random sample (by quota according to sex and age by municipality), with a margin of error of 6% and a confidence level of 95%. The interviews took place on the street, randomly and in-person, by trained interviewers.

The survey collected individual information on self-assessed mental health status and on the perception of neighbourhood environmental characteristics (Table 2): (i) physical and built environment (satisfaction with health, sports, educational, cultural, public transport, associative/community, outdoor leisure, and local commerce facilities and services; safety; urban cleaning; noise; air quality; use of green spaces; transport used for commuting), (ii) socioeconomic environment (education, professional status; type of profession; marital status; household financial situation; household income; unemployment in the family; household budget mostly allocated to health, education, or housing), and (iii) social and cultural interaction environment (sense of belonging and identity; family and community relational support; isolation; trust in public institutions). These neighbourhood environmental variables were included in the survey because there is scientific evidence of their association with mental health (presented in Table 2). Table 3 presents the general characteristics of the sample.

Neighbourhood Env	Survey Categories		
		Health facilities and services	Not satisfied; Satisfied
		Educational facilities and services	Not satisfied; Satisfied
		Sports facilities and services	Not satisfied; Satisfied
		Cultural facilities and services Not satisf	Not satisfied; Satisfied
	Satisfaction with residence area [65–72]	Associative and community facilities (e.g., associations, recreation centres, clubs)	Not satisfied; Satisfied
		Public transport facilities and services	Not satisfied; Satisfied
		Parking	Not satisfied; Satisfied
		Outdoor leisure facilities and services	Not satisfied; Satisfied
		Local commerce	Not satisfied; Satisfied
Dhave i and havitt		Safety	Not satisfied; Satisfied
Physical and built environment	Environmental Quality [73,74]	Indoor noise levels (at home)	Not satisfied; Satisfied
		Outdoor noise levels	Not satisfied; Satisfied
		Outdoor air quality	Not satisfied; Satisfied
		Urban cleanliness (e.g., garbage collection)	Not satisfied; Satisfied
		Type of transport used for commuting	Motorized; non-motorized
	Mobility and Transports [75–78]		Private motorized; Not motorized or public
		Average travel time for daily commuting	$<20$ min; $\ge$ 20 min
		Use	Yes; No
	Green Spaces [17,79]	Proximity to residence	Use of the nearest green spa Not using the nearest green space
		Frequency of use	Monthly or less; Weekly; Dai
		Usefulness of the existence near the residence	Yes; No
	Education [80,81]		$\leq$ 12 years; >12 years
Socioeconomic environment	Labour [82–88]	Professional status	Unemployed; Employed; Student; Retired; Homemak
		Type of profession	Manual worker; Non manu worker; Unqualified manua worker
		Unemployment in the last three years	Yes; No
		Unemployed in the family	Yes; No
		Satisfaction with the job offer in the area of residence	Not satisfied; Satisfied

 Table 2. Variables of neighbourhood environmental characteristics present in the survey.

Neighbourhood Envi	ronmental Characteristics and Scien (Association with Mental Health	Survey Categories		
	Marital status [89,90]		Single; Married; Divorced; Widow(er)	
		Difficulty in paying expenses	Difficulty in paying expenses Able to pay current expenses only; Able to save money	
	- Household and surrounding financial situation [91–95]	Concern about expenses	More concerned with expenses; Less concerned with expenses	
		Main expense of thehousehold budget	Health expenses; Education expenses; Housing expenses	
		Family member, friend, neighbour with difficulty paying expenses	Yes; No	
	Household income [96–100]		≤500 €; >500 €	
	Dependent persons [101]		Dependent children; Other dependents; No dependents	
	Sense of belonging and identity [102,103]	Like living in the neighbourhood	Like; Dislike	
		Residence time in the neighbourhood	$\leq$ 5 years; >5 years	
		Relationship with neighbours	Bad/without relation; Good relation	
Social and cultural interaction environment	Family and community relational support [102,104–108]	Financial support	Neighbours; Family and Friends; Bank; Social Solidarity Institutions; Nobody	
		Emotional support	Neighbours; Family and Friends; Health Professionals; Social Solidarity Institutions; Nobody	
	Isolation [109]	Living alone	Yes; No	
	Trust in public institutions	Voting in the last municipal elections	Yes; No	
	[110,111]	Voting in the last parliamentary elections	Yes; No	

Table 2. Cont.

# 2.3. Measure of Mental Health

Self-assessed mental health status was measured by the mental health and vitality scale of the Short Form 36-item Health Survey (SF-36v2), validated for the Portuguese population [112]. The SF-36v2 is used to assess health-related quality of life [113]. The mental health and vitality scale ranges from 0 to 100, corresponding to situations in which the individual experiences total disability, and no disability, respectively. This scale was computed following the methodology proposed by Ware et al. [114], where scores lower or equal to 50 represent poor mental health and scores higher than 50 indicate good mental health.

Variables	Categories	п	%
Gender	Female	573	53.8%
Ochidei	Male	493	46.2%
	18–29	172	16.1%
	30–44	319	29.9%
Age group	45–59	246	23.1%
	60–74	202	19.0%
	≥75	127	11.9%
Electric allocations	$\leq$ 12 years	770	72.2%
Educational level	>12 years	296	27.8%
Mental health	Good mental health (score > 50)	715	67.1%
	Poor mental health (score $\leq 50$ )	351	32.9%
	≤700 €	403	37.8%
Household Income	701 €-1200 €	281	26.4%
	1201 €-2000 €	229	21.5%
	>2000€	153	14.4%

**Table 3.** Sample general characteristics (n = 1066).

#### 2.4. Methodology for Strategic Focus on Environmental and Mental Health Assessment (SEmHA)

The methodology for setting the strategic focus and assessment framework within the SEmHA is based on the methodological framework for "Strategic Thinking for Sustainability" (ST4S) in SEA developed by Partidário [27] and further elaborated by Partidário [115]. The ST4S methodological framework can be synthesized in three main stages. The first stage is to establish the strategic focus by considering the sustainability context within which the assessment takes place, and results from the cross-analysis and synthesis of priority problems, policies, and perceptions. A strategic assessment framework is the outcome of the first stage and is central to ensuring a strategic focus. The framework is defined by a limited number of critical decision factors (CDF) and respective assessment criteria (AC). In ST4S, CDF are key integrated priority themes that structure the assessment and evaluation of what is important to assure the sustainability of intended strategies. CDF are considered success factors in a strategic decision. The second stage in ST4S is the assessment of pathways for sustainability, with pathways representing alternative options, with associated assessed risks and opportunities informing strategic choices. The CDF and AC structure the assessment. For each risk and opportunity found, guidelines or recommendations are formulated. The third stage is a continuous stage, which should run throughout the lifecycle of policies, planning, and programmes. In this third continuous stage, monitoring and post-evaluation should be carried out as follow-up activities to any specific assessment, while stakeholder engagement and process alignment should be continuously done throughout the policy, planning, and assessment cycles [115].

Building on the first stage of this ST4S framework (Context and strategic focus), a methodology for defining the strategic focus of environmental conditions that enable mental health was developed. The purpose was to develop the SEmHA framework to provide the structure to assess the potential impacts that neighbourhood environments may create for the mental health of the local population (municipality level). The purpose of the SEmHA is to promote strategic thinking within the concepts and principles of a HIA [27,115].

The SEmHA framework was developed in two phases. Firstly, to create a sound scientific baseline for the development of the methodology, an assessment of the neigh-

bourhood environmental effects on the mental health of the population was conducted, using data from the survey applied to the study area (phase I). Secondly, a methodology to ensure the strategic focus in the SEmHA was established, including the identification of CDF and the AC, supported by indicators, which draws on the results from the survey—risk factors identified (phase II). The CDF, together with the AC, represent the strategic enablers for promoting mental health. The following section provides further details on the methodology.

#### 2.4.1. Phase I: Baseline—Understanding Neighbourhood Environmental Conditions

The purpose of this first phase is to establish a sound scientific baseline to understand the neighbourhood environmental conditions that may act as risk factors for mental health [27,115], using the data from the applied survey.

Several binomial logistic regression models were applied to identify the risk factors of poor mental health. The dependent variable of the models was self-assessed mental health. The neighbourhood environment characteristics were modelled individually as independent variables. Each model was controlled for age and sex. The odds ratios (ORs) of having poor mental health and respective 95% confidence intervals (CIs) were calculated. The binomial logistic regression models were performed using R version 3.4.2 (http://www.r-project.org (accessed on 18 May 2021)) through the MGCV package.

This produced a baseline of the neighbourhood environment characteristics (risk factors) that are statistically and significantly associated with mental health to inform the phase II of the SEmHA.

# 2.4.2. Phase II: Definition of the SEmHA Framework

Results from phase I were used to prioritize core success factors and set the strategic focus of the SEmHA. The identification of the SEmHA CDF, and its respective assessment criteria and indicators were supported by the neighbourhood environment characteristics found in phase I that presented a high risk to poor mental health (odds ratios  $\geq$  1.00 and a *p*-value  $\leq$  0.05). Then, evidence in the scientific literature regarding the influence of neighbourhood environment characteristics on an individual's mental health (e.g., [3,13,55,116,117]) was used to better understand the pathways of influence of the neighbourhood environment factors identified, and to strategically prioritize and synthetise them in order to improve mental health of the community at local level.

# 3. Results

#### 3.1. Baseline—Risks to Poor Mental Health

This study identified several neighbourhood environmental characteristics that represent potential risk to poor mental health (Figure 2). The highest significant odds ratios ( $\geq$ 2.00; *p*-value  $\leq$  0.05) were found in the socioeconomic environment. Individuals that reported difficulty paying expenses, and were only able to pay current expenses, had a significantly higher probability of having poor mental health than those that reported the ability to save money (odds ratio of 3.22 and 2.34; 95%CI 2.17–4.78 and 1.74–3.16, *p*-value  $\geq$  0.05, respectively). The individuals with lower household income ( $\leq$ 500 €) also had a higher significant risk of having poor mental health (odds ratio of 2.23; 95%CI 1.60–3.03, *p*-value  $\geq$  0.05). In this dimension, other characteristics regarding labour (unemployment in the family/type of profession) and education also presented risk to mental health.

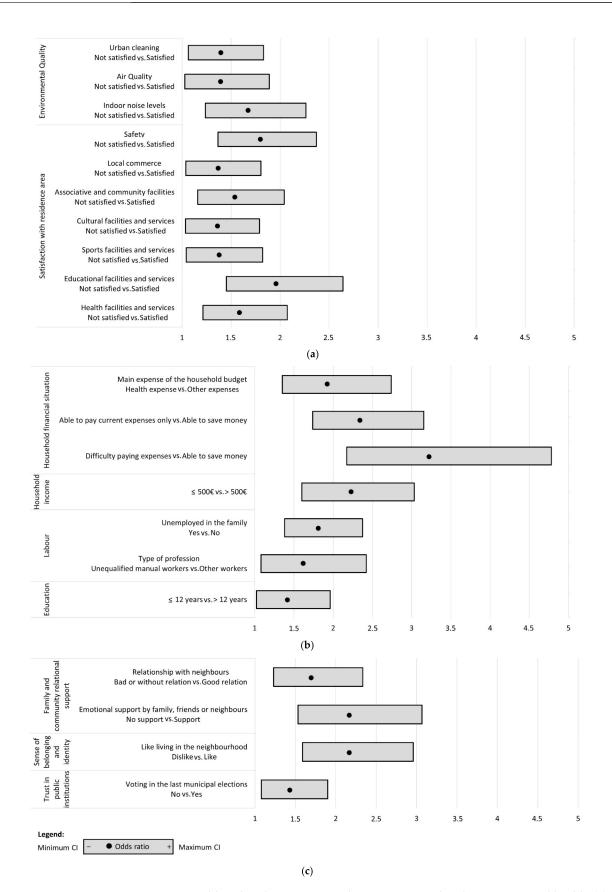


Figure 2. Neighbourhood environment characteristics with risk to poor mental health: (a) physical and built environment; (b) socioeconomic environment; and (c) social and cultural interaction environment.

The highest significant odds ratios of having poor mental health found inside the social and cultural interaction environment were observed in individuals that dislike living in the neighbourhood and do not have emotional support from family, friends, or neighbours (odds ratio of 2.17 and 2.17; 95%CI 1.59–2.96 and 1.53–3.07, *p*-value  $\geq$  0.05, respectively). Other characteristics regarding family and community relational support and trust in public institutions also represented risks to mental health.

Considering the set of physical and built environment characteristics, dissatisfaction with the residence area presented the highest risks of poor mental health, observed particularly in individuals that are not satisfied with educational facilities and services, and with the safety of the residence area (odds ratio of 1.96 and 1.80; 95%CI 1.45–2.64 and 1.37–2.37, *p*-value  $\geq 0.05$ , respectively). Characteristics related to poor physical environmental quality (dissatisfaction with urban cleanliness, air quality of the residence area, and indoor noise levels of the residence) also presented risks to mental health.

#### 3.2. Strategic Focus on Neighbourhood Environmental Conditions That Influence Mental Health

Neighbourhood environmental conditions that enable the population's mental health are presented in Table 4 and Figure 3. Four CDF were identified: 1. public space quality, 2. physical environment quality, 3. professional qualification and creation of economic activities, and 4. services and facilities. The following sections describe the CDF and respective AC, and identify the indicators that inform evaluation of each AC. All of the CDF, AC and indicators informing the evaluation of each AC are presented in Table 4 and Figure 3.

**Table 4.** Strategic focus and assessment framework for mental health-enabling neighbourhood

 environments (Critical Decision Factors and respective Assessment Criteria and indicators).

Critical Decision Factors (CDF)	Assessment Criteria (AC)	Indicators	Units
	<b>1.1 Safety</b> Assessment of the quality and functionality of public space, considering the elements of the space that promote feelings of security, namely the presence of urban furniture, lighting, maintenance and cleanliness of the space, the interior/exterior relationship of buildings, among other characteristics.	Crimes recorded by the police: pickpocketing, robbery on public roads, theft of vehicles, burglary, theft in establishments	Per 100,000 inhabitants
		Buildings with large repair needed or most degraded	%
		Street lighting density	Streetlights/km <sup>2</sup>
		Running over	Per 1000 inhabitants
<ul> <li>1. Public space quality Access, characteristics and elements of public space that ensure opportunities to make healthy choices, promoting  <ul> <li>sense of safety, identity and belonging to place</li> <li>contact with nature social and cultural interaction</li> </ul></li></ul>		Resident population living within 5 min. walking distance of urban green space	%
		Expenditure of the municipality on public space	€ per inhabitant
	<b>1.2 Sense of place</b> Assessment of the contribution of the sense of place to social interaction, generation of feelings of common identity and	Abstention in elections to parish assemblies	%
	belonging to the community, relationships of trust, help and cooperation and combating social isolation, recognizing proximity networks, as well as community responsibilities for the quality of public space and its heritage/patrimonial elements.	Initiatives generated by/for the community within the parish council promoting sense of place	$ m N^{\circ}$
		Participants in initiatives generated by/for the community within the parish council promoting sense of place	N°

**Critical Decision Factors (CDF)** 

2. Physical environment quality Characteristics and elements of

air quality and adequate

solid waste management

and urban cleaning

the physical and natural environment that support human

sound levels

life, such as:

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Fable 4. Cont.		
Assessment Criteria (AC)	Indicators	Units
<b>2.1 Air quality</b> Assessment of air quality, namely levels of pollutants from traffic, industries and works.	Resident population exposed to PM10 concentrations	%
	Resident population exposed to PM2.5 concentrations	%
	Population exposed to pollutants emission sources	%
	Resident population affected by noise levels	%
<b>2.2 Noise in housing</b> Assessment of outdoor noise	Population exposed to noise emission sources	%
levels, that are perceived indoor particularly from traffic, construction sites and the neighbourhood.	Complaints about noise recorded in the municipality	$\mathbf{N}^{\circ}$
	Municipal licenses attributed for the installation of windows with double glazing	$\mathrm{N}^{\circ}$
2.3 Solid waste and urban	Urban solid waste collected	kg/inhabitants
cleanliness	Urban waste selectively collected	%
Assessment of the cleanliness of public space, namely the management of solid urban waste	Weekly frequency of cleaning/solid waste collection	Average $n^\circ$ of times
and works.	Expenditure of the municipality on waste management	€ per inhabitant

#### Та

3.1 Professional qualification
Assessment of initiatives for
lifelong learning.

#### 3. Professional qualification and creation of economic activities Training opportunities and qualification of individuals and local economic dynamics, including:

- lifelong learning \_
- business attractiveness -
- \_ employment creation
- \_ innovation and
- entrepreneurship

3.2 New economi business initiativ Assessment of the attract new invest economic activitie including condition generation of bus (e.g., incubators, the capacity to ho initiatives in the t

3.3 Employment Assessment of job creation and

maintenance in the territory.

ang urban	Urban waste selectively collected	%
ne cleanliness of mely the solid urban waste	Weekly frequency of cleaning/solid waste collection	Average $n^{\circ}$ of time
	Expenditure of the municipality on waste management	€ per inhabitant
<b>qualification</b> iitiatives for	Individuals (18 and over) who participated in adult education and training courses	%
	Individuals (18 and over) certified by the system of recognition, validation and certification of competences	%
	Unqualified workers	%
	Resident population not in education, employment, or training	%
nic activities and ives	Birth of enterprises	%
the capacity to stments and ies to the territory, ions for the siness initiatives start-ups) and ost/install these territory.	Survival of enterprises	%
	Average age of incubated enterprises	$\mathbf{N}^{\circ}$
	Business plans approved by incubators	$\mathbf{N}^{\circ}$
	Occupancy of the incubators	%
-	Employment evolution	%
	Self-employed workers	%
tl <b>Labour</b> b creation and	Resident population that works or studies in the same municipality	%

Unemployment evolution

enterprises

Employment created by incubated

%

%

<b>Critical Decision Factors (CDF)</b>	Assessment Criteria (AC)	Indicators	Units
	<b>4.1 Health</b> Assessment of the offer, access and quality of health services and facilities, namely the walking proximity to the residence.	Population living within 10 min. walking distance to primary health care	%
		Medical doctors in primary health care	Per 1000 inhabitants
		Resident population without general practitioner/family doctor	%
		Nurses in primary health care	Per 1000 inhabitants
		Medical appointments with general medical practice and family medicine	Per inhabitant
		Early leavers from education and training	%
		Population with tertiary education concluded	%
<b>4. Services and facilities</b> Offer, access and quality of	<b>4.2 Education</b> Assessment of the offer, access and quality of education services and facilities, namely the walking proximity to the residence.	Children (3 to 10 years old) living within 10 min. walking from pre-primary education and primary education (1st cycle) schools	%
		Capacity (number of places) of the pre-primary education and primary education (1st cycle) schools	Per 1000 inhabitants between 3 and 10 years old
	<b>4.3 Sport</b> Assessment of the offer, access and quality of services and sports facilities, considering their contribution to the practice of physical exercise and active social life.	Population living within 10 min. walking distance to sports facilities	%
ervices and facilities supporting community activities		Expenditure of the municipality on activities and sports facilities	€ per inhabitant
		Participants in sport activities	Per 1000 inhabitants
	<b>4.4 Public Transport</b> Assessment of the offer, access and quality of public transport services and facilities, valuing the functional proximity and the complementarity of transport systems (e.g., smooth mobility).	Population using public transportation and/or active (soft) modes daily	%
		Population living within 5 min. walking distance to a public transportation stop	%
		Average time spent commuting of employed or student resident population using collective mode of transport	Minutes
	<b>4.5 Associative and community</b> <b>spaces</b> Assessment of the offer, access and quality of the associative/community spaces, namely those that encourage involvement in the community/society, combating social isolation and loneliness.	Affiliated individuals of local associations by association typology	Per 1000 inhabitants
		Population living within 10 min. walking distance to a local association	%
		Elderly (65 or over) living within 5 min. walking distance to social/conviviality centre or daycare centre	%
		Capacity (number of places) of social/conviviality centre or daycare centre	Per 1000 inhabitants with 65 or more years old

# Table 4. Cont.

	lable 4. Cont.		
Critical Decision Factors (CDF)	Assessment Criteria (AC)	Indicators	Units
	<b>4.6 Local commerce</b> Assessment of the offer and access to trade services, namely the walking proximity to the residence	Commercial establishments density	Establishments /km <sup>2</sup>
	and its integration into mixed land use.	Average time to nearest commercial establishments	Minutes
	L Public space quality Physical environmee quality MENTAL HEALTH Rofessional qualificat and creation of econo activities 4. Services and facilities	<ul> <li>sense of place [nf]</li> <li>Participants in iniciatives generated by/promoting the sense of place [nf]</li> <li>Population exposed to PM10 concentrat</li> <li>Population exposed to noise emission so</li> <li>Complaints about noise recorded in the instantian distributed for the instantian waste selectively collected [kg/inhabitan</li> <li>Urban solid waste collector [kg/inhabitan</li> <li>Urban solid waste collector [kg/inhabitan</li> <li>Undividuals who participated in adult edd.</li> <li>Individuals who participated in adult edd.</li> <li>Individuals who participated in adult edd.</li> <li>Individuals certified by the system of recomplexences [kg]</li> <li>Unqualified workers [kg]</li> <li>Population not in education, employmert</li> <li>Survival of enterprises [pf]</li> <li>Population not in education, employmert</li> <li>Survival of enterprises [kg]</li> <li>Occupancy of the incubators [kg]</li> <li>Self-employed workers [kg]</li> <li>Employment evolution [kg]</li> <li>Employment evolution [kg]</li> <li>Employment evolution [kg]</li> <li>Employment evolution [kg]</li> <li>Burbion fixing within 10 min. walking from Medical apointments with general med</li> <li>Aurage and primary decation condition and trainmin</li> <li>Population living within 10 min. walking from Medical apointments with general med</li> <li>Capacity (number of places) of the prevency evolution [kg]</li> <li>Population living within 10 min. walking from Population living within 10 min. walking from Population living within 10</li></ul>	sst degraded [%] m urban green space [%] space [{ per inhabitant] blies [%] humity within the parish council promoting for the community within the parish council counces [%] socurces [%] municipality [%] tations [%] (socurces [%] municipality [%] tranagement [c per inhabitant] reation and training courses [%] ognation, validation and certification of at or training [%] <b>usiness initiatives</b> epises [ per 1000 working inhabitants] proved workers] morpimary health care [%] epi 1000 inhabitants] morpimary health care [%] epi 1000 inhabitants] %] habitants] (ad practice [per inhabitant] %] many education and primary education [1st at and 10 years old] may education and primary education [1st at and 10 years old] may of modes daily [%] may alocal association [%] ployed or student population using collective <b>ECE</b> Wy association tipology [per 1000 inhabitants] may alocal association [%] ployed or student population using collective <b>ECE</b> Wy association fipology [per 1000 inhabitants] m a local association [%] may alocal association [%] ployed or student population using collective <b>ECE</b> Wy association fipology [per 1000 inhabitants] m a local association [%] m a local associati

Table 4. Cont.

**Figure 3.** Strategic focus on assessment framework for mental health enabling neighbourhood environments (Critical Decision Factors, Assessment Criteria, and respective indicators).

# 3.2.1. Public Space Quality (CDF 1)

This CDF assesses the access, characteristics, and elements of public space which influence the mental health of the population. Through the planning, design, and maintenance of urban settings, public space must offer opportunities for making healthy choices [3–6]. To describe the CDF, two AC were defined: 1.1 safety and 1.2 sense of place.

"Safety" refers to the assessment of the quality and functionality of public space, considering elements of the space that promote feelings of safety, namely the presence of urban furniture, lighting, maintenance and cleanliness, as well as the relationship between the interior and exterior of buildings. Six indicators were suggested (Table 4).

"Sense of Place" refers to the assessment of the sense of place produced by public space through social interaction, feelings of identity and belonging to the community, trust, supportive and cooperative relationships, and the combatting of social isolation, thus recognizing the importance of social networks of proximity. The capacity and responsibility of the community to take care of public space and their heritage/patrimonial elements must also be evaluated. Three indicators were suggested (Table 4).

# 3.2.2. Physical Environment Quality (CDF 2)

The objective of this CDF is to assess the characteristics and elements of the physical and natural environment that support human experience and influence the mental health of the population. Three AC were defined: 2.1 air quality, 2.2 noise in housing, and 2.3 solid waste and urban cleanliness.

The objective of the "air quality" assessment criterion is to evaluate the levels of pollutants from traffic, industries, and construction works, and three indicators were proposed (Table 4).

"Noise in housing" assesses the outdoor noise levels that are perceived indoors, namely from traffic, construction works, and neighbours. Four indicators were identified (Table 4).

The main purpose of the "solid waste and urban cleanliness" criterion is the assessment of the cleanliness of public space, namely the management of urban solid waste as well as construction and demolition waste, with four indicators identified (Table 4).

# 3.2.3. Professional Qualification and Creation of Economic Activities (CDF 3)

The objective of this CDF is to assess the opportunities for individual professional training and qualification, and the dynamics of the local economy, including lifelong training and business attractiveness, job creation, innovation and entrepreneurship. Professional qualification (AC 3.1), new economic activities and business initiatives (AC 3.2), and employment and labour (AC 3.3) are the three AC identified.

"Professional qualification" refers to the existence of, or accessibility to, initiatives for lifelong learning, and four indicators were proposed (Table 4).

"New economic activities and business initiatives" refers to the capacity to attract new investments and economic activities to the place. This is revealed in the assessment of the conditions for the generation of business initiatives (e.g., incubators, start-ups) and the capacity to host/install these initiatives in the place. To collect data on this AC, five indicators were suggested (Table 4).

"Employment and labour" assesses the capacity of the place to create and maintain jobs. Five indicators were suggested (Table 4).

#### 3.2.4. Services and Facilities (CDF 4)

The last CDF assesses the offer, access, and quality of the services and facilities that support community activities, identified by six AC: 4.1 health, 4.2 education, 4.3 sport, 4.4 public transportation, 4.5 associative and community spaces, and 4.6 local commerce (Figure 3).

The health and education AC is focused on the walking distance between the individual's residence and these facilities, and the capacity of the services offered, with four indicators identified.

In the sport AC, the focus is not only on walking accessibility, but also on the contribution of these facilities and services to the practice of physical exercise and the pursuit of an active social lifestyle. Three indicators are proposed (Table 4).

The public transportations AC assesses the functional proximity and complementarity of transport systems (e.g., smooth mobility), and three indicators are identified (Table 4).

Regarding the associative and community spaces AC, the objective is to assess the offer, access, and quality of facilities and services that encourage the individual's involvement in the community and society, as well as guarding against social isolation and loneliness. Four indicators are identified (Table 4).

Finally, the local commerce AC assesses the walking distance between commercial facilities and the individual's residence, and the integration of that type of service in mixed land use. Two indicators are suggested (Table 4).

# 4. Discussion

The baseline results for the study area (four municipalities in the Lisbon Region, Portugal) revealed significant statistical associations between individuals' perceptions of their neighbourhood environment and their mental health. A methodology for ensuring a strategic focus and assessment framework in the SEmHA was built based on these findings to demonstrate the importance of the neighbourhood environment to the promotion of mental health, both as a health determinant and as an enabler of improved mental health.

#### 4.1. Discussing the Selection of the Four Critical Decision Factors (CDF)

Drawing on the baseline data collected and assessed in the study area (the four municipalities in the Lisbon Region after a period of economic crisis), four main CDF related to the neighbourhood environment were identified as critical to assessing the conditions that enable improved mental health. These CDF appear to be able to support decision making on community mental health improvement through local planning processes. These factors were related to: (i) the natural neighbourhood environment, including air, noise, and solid waste; (ii) the built neighbourhood environment, through public spaces, services, and facilities; and (iii) the social neighbourhood environment, taking into account professional qualification and economic activities.

Other examples of place-oriented frameworks that are based on factors which affect community mental health, including the direct impacts of social determinants, availability of services, assets, and other resources that maximise the community support provided to the local population needs include the Community Development Key Areas with Impact on Mental Health identified by Villeneau et al. [118]; the Framework for Promoting Mental Health in Europe (European Commission Health Monitoring Programme) [119,120]; the NHS Health Scotland mental health indicators [121,122]; the Positive Mental Health Surveillance Indicator Framework (Mental Health Strategy for Canada) [123]; and the Conceptual Framework of the Relationship Between Urban Form and Mental Well-Being developed by Hajrasoulih et al. [124].

Although a direct comparison between these frameworks is limited by the different objectives that drive their definition, they all refer to the mental health and well-being of the population. Notwithstanding, the four CDF and respective AC that are proposed by the SEmHA can be partially associated to the referred frameworks: 1. public space quality—1.1 safety and 1.2 sense of place [118–124]; 2. physical environment quality—2.1 air quality, 2.2 noise in housing, and 2.3 solid waste and urban cleanliness [118,124]; 3. professional qualification and creation of economic activities—3.1 professional qualification, 3.2 new economic activities and business initiatives, and 3.3 employment and Labour [118–122]; and 4. services and facilities—4.1 health, 4.2 education, 4.3 sport, 4.4 public transportation, 4.5 associative and community spaces, and 4.6 local commerce [118–122,124]. Among

these mental health frameworks, there is only one, the Community Development Key Areas with Impact on Mental Health identified by Villeneau et al. [118], that tackles all the assessment aspects identified in this study. However, across all the revised frameworks, the least-mentioned factor is CDF 2. Physical environment quality, adopted in this study, which suggests that effects of the physical neighbourhood environment on mental health conditions have been less-well studied, and mostly confined to epidemiological studies [125,126]. Another distinctive feature of the proposed SEmHA framework, when compared with other place-oriented frameworks, is its strategic focus and character to inform decision-making on the neighbourhood environmental characteristics that need to be addressed to promote the mental health of the population at the local level, and which is believed to be particularly useful in moments of crisis [53].

#### 4.2. Discussing What Each Critical Decision Factor (CDF) Entails

The proposed holistic and multi-factor SEmHA framework highlights, synthesizes and is supported by scientific evidence concerning the joint effects of urban characteristics at the local level, as shown by the results found in the Lisbon Region study area.

# 4.2.1. CDF 1. Public Space Quality

Regarding CDF 1. (the higher risks to mental health of not being satisfied with the safety of the residence area, lower family and community relational support, sense of belonging and identity, and trust in public institutions), literature supports the importance and capacity of public space to contribute to the mental health gains of the population. Adequate street lighting and urban furniture location (e.g., communal seating), clean and maintained spaces (e.g., without accumulated trash), the presence of nature, public art, heritage/patrimonial and identity elements, and the existence of undegraded buildings without signs of vandalism, are all features that can have positive effects on mental health and reduce the fear of crime [65,127–130], injuries [131], and the perception of unsafe neighbourhoods [132]. Several studies also suggest that an environment that enables walking safety can improve the mental health of the population by increasing the practice of physical activity of different age groups [133–138]. This is particularly relevant in natural settings when compared to indoor settings [139,140]. The aesthetics of, access (proximity) to, and engagement with public spaces, namely green and blue spaces, are relevant assessment dimensions for the promotion of social interaction and active living [128,141–145].

Concerning public space interventions, governments can adopt strategies at the local level to develop mental health-friendly neighbourhood environments, based on the design and on the management of public space. These must be safe, accessible, aesthetically pleasing, culturally appropriate, and allow contact with nature, as well as comfortable pedestrian activity [14,146,147]. For instance, the presence of sidewalks, places to sit, playgrounds, safe well-lit crosswalks, building accessibility (e.g., comfortable common entrances), dedicated or channelized traffic movements and adjusted vehicle speeds, can increase the safety and usability of public space, and influence individual choices regarding healthy lifestyles (e.g., eating habits, physical activity, social connections) [146]. In addition, the negative impacts of isolation and loneliness on mental health can be mitigated by promoting neighbourhood watch (crime prevention awareness) and neighbourhood walkability, as well as enabling residents to nurture positive local relationships and take part in community life [146,148]. This increases the sense of place of neighbourhoods through the reinforcement of identity and belonging [143,149]. Many aspects of social engagement can be strengthened through the involvement of residents in planning processes, such as: bonds and networks between neighbours; community cohesion; the perception of neighbourhood security; proximity to friends and family; and the sense of empowerment, connection, and community responsibility. [118,143,146,149,150].

# 4.2.2. CDF 2. Physical Environment Quality

Concerning CDF 2, results from the study reinforce the idea that the quality of the physical (natural) environment, namely access to clean air [125,151], low levels of noise exposure [133,137], and urban cleanliness [152–154], is associated with better mental health outcomes. Moreover, neighbourhoods with low pollution levels also encourage the practice of outdoor physical activity and of active transport, with associated benefits to mental health [134,155]. The positive impacts on mental health of improving the quality of the physical environment can be assisted by local neighbourhood planning processes [146], through a range of interventions, for instance decreasing public space decay, trash buildup, and vandalism using functional and proximity solid waste management and urban cleaning services. Urban air pollution (greenhouse gas, carbon monoxide, hydrocarbons, oxides of nitrogen, ground level ozone, and particulate matter), can be reduced by adopting nature-based solutions, expanding natural elements across urban landscapes (e.g., trees, greenways, urban agriculture, green parks), lowering vehicle speed limits, locating residential areas at a safe distance from vehicle exhausts, and maintaining short walking distances (active transportation/mobility) between homes and services/facilities. Noise exposure and pollution, particularly the effects of indoor noise, can be reduced through housing location criteria such as the proximity to noise emission sources, for instance busy roadways (e.g., highways), railways (e.g., stations) and airports (e.g., take-off and landing routes and air traffic holding areas), and promoting better quality construction and renewal of buildings, such as incentives to the installation of efficient insulation systems (e.g., double glazing).

# 4.2.3. CDF 3. Professional Qualification and Creation of Economic Activities

With respect to CDF 3, the risks to mental health relate to household financial difficulties due to low household income, unemployment, unqualified work, and low education levels. Results show there is a clear and well-known connection between mental ill-health and low income and poverty, low educational status, and also unemployment [51,116,120,156]. Furthermore, the mental health of the community is also affected by feelings of insecurity and the loss of control related with the combined effect of individual social isolation and disintegration [120].

In this context, the AC 3.1 professional qualification assessment criterion highlights the important role played by local governments in supporting continuous education and lifelong learning programmes capable of responding to neighbourhood and community needs and resulting in positive consequences for mental health [157,158]. Education is a crucial dimension in enabling deprived groups to expand capability, mitigate psychological distress, and develop self-esteem [120,159]. It is especially important to develop qualification strategies and activities throughout life, in direct partnership with schools and enterprises, related to vocational and supported training that enhances and improves working capacity, coping skills, and labour market competences (e.g., to unqualified workers) [120,157]. These education programmes can also help in the promotion of interpersonal awareness and the maintenance of social contacts [149].

The AC 3.2 new economic activities and business initiatives, and 3.3 employment and labour, emphasize the capacity to attract and support economic dynamics and wealth generation at the local level, which can bring employment opportunities that integrate individuals outside the labour market, as well as promoting sustainable work and financial independence [149]. There is scientific support suggesting that local governments can foment and create conditions to host and strengthen new business initiatives and forms of work through organizations that build up and facilitate structure, competences, networks and partnerships [160,161], for instance, incubators, start-ups, voluntary work, and co-operatives. Contributing to active job creation should be used to prevent local unemployment, particularly long-term unemployment, and provide, for example, conditions for entrepreneurship [120,160,162].

# 4.2.4. CDF 4. Services and Facilities

Regarding CDF 4, our findings show that the risk to mental health relates to the quality and availability of several services and facilities in the residential area. Several studies point out the importance of provision and access to local services and facilities, and their walking proximity, to better mental health and wellbeing of the population [163–165]. At the local level, mixed land use developments (proximity of services and facilities to housing options) that prioritize access to, for instance, health care, schools, sport and recreational centres, social and community amenities and grocery stores, can increase walking and cycling [166,167] and consequently the level of physical activity of the population [148], with associated positive impacts on mental health. The place investment in neighbourhood walking connectivity and easy access to services and facilities can impact positively on the neighbourhood's mental health through changes in mobility habits (prioritising active and public transportation over individual forms) and the increase of social capital and community engagement [128,142,168–172]. These changes can consequently improve neighbourhood trust and also expand people's involvement and participation in local decision-making processes [146].

# 4.3. Discussing the Usefulness and Applicability of the Strategic Focus on Environmental and Mental Health Assessment (SEmHA) Framework

Overall, the results reveal that this strategic focus and assessment framework, with the aforementioned CDF and AC, if used to assess local planning strategic options, is likely to support local decision-making in creating local conditions that favour mental health. Each case has its own singularities, so what is relevant in the Lisbon Region (Portugal) may not apply exactly in the same way to other places. However, with respect to the Lisbon Region, it appears that promoting compacted, connected, inclusive, and natural urban neighbourhoods in which people can move via active or soft transportation, access services, as well as aesthetic recreational and green spaces, and also feel safe and comfortable to participate in community life [14,146,173], will likely create better conditions for mental health. As mentioned above, the literature has demonstrated the association between population/residential density and mental health and wellbeing (e.g., levels of disease, trust, tolerance, participation) [174–177]. However, evidence also shows that more research is needed to better understand the levels of population/residential/services density beneficial to mental health [177].

This study supports the importance of adopting strategic thinking in environmental and health assessments to ensure that commitment to mental health promotion is embedded in urban local policies across all sectors. A Mental Health in All Policies considers the systemic and complex relationships that take place within neighbourhoods and their effects at the local level [41,42,149]. Knowledge and assessment of the mental health needs of the population, particularly those who are vulnerable, disadvantaged, or at risk, are crucial for improving health equity and for supporting political decision-making that ensures that everyone has lifelong access to the same conditions, services and amenities of the neighbourhood. [149,178].

During periods of crisis, such as the current COVID-19 pandemic, the negative impacts on mental health are a reality (e.g., increases in depression, anxiety, alcohol and substance misuse, antidepressant usage, violence, emotional distress, poor quality of life, and reduced wellbeing), as a result of, for instance, fear of infection and death, loss of loved ones, social distancing and reduced interaction, income insecurities, local labour market decline, austerity measures, and drastic changes in daily routines [9,52,179–181]. These consequences, together with the increase in health inequalities, usually worsen the conditions of the vulnerable and excluded [10,11,52,182]. This strategic and assessment framework can help to support and structure the interventions in mental health at the local level, helping to mitigate the extent and intensity of immediate and long-term negative effects [29,183–185]. Health Impact Assessment methodologies have been revealed as a beneficial tool to inform and understand policy decisions and unpredicted major events such as the COVID-19 pandemic [53].

#### 4.4. Strengths, Limitations and Future Research

The proposed methodology to establish a strategic focus and respective assessment framework comes with strengths and limitations.

In terms of strengths, it illustrates a possible outline of a structured framework for applying a strategic focus in a HIA at the local level, built upon the perceptions of the resident population of four municipalities in the Lisbon Region. Its application and adaptation to other levels, scales, and contexts could be beneficial, particularly in the public sectors, for understanding how policies can affect the onset of mental disorders as well as the improvement of population mental health and health equity. The assessment results also help identify opportunities for intersectoral and collaborative action that could improve neighbourhood environments and consequently promote the mental health of the population. We believe this is the first study involving a SEA-based approach that gathers and relates neighbourhood environment characteristics and mental health. This framework allows: (i) assessing the enabling conditions of mental health through each CDF, (ii) identifying points for strategic public intervention, (iii) monitoring changes over time for the design or evaluation of programmes and policies, (iv) supporting the conception of evidence-based interventions that have a higher probability of long-term impact on mental health.

The study's design and methodology contain limitations with respect to the selfreported individual data from perceptions of the neighbourhood and mental health status, which may not correspond to an exact reality, and can be influenced by memory bias or social desirability [186]. The CDF, AC, and indicators were developed through the survey instrument and dialogue/discussion with municipality mayors and parish council presidents. This was limited due to time and cost constraints, whereas further combined qualitative approaches are recommended with the participation of different community stakeholders [187,188]. In developing the CDF and AC, statistical associations between neighbourhood characteristics and mental health outcomes were used, but this should not be interpreted as if there is a direct causality, as some indirect causes may justify the relationship [189]. Another limitation of the study was the use of indicators that are related to the Portuguese context and which availability of data at the local level may be limited.

Application of the strategic focus and assessment framework to a local level study area (e.g., neighbourhood, municipality, or a set of municipalities) would be the next step for future research. This would provide an understanding of the operability of the framework in identifying and assessing strategic planning options that could inform local plans and policies and more adequately improve mental health.

# 5. Conclusions

The study proposed a strategic focus and assessment framework—SEmHA—applied to the neighbourhood environmental conditions of the study area (four municipalities in the Lisbon Region following a period of economic crisis), enabling assessment of mental health at the local level, by combining holistic, and intersectoral approaches.

The critical decision factors identified to strategically act on community mental health were (i) public space quality, (ii) physical environment quality, (iii) professional qualification and creation of economic activities, and (iv) services and facilities. These results suggest that an increase in mental health benefits can be fostered through the neighbourhood environment, landscape and community planning, and design interventions, taking into account land use support decisions that can, for instance, compact urban neighbourhoods, increase the mix of land uses and, in some areas, urban density. The proposed strategic focus and assessment framework contributes to ensuring that the neighbourhood environment interventions truly achieve community improvements and reduce inequalities,

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through cyclical assessment and monitoring of the impacts on well-being, health, and health equity [190].

Using the proposed SEmHA framework to guarantee a strategic focus on the assessment of neighbourhood environmental impacts on mental health at the local level will help policy makers to identify and assess strategic options that enable the creation (and reconversion) of more complete, more sustainable and more liveable neighbourhood environments, where individuals can enjoy their mental health choices, thus improving place and community resilience during times of crisis.

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#### References

- Patel, V.; Lund, C.; Hatherill, S.; Plagerson, S.; Corrigall, J.; Funk, M.; Flisher, A.J. Mental Disorders: Equity and Social Determinants. In *Equity, Social Determinants and Public Health Programs*; Blas, A., Kurup, A.S., Eds.; World Health Organization: Geneva, Switzerland, 2010; pp. 115–134.
- Prince, M.; Patel, V.; Saxena, S.; Maj, M.; Maselko, J.; Phillips, M.R.; Rahman, A. No Health without Mental Health. *Lancet* 2007, 370, 859–877. [CrossRef]
- Brown, J.; Learmonth, A.; Mackereth, C. Promoting Public Mental Health and Well-Being: Principles into Practice; Jessica Kingsley Publishers: London, UK, 2015.
- 4. Patel, V. Acting Early: The Key to Preventing Mental Health Problems. J. R. Soc. Med. 2018, 111, 153–157. [CrossRef] [PubMed]
- 5. Alegría, M.; NeMoyer, A.; Falgàs Bagué, I.; Wang, Y.; Alvarez, K. Social Determinants of Mental Health: Where We Are and Where We Need to Go. *Curr. Psychiatry Rep.* **2018**, *20*, 95. [CrossRef] [PubMed]
- 6. Curtis, S. Space, Place and Mental Health; Ashgate: Farnham, UK, 2010; ISBN 0754673316.
- Kousoulis, A.A.; Goldie, I. A Visualization of a Socio-Ecological Model for Urban Public Mental Health Approaches. *Front. Public Health* 2021, 9, 1–4. [CrossRef] [PubMed]
- Pearce, J.; Cherrie, M.; Shortt, N.; Deary, I.; Ward Thompson, C. Life Course of Place: A Longitudinal Study of Mental Health and Place. *Trans. Inst. Br. Geogr.* 2018, 43, 555–572. [CrossRef]

- Salanti, G.; Cipriani, A.; Furukawa, T.A.; Peter, N.; Tonia, T.; Papakonstantinou, T.; Holloway, A.; Leucht, S. An Efficient Way to Assess the Effect of COVID-19 on Mental Health in the General Population. *Lancet Psychiatry* 2021, 8, e14–e15. [CrossRef]
- 10. Cave, B.; Kim, J.; Viliani, F.; Harris, P. Applying an Equity Lens to Urban Policy Measures for COVID-19 in Four Cities. *Cities Health* **2020**, 1–5. [CrossRef]
- 11. Campo-Arias, A.; De Mendieta, C.T. Social Determinants of Mental Health and the COVID-19 Pandemic in Low-Income and Middle-Income Countries. *Lancet Glob. Health* **2021**, *9*, e1029. [CrossRef]
- Ribeiro, A.I.; Triguero-Mas, M.; Jardim Santos, C.; Gómez-Nieto, A.; Cole, H.; Anguelovski, I.; Silva, F.M.; Baró, F. Exposure to Nature and Mental Health Outcomes during COVID-19 Lockdown. A Comparison between Portugal and Spain. *Environ. Int.* 2021, 154, 106664. [CrossRef]
- 13. Barton, H. City of Well-Being. A Radical Guide to Planning; Routledge: Oxfordshire, UK, 2016.
- 14. Un-Habitat; World Health Organization. Integrating Health in Urban and Territorial Planning: A Sourcebook; WHO: Genebra, Switzerland, 2020.
- Appelqvist-Schmidlechner, K.; Vaara, J.P.; Vasankari, T.; Häkkinen, A.; Mäntysaari, M.; Kyröläinen, H. Relationship between Different Domains of Physical Activity and Positive Mental Health among Young Adult Men. *BMC Public Health* 2020, 20, 1116. [CrossRef]
- 16. Mitchell, R. Is Physical Activity in Natural Environments Better for Mental Health than Physical Activity in Other Environments? Soc. Sci. Med. 2013, 91, 130–134. [CrossRef] [PubMed]
- Sugiyama, T.; Leslie, E.; Giles-Corti, B.; Owen, N. Associations of Neighbourhood Greenness with Physical and Mental Health: Do Walking, Social Coherence and Local Social Interaction Explain the Relationships? *J. Epidemiol. Community Health* 2008, 62, e9. [CrossRef] [PubMed]
- 18. Basu, M.; Hashimoto, S.; Dasgupta, R. The Mediating Role of Place Attachment between Nature Connectedness and Human Well-Being: Perspectives from Japan. *Sustain. Sci.* 2020, *15*, 849–862. [CrossRef]
- 19. Khosravi, H.; Bahrainy, H.; Tehrani, S.O. Neighbourhood Morphology, Genuine Self-Expression and Place Attachment, the Case of Tehran Neighbourhoods. *Int. J. Urban Sci.* 2020, 24, 397–418. [CrossRef]
- Fischer, T.B.; Jha-Thakur, U.; Fawcett, P.; Clement, S.; Hayes, S.; Nowacki, J. Consideration of Urban Green Space in Impact Assessments for Health. *Impact Assess. Proj. Apprais.* 2018, 36, 32–44. [CrossRef]
- Loureiro, A.; Lima, J.; do Partidário, M.R.; Santana, P. Condicionantes Da Saúde Mental e Os Instrumentos de Avaliação de Impactos. In *Território e Saúde Mental em Tempos de Crise*; Santana, P., Ed.; Imprensa da Universidade de Coimbra: Coimbra, Portugal, 2015; pp. 11–27.
- 22. European Union Territorial Agenda 2030. A Future for All Places. Informal Meeting of Ministers Responsible for Spatial Planning and Territorial Development and/or Territorial Cohesion; European Union: Berlin, Germany, 2020.
- Santana, P.; Almendra, R.; Pilot, E.; Doreleijers, S.; Krafft, T. Environmental Inequalities in Global Health. In *Handbook of Global Health*; Springer International Publishing: Berlin/Heidelberg, Germany, 2021; pp. 1–19.
- Cave, B.; Claßen, T.; Fischer-Bonde, B.; Humboldt-Dachroeden, S.; Martín-Olmedo, P.; Mekel, O.; Pyper, R.; Silva, F.; Viliani, F.; Xiao, Y. Human Health: Ensuring a High Level of Protection. In A Reference Paper on Addressing Human Health in Environmental Impact Assessment (As per EU Directive 2011/92/EU Amended by 2014/52/EU); International Association for Impact Assessment: Washington, DC, USA, 2020.
- WHO. Health Impact Assessment: Main Concepts and Suggested Approach (Gothenburg Consensus Paper); WHO: Genea, Switzerland, 1999.
- Harris-Roxas, B.; Viliani, F.; Bond, A.; Cave, B.; Divall, M.; Furu, P.; Harris, P.; Soeberg, M.; Wernham, A.; Winkler, M. Health Impact Assessment: The State of the Art. *Impact Assess. Proj. Apprais.* 2012, *30*, 43–52. [CrossRef]
- 27. Partidário, M.R. Strategic Environmental Assessment Better Practice Guide Methodological Guidance for Strategic Thinking in SEA; Portuguese Environment Agency and Redes Energéticas Nacionais (REN), SA: Lisbon, Portugal, 2012.
- Partidário, M.R. Elements of an SEA Framework— Improving the Added-Value of SEA. Environ. Impact Assess. Rev. 2000, 20, 647–663. [CrossRef]
- 29. Partidário, M.R. A Strategic Advocacy Role in SEA for Sustainability. J. Environ. Assess. Policy Manag. 2015, 17, 1550015. [CrossRef]
- Quigley, R.; den Broeder, L.; Furu, P.; Bond, A.; Cave, B.; Bos, R. Health Impact Assessment. International Best Practice Principles. Fargo USA Int. Assoc. Impact Assess. 2006, 5, 5–8.
- Fischer, T.B.; Matuzzi, M.; Nowacki, J. The Consideration of Health in Strategic Environmental Assessment (SEA). Environ. Impact Assess. Rev. 2010, 30, 200–210. [CrossRef]
- Fehr, R.; Viliani, F.; Nowacki, J.; Martuzzi, M. Health in Impact Assessments: Opportunities Not to Be Missed; WHO: Copenhagen, Denmark, 2014.
- 33. Joffe, M. The Need for Strategic Health Assessment. Eur. J. Public Health 2008, 18, 439–440. [CrossRef] [PubMed]
- St-Pierre, L. *Mental Health in the Field of Health Impact Assessment;* Institut national de santé publique: Québec, QC, Canada, 2016.
   Lucyk, K.; Gilhuly, K.; Tamburrini, A.-L.; Rogerson, B. Incorporating Mental Health into Health Impact Assessment in the United States: A Systematic Review. J. Public Ment. Health 2016, 15, 150–176. [CrossRef]
- 36. Todman, L.C.; Hricisak, L.M.; Fay, J.E.; Sherrod Taylor, J. Mental Health Impact Assessment: Population Mental Health in Englewood, Chicago, Illinois, USA. *Impact Assess. Proj. Apprais.* **2012**, *30*, 116–123. [CrossRef]

- 37. Kumagai, Y.; Partidario, M. Lasting Community Wellbeing: Comparison of Lisbon and Tokyo. *Sustain. Dev.* **2019**, 27, 84–95. [CrossRef]
- Cooke, A.; Friedli, L.; Coggins, T.; Edmonds, N.; Michaelson, J.; O'Hara, K.; Snowden, L.; Stansfield, J.; Nicola Steuer, N.; Scott-Samuel, A. Mental Well-Being Impact Assessment: A Toolkit for Well-Being; National Mental Well-Being Impact Assessment Collaborative: London, UK, 2011.
- 39. Lalani, N. *Mental Well-Being Impact Assessment: A Primer;* The Wellesley Institute: Toronto, ON, Canada, 2011.
- 40. Nowacki, J.; Martuzzi, M.; Fischer, T.B. Health and Strategic Environmental Assessment; WHO: Copenhagen, Denmark, 2009.
- 41. De Silva, M.J. Making Mental Health an Integral Part of Sustainable Development: The Contribution of a Social Determinants Framework. *Epidemiol. Psychiatr. Sci.* **2015**, *24*, 100–106. [CrossRef]
- Botezat, I.; Campion, J.; Garcia-Cubillana, P.; Guðmundsdóttir, D.; Halliday, W.; Henderson, N.; Holte, A.; Heitor Santos, M.J.; Japing, K.; Kearney, N.; et al. *Mental Health in All Policies. Situation Analysis and Recommendations for Action.*; European Union: Brussels, Belgium, 2017.
- Harris, P.; Sainsbury, P.; Kemp, L. The Fit between Health Impact Assessment and Public Policy: Practice Meets Theory. Soc. Sci. Med. 2014, 108, 46–53. [CrossRef]
- Morrison, J.; Pons-Vigués, M.; Bécares, L.; Burström, B.; Gandarillas, A.; Domínguez-Berjón, F.; Diez, È.; Costa, G.; Ruiz, M.; Pikhart, H.; et al. Health Inequalities in European Cities: Perceptions and Beliefs among Local Policymakers. *BMJ Open* 2014, 4, e004454. [CrossRef]
- 45. Kickbusch, I.; McCann, W.; Sherbon, T. Adelaide Revisited: From Healthy Public Policy to Health in All Policies. *Health Promot. Int.* **2008**, *23*, 1–4. [CrossRef]
- Leppo, K.; Ollila, E.; Peña, S.; Wismar, M.; Cook, S. Health in All Policies. Seizing Opportunities, Implementing Policies; Ministry of Social Affairs and Health: Helsinki, Finland, 2013.
- 47. WHO. Health in All Policies (HiAP) Framework for Country Action; WHO: Genea, Switzerland, 2014.
- 48. Soja, E.W. Seeking Spatial Justice; University of Minnesota Press: Minnesota, MN, USA, 2015.
- 49. Nieuwenhuijsen, M.J. COVID-19 and the City; from the Short Term to the Long Term. Environ. Res. 2020, 191, 110066. [CrossRef]
- 50. United Nations Environment Program. Integrated Strategic Environmental Assessments in Post-Crisis Countries. In A Guidance Note for Integrating Disaster Risk Reduction and Climate Change Adaptation in Sustainable Reconstruction and Development Planning; United Nations Office for Disaster Risk Reduction: Nairobi, Kenya, 2018.
- 51. Marmot, M.; Allen, J.; Goldblatt, P.; Herd, E.; Morrison, J. Build Back Fairer: The COVID-19 Marmot Review. The Pandemic, Socioeconomic and Health Inequalities in England; Institute of Health Equity: London, UK, 2020.
- 52. Sarchiapone, M.; Lopez-Castroman, J.; Gramaglia, C.; Baca-Garcia, E.; Baralla, F.; Barrigón, M.L.; Bartollino, S.; Beezhold, J.; Bobes, J.; Calati, R.; et al. Increased Risk for Mental Disorders and Suicide during the COVID-19 Pandemic: Position Statement of the Section on Suicidology and Suicide Prevention of the European Psychiatric Association. *Glob. Psychiatry* **2021**, *4*, 4–19. [CrossRef]
- Green, L.; Ashton, K.; Azam, S.; Dyakova, M.; Clemens, T.; Bellis, M.A. Using Health Impact Assessment (HIA) to Understand the Wider Health and Well-Being Implications of Policy Decisions: The COVID-19 "Staying at Home and Social Distancing Policy" in Wales. *BMC Public Health* 2021, 21, 1456. [CrossRef] [PubMed]
- Almendra, R.; Loureiro, A.; Silva, G.; Vasconcelos, J.; Santana, P. Short-Term Impacts of Air Temperature on Hospitalizations for Mental Disorders in Lisbon. *Sci. Total Environ.* 2019, 647, 127–133. [CrossRef] [PubMed]
- 55. Loureiro, A.; Santana, P.; Nunes, C.; Almendra, R. The Role of Individual and Neighborhood Characteristics on Mental Health after a Period of Economic Crisis in the Lisbon Region (Portugal): A Multilevel Analysis. *Int. J. Environ. Res. Public Health* **2019**, 16, 2647. [CrossRef]
- 56. Santana, P.; Costa, C.; Cardoso, G.; Loureiro, A.; Ferrão, J. Suicide in Portugal: Spatial Determinants in a Context of Economic Crisis. *Health Place* **2015**, *35*, 85–94. [CrossRef]
- 57. Loureiro, A.; Costa, C.; Almendra, R.; Santana, P. The Socio-Spatial Context as a Risk Factor for Hospitalization Due to Mental Illness in the Metropolitan Areas of Portugal. *Cad. Saúde Pública* **2015**, *31*, 219–231. [CrossRef] [PubMed]
- Silva, M.; Antunes, A.; Azeredo-Lopes, S.; Loureiro, A.; Saraceno, B.; Caldas-de-Almeida, J.M.; Cardoso, G. Factors Associated with Involuntary Psychiatric Hospitalization in Portugal. *Int. J. Ment. Health Syst.* 2021, 15, 37. [CrossRef] [PubMed]
- Silva, M.; Antunes, A.; Loureiro, A.; Azeredo-Lopes, S.; Saraceno, B.; Caldas-de-Almeida, J.; Cardoso, G. Factors Associated with Length of Stay and Readmission in Acute Psychiatric Inpatient Services in Portugal. *Psychiatry Res.* 2020, 293, 113420. [CrossRef]
- 60. dos Santos, M.J.H.; Miguel, J.M.P. Avaliação Do Impacte de Políticas de Diferentes Sectores Na Saúde e Nos Sistemas de Saúde: Um Ponto de Situação. *Rev. Port. De Saúde Pública* **2009**, *27*, 5–17.
- de Almeida, T.C.; Heitor, M.J.; Santos, O.; Costa, A.; Virgolino, A.; Rasga, C.; Martiniano, H.; Vicente, A.; Lima, B.; Carreiras, J.; et al. SM-COVID19—Saúde Mental Em Tempos de Pandemia; Instituto Nacional de Saúde Doutor Ricardo Jorge: Lisboa, Portugal, 2020.
- Tendais, I.; Ribeiro, A.I. Espaços Verdes Urbanos e Saúde Mental Durante o Confinamento Causado Pela Covid-19. *Finisterra—Rev.* Port. De Geogr. 2020, 55, 183–188. [CrossRef]
- 63. Santana, P.; Costa, C.; Marí-Dell'Olmo, M.; Gotsens, M.; Borrell, C. Mortality, Material Deprivation and Urbanization: Exploring the Social Patterns of a Metropolitan Area. *Int. J. Equity Health* **2015**, *9*, 14–55. [CrossRef]
- 64. Statistics Portugal Censos 2011—Resultados Definitivos 2012. Available online: https://censos.ine.pt/xportal/xmain?xpid= INE&xpgid=ine\_publicacoes&PUBLICACOESpub\_boui=156644135&PUBLICACOESmodo=2 (accessed on 18 May 2021).

- 65. Guite, H.F.; Clark, C.; Ackrill, G. The Impact of the Physical and Urban Environment on Mental Well-Being. *Public Health* 2006, 120, 1117–1126. [CrossRef] [PubMed]
- Takano, T. Urban Residential Environments and Senior Citizens' Longevity in Megacity Areas: The Importance of Walkable Green Spaces. J. Epidemiol. Community Health 2002, 56, 913–918. [CrossRef] [PubMed]
- 67. Gary, T.L.; Stark, S.A.; LaVeist, T.A. Neighborhood Characteristics and Mental Health among African Americans and Whites Living in a Racially Integrated Urban Community. *Health Place* **2007**, *13*, 569–575. [CrossRef] [PubMed]
- Sheppard, A.J.; Salmon, C.; Balasubramaniam, P.; Parsons, J.; Singh, G.; Jabbar, A.; Zaidi, Q.; Scott, A.; Nisenbaum, R.; Dunn, J.; et al. Are Residents of Downtown Toronto Influenced by Their Urban Neighbourhoods? Using Concept Mapping to Examine Neighbourhood Characteristics and Their Perceived Impact on Self-Rated Mental Well-Being. *Int. J. Health Geogr.* 2012, *11*, 31. [CrossRef] [PubMed]
- 69. Whitley, R.; Prince, M. Fear of Crime, Mobility and Mental Health in Inner-City London, UK. Soc. Sci. Med. 2005, 61, 1678–1688. [CrossRef] [PubMed]
- Cromley, E.K.; Wilson-Genderson, M.; Pruchno, R.A. Neighborhood Characteristics and Depressive Symptoms of Older People: Local Spatial Analyses. Soc. Sci. Med. 2012, 75, 2307–2316. [CrossRef] [PubMed]
- Wilson-Genderson, M.; Pruchno, R. Effects of Neighborhood Violence and Perceptions of Neighborhood Safety on Depressive Symptoms of Older Adults. Soc. Sci. Med. 2013, 85, 43–49. [CrossRef]
- Semenza, J.C.; Krishnasamy, P.V. Design of a Health-Promoting Neighborhood Intervention. *Health Promot. Pract.* 2007, *8*, 243–256. [CrossRef]
- 73. Araya, R.; Montgomery, A.; Rojas, G.; Fritsch, R.; Solis, J.; Signorelli, A.; Lewis, G. Common Mental Disorders and the Built Environment in Santiago, Chile. *Br. J. Psychiatry J. Ment. Sci.* **2007**, *190*, 394–401. [CrossRef]
- 74. Thomas, H.; Weaver, N.; Patterson, J.; Jones, P.; Bell, T.; Playle, R.; Dunstan, F.; Palmer, S.; Lewis, G.; Araya, R. Mental Health and Quality of Residential Environment. *Br. J. Psychiatry J. Ment. Sci.* **2007**, *191*, 500–505. [CrossRef]
- 75. Gatersleben, B.; Uzzell, D. Affective Appraisals of the Daily Commute. Environ. Behav. 2007, 39, 416–431. [CrossRef]
- 76. Wener, R.E.; Evans, G.W. Comparing Stress of Car and Train Commuters. *Transp. Res. Part F Traffic Psychol. Behav.* 2011, 14, 111–116. [CrossRef]
- 77. Preston, J.; Rajé, F. Accessibility, Mobility and Transport-Related Social Exclusion. J. Transp. Geogr. 2007, 15, 151–160. [CrossRef]
- Stanley, J.K.; Hensher, D.A.; Stanley, J.R.; Vella-Brodrick, D. Mobility, Social Exclusion and Well-Being: Exploring the Links. *Transp. Res. Part A Policy Pract.* 2011, 45, 789–801. [CrossRef]
- 79. Annerstedt, M.; Ostergren, P.-O.; Björk, J.; Grahn, P.; Skärbäck, E.; Währborg, P. Green Qualities in the Neighbourhood and Mental Health—Results from a Longitudinal Cohort Study in Southern Sweden. *BMC Public Health* **2012**, *12*, 337. [CrossRef]
- 80. Dalgard, O.S.; Mykletun, A.; Rognerud, M.; Johansen, R.; Zahl, P.H. Education, Sense of Mastery and Mental Health: Results from a Nation Wide Health Monitoring Study in Norway. *BMC Psychiatry* **2007**, *7*, 1–9. [CrossRef]
- 81. Araya, R. Education and Income: Which Is More Important for Mental Health? J. Epidemiol. Community Health 2003, 57, 501–505. [CrossRef]
- 82. Breslin, F.C.; Mustard, C. Factors Influencing the Impact of Unemployment on Mental Health among Young and Older Adults in a Longitudinal, Population-Based Survey. *Scand. J. Work. Environ. Health* **2003**, *29*, 5–14. [CrossRef]
- 83. Comino, E.J.; Harris, E.; Chey, T.; Manicavasagar, V.; Penrose Wall, J.; Powell Davies, G.; Harris, M.F. Relationship between Mental Health Disorders and Unemployment Status in Australian Adults. *Aust. N. Z. J. Psychiatry* **2003**, *37*, 230–235. [CrossRef]
- 84. Artazcoz, L.; Benach, J.; Borrell, C.; Cortès, I. Unemployment and Mental Health: Understanding the Interactions among Gender, Family Roles, and Social Class. *Am. J. Public Health* **2004**, *94*, 82–88. [CrossRef]
- 85. Fone, D.L.; Dunstan, F. Mental Health, Places and People: A Multilevel Analysis of Economic Inactivity and Social Deprivation. *Health Place* 2006, 12, 332–344. [CrossRef] [PubMed]
- 86. Thomas, C.; Benzeval, M.; Stansfeld, S. Psychological Distress after Employment Transitions: The Role of Subjective Financial Position as a Mediator. *J. Epidemiol. Community Health* **2007**, *61*, 48–52. [CrossRef] [PubMed]
- Córdoba-Doña, J.A.; San Sebastián, M.; Escolar-Pujolar, A.; Martínez-Faure, J.E.; Gustafsson, P.E. Economic Crisis and Suicidal Behaviour: The Role of Unemployment, Sex and Age in Andalusia, Southern Spain. *Int. J. Equity Health* 2014, 13, 55. [CrossRef] [PubMed]
- 88. Hämmig, O.; Bauer, G.F. The Social Gradient in Work and Health: A Cross-Sectional Study Exploring the Relationship between Working Conditions and Health Inequalities. *BMC Public Health* **2013**, *13*, 1170. [CrossRef] [PubMed]
- Williams, K.; Frech, A.; Carlson, D.L. Marital Status and Mental Health. In A Handbook for the Study of Mental Health; Scheid, T.L., Brown, T.N., Eds.; Cambridge University Press: Cambridge, UK, 2012; pp. 306–320.
- Lindström, M.; Rosvall, M. Marital Status, Social Capital, Economic Stress, and Mental Health: A Population-Based Study. Soc. Sci. J. 2012, 49, 339–342. [CrossRef]
- 91. Cannuscio, C.C.; Weiss, E.E.; Asch, D.A. The Contribution of Urban Foodways to Health Disparities. *J. Urban Health* **2010**, *87*, 381–393. [CrossRef]
- Yang, T.-C.; Matthews, S.A. The Role of Social and Built Environments in Predicting Self-Rated Stress: A Multilevel Analysis in Philadelphia. *Health Place* 2010, 16, 803–810. [CrossRef]
- Brown, S.; Taylor, K.; Wheatley Price, S. Debt and Distress: Evaluating the Psychological Cost of Credit. J. Econ. Psychol. 2005, 26, 642–663. [CrossRef]

- 94. Lee, S.; Guo, W.J.; Tsang, A.; Mak, A.D.P.; Wu, J.; Ng, K.L.; Kwok, K. Evidence for the 2008 Economic Crisis Exacerbating Depression in Hong Kong. J. Affect. Disord. 2010, 126, 125–133. [CrossRef]
- Gili, M.; Roca, M.; Basu, S.; McKee, M.; Stuckler, D. The Mental Health Risks of Economic Crisis in Spain: Evidence from Primary Care Centres, 2006 and 2010. *Eur. J. Public Health* 2013, 23, 103–108. [CrossRef]
- 96. Zhang, J.X.; Ho, S.C.; Woo, J. Assessing Mental Health and Its Association with Income and Resource Utilization in Old-Old Chinese in Hong Kong. *Am. J. Geriatr. Psychiatry Off. J. Am. Assoc. Geriatr. Psychiatry* **2005**, *13*, 236–243. [CrossRef]
- 97. Sundquist, K.; Ahlen, H. Neighbourhood Income and Mental Health: A Multilevel Follow-up Study of Psychiatric Hospital Admissions among 4.5 Million Women and Men. *Health Place* **2006**, *12*, 594–602. [CrossRef] [PubMed]
- Fone, D.; Dunstan, F.; Williams, G.; Lloyd, K.; Palmer, S. Places, People and Mental Health: A Multilevel Analysis of Economic Inactivity. Soc. Sci. Med. 2007, 64, 633–645. [CrossRef] [PubMed]
- Orpana, H.; Lemyre, L.; Gravel, R. Income and Psychological Distress: The Role of the Social Environment. *Stat. Can. Health Rep.* 2009, 20, 1–8.
- Fukuda, Y.; Hiyoshi, A. Influences of Income and Employment on Psychological Distress and Depression Treatment in Japanese Adults. *Environ. Health Prev. Med.* 2012, 17, 10–17. [CrossRef] [PubMed]
- 101. Schulz, R.; Sherwood, P.R. Physical and Mental Health Effects of Family Caregiving. AJN Am. J. Nurs. 2008, 108, 23–27. [CrossRef]
- Myer, L.; Stein, D.J.; Grimsrud, A.; Seedat, S.; Williams, D.R. Social Determinants of Psychological Distress in a Nationally-Representative Sample of South African Adults. *Soc. Sci. Med.* 2008, *66*, 1828–1840. [CrossRef]
- 103. Fone, D.; Dunstan, F.; Lloyd, K.; Williams, G.; Watkins, J.; Palmer, S. Does Social Cohesion Modify the Association between Area Income Deprivation and Mental Health? A Multilevel Analysis. *Int. J. Epidemiol.* 2007, *36*, 338–345. [CrossRef]
- Fone, D.; Dunstan, F.; John, A.; Lloyd, K. Associations between Common Mental Disorders and the Mental Illness Needs Index in Community Settings. Multilevel Analysis. Br. J. Psychiatry J. Ment. Sci. 2007, 191, 158–163. [CrossRef]
- 105. Rios, R.; Aiken, L.S.; Zautra, A.J. Neighborhood Contexts and the Mediating Role of Neighborhood Social Cohesion on Health and Psychological Distress among Hispanic and Non-Hispanic Residents. Ann. Behav. Med. 2012, 43, 50–61. [CrossRef]
- Lee, M.A. Neighborhood Residential Segregation and Mental Health: A Multilevel Analysis on Hispanic Americans in Chicago. Soc. Sci. Med. 2009, 68, 1975–1984. [CrossRef] [PubMed]
- 107. Corrêa, A.; Moreira-Almeida, A.; Menezes, P.; Vallada, H.; Scazufca, M. Investigating the Role Played by Social Support in the Association between Religiosity and Mental Health in Low Income Older Adults: Results from the São Paulo Ageing & Health Study (SPAH). *Rev. Bras. De Psiquiatr.* 2010, 33, 157–164.
- 108. Tsai, J.; Thompson, E. Impact of Social Discrimination, Job Concerns, and Social Support on Filipino Immigrant Worker Mental Health and Substance Use. *Am. J. Ind. Med.* **2013**, *56*, 1082–1094. [CrossRef] [PubMed]
- 109. Quinn, N.; Biggs, H. Creating Partnerships to Improve Community Mental Health and Well-Being in an Area of High Deprivation: Lessons from a Study with Highrise Flat Residents in East Glasgow. J. Public Ment. Health **2010**, *9*, 16–21. [CrossRef]
- Poblete, F.; Sapag, J.; Bossert, T. Capital Social y Salud Mental En Comunidades Urbanas de Nivel Socioeconómico Bajo, En Santiago, Chile. Nuevas Formas de Entender La Relación Comunidad-Salud. *Rev. Méd. Chile* 2008, 136, 230–239. [CrossRef]
- 111. Hamano, T.; Fujisawa, Y.; Ishida, Y.; Subramanian, S.V.; Kawachi, I.; Shiwaku, K. Social Capital and Mental Health in Japan: A Multilevel Analysis. PLoS ONE 2010, 5, e13214. [CrossRef]
- 112. Ferreira, P.L.; Noronha Ferreira, L.; Nobre Pereira, L. Medidas Sumário Física e Mental de Estado de Saúde Para a População Portuguesa. *Rev. Port. Saude Publica* 2012, 30, 163–171. [CrossRef]
- Ware, J.E., Jr.; Sherbourne, C.D. The MOS 36-Item Short-Form Health Survey (SF-36). I. Conceptual Framework and Item Selection. Med. Care 1992, 6, 473–483. [CrossRef]
- 114. Ware, J.E.; Snow, K.K.; Kosinski, M.; Gandek, B. SF-36 Health Survey Manual and Interpretation Guide; The Health Institute, New England Medical Center: Boston, UK, 1993; Volume 1, ISBN 1891810065.
- Partidário, M.R. Strategic Thinking for Sustainability in SEA. In *Handbook on Strategic Environmental Assessment;* Fischer, T., Gonzalez, A., Eds.; Edward Elgar Research Handbooks of Impact Assessment Series: Cheltenham, UK, 2021; pp. 41–57.
- 116. WHO; Calouste Gulbenkian Foundation. Social Determinants of Mental Health; WHO: Geneva, Switzerland, 2014.
- 117. Barton, H.; Thompson, S.; Burgess, S.; Grant, M. (Eds.) The Routledge Handbook of Planning for Health and Well-Being. In *Shaping a Sustainable and Healthy Future*; Routledge: Oxfordshire, UK, 2015.
- 118. Villeneau, L.; Morris, D.; Parkman, S.; Wolf, J.; McCulloch, A. *On Your Doorstep: Community Organisations and Mental Health;* Sainsbury: London, UK, 2001.
- Korkeila, J.; Lehtinen, V.; Bijl, R.; Dalgard, O.-S.; Kovess, V.; Morgan, A.; Salize, H.J. Review Article: Establishing a Set of Mental Health Indicators for Europe. *Scand. J. Public Health* 2003, *31*, 451–459. [CrossRef]
- Lahtinen, E.; Lehtinen, V.; Riikonen, E.; Ahonen, J. (Eds.) Framework for Promoting Mental Health in Europe; STAKES National Research and Development Center for Welfare and Health Ministery of Social Affairs and Health: Hamina, Finland, 1999; ISBN 951-33-0823-5.
- Parkinson, J. Establishing National Mental Health and Well-being Indicators for Scotland. J. Public Ment. Health 2006, 5, 42–48.
   [CrossRef]
- 122. Parkinson, J. Establishing a Core Set of National, Sustainable Mental Health Indicators for Adults in Scotland: Final Report.; NHS Health Scotland: Glasgow, Scotland, 2007.

- Orpana, H.; Vachon, J.; Dykxhoorn, J.; McRae, L.; Jayaraman, G. Monitoring Positive Mental Health and Its Determinants in Canada: The Development of the Positive Mental Health Surveillance Indicator Framework. *Health Promot. Chronic Dis. Prev. Can.* 2016, 36, 1–10. [CrossRef] [PubMed]
- 124. Hajrasoulih, A.; del Rio, V.; Francis, J.; Edmondson, J. Urban Form and Mental Wellbeing: Scoping a Theoretical Framework for Action. J. Urban Des. Ment. Health 2018, 5, 1–10.
- 125. King, J. Air Pollution, Mental Health, and Implications for Urban Design: A Review. J. Urban Des. Ment. Health 2018, 4, 1-6.
- 126. Baranyi, G. Neighbourhood Conditions and Mental Health: Time and Space over the Life Course; The University of Edinburgh: Edinburgh, Scotland, 2017.
- 127. Mair, C.; Diez Roux, A.V.; Galea, S. Are Neighbourhood Characteristics Associated with Depressive Symptoms? A Review of Evidence. J. Epidemiol. Community Health 2008, 62, 940–946. [PubMed]
- 128. McCormack, G.R.; Shiell, A. In Search of Causality: A Systematic Review of the Relationship between the Built Environment and Physical Activity among Adults. *Int. J. Behav. Nutr. Phys. Act.* **2011**, *8*, 1–11. [CrossRef]
- 129. Santana, P.; Santos, R.; Costa, C.; Roque, N.; Loureiro, A. Crime Impacts of Urban Design. TRIA 2010, 5, 39-48.
- 130. Baranyi, G.; Di Marco, M.H.; Russ, T.C.; Dibben, C.; Pearce, J. The Impact of Neighbourhood Crime on Mental Health: A Systematic Review and Meta-Analysis. *Soc. Sci. Med.* **2021**, *282*, 114106. [CrossRef]
- 131. Beyer, F.R.; Ker, K. Street Lighting for Preventing Road Traffic Injuries. Cochrane Database Syst. Rev. 2009, 21, 1–57. [CrossRef]
- Sugiyama, T.; Ward Thompson, C.; Alves, S. Associations between Neighborhood Open Space Attributes and Quality of Life for Older People in Britain. *Environ. Behav.* 2009, 41, 3–12. [CrossRef]
- 133. Annear, M.; Keeling, S.; Wilkinson, T.; Cushman, G.; Gidlow, B.; Hopkins, H. Environmental Influences on Healthy and Active Ageing: A Systematic Review. *Ageing Soc.* **2014**, *34*, 590–622. [CrossRef]
- Gascon, M.; Mas, M.T.; Martínez, D.; Dadvand, P.; Forns, J.; Plasència, A.; Nieuwenhuijsen, M.J. Mental Health Benefits of Long-Term Exposure to Residential Green and Blue Spaces: A Systematic Review. *Int. J. Environ. Res. Public Health* 2015, 12, 4354–4379. [CrossRef] [PubMed]
- Calogiuri, G.; Chroni, S. The Impact of the Natural Environment on the Promotion of Active Living: An Integrative Systematic Review. BMC Public Health 2014, 14, 1–27. [CrossRef] [PubMed]
- 136. Lee, A.C.K.; Maheswaran, R. The Health Benefits of Urban Green Spaces: A Review of the Evidence. *J. Public Health* 2011, 33, 212–222. [CrossRef] [PubMed]
- 137. Clark, C.; Myron, R.; Stansfeld, S.; Candy, B. A Systematic Review of the Evidence on the Effect of the Built and Physical Environment on Mental Health. *J. Public Ment. Health* **2007**, *6*, 14–27. [CrossRef]
- 138. Foster, S.; Giles-Corti, B.; Knuiman, M. Does Fear of Crime Discourage Walkers? A Social-Ecological Exploration of Fear As a Deterrent to Walking. *Environ. Behav.* 2014, 46, 698–717. [CrossRef]
- 139. Davison, K.K.; Lawson, C.T. Do Attributes in the Physical Environment Influence Children's Physical Activity? A Review of the Literature. *Int. J. Behav. Nutr. Phys. Act.* 2006, *3*, 19. [CrossRef]
- Dunton, G.F.; Kaplan, J.; Wolch, J.; Jerrett, M.; Reynolds, K.D. Physical Environmental Correlates of Childhood Obesity: A Systematic Review. Obes. Rev. 2009, 10, 393–402. [CrossRef]
- Hunter, R.F.; Christian, H.; Veitch, J.; Astell-Burt, T.; Hipp, J.A.; Schipperijn, J. The Impact of Interventions to Promote Physical Activity in Urban Green Space: A Systematic Review and Recommendations for Future Research. *Soc. Sci. Med.* 2015, 124, 246–256. [CrossRef]
- 142. Beard, J.R.; Petitot, C. Ageing and Urbanization: Can Cities Be Designed to Foster Active Ageing? *Public Health Rev.* 2010, 32, 427–450. [CrossRef]
- Francis, J.; Giles-Corti, B.; Wood, L.; Knuiman, M. Creating Sense of Community: The Role of Public Space. J. Environ. Psychol. 2012, 32, 401–409. [CrossRef]
- 144. Francis, J.; Wood, L.J.; Knuiman, M.; Giles-Corti, B. Quality or Quantity? Exploring the Relationship between Public Open Space Attributes and Mental Health in Perth, Western Australia. *Soc. Sci. Med.* **2012**, *74*, 1570–1577. [CrossRef] [PubMed]
- 145. Dadvand, P.; Nieuwenhuijsen, M.J. Urban Greenspace, Transportation, and Health. In *International Encyclopedia of Transportation*; Elsevier: Amsterdam, The Netherlands, 2021; pp. 327–334.
- 146. BC Centre for Disease Control. *Healthy Built Environment Linkages Toolkit: Making the Links between Design, Planning and Health, Version 2.0;* Provincial Health Services Authority: Vancouver, BC, Canada, 2018.
- 147. Koohsari, M.J.; Mavoa, S.; Villanueva, K.; Sugiyama, T.; Badland, H.; Kaczynski, A.T.; Owen, N.; Giles-Corti, B. Public Open Space, Physical Activity, Urban Design and Public Health: Concepts, Methods and Research Agenda. *Health Place* 2015, 33, 75–82. [CrossRef] [PubMed]
- 148. Pinto, A.; McGaw-Césaire, J.; Petrokofsky, C. Spatial Planning for Health: An Evidence Resource for Planning and Designing Healthier Places; Public Health England: London, UK, 2017.
- 149. Department of Health—UK Government. *Making It Happen:A Guide to Delivering Mental Health Promotion;* Department of Health-UK Government: London, UK, 2001.
- 150. Russell, H.; Killoran, A. Public Health and Regeneration: Making the Links; Health Education: London, UK, 2000; ISBN 0752118048.
- Vert, C.; Sánchez-Benavides, G.; Martínez, D.; Gotsens, X.; Gramunt, N.; Cirach, M.; Molinuevo, J.L.; Sunyer, J.; Nieuwenhuijsen, M.J.; Crous-Bou, M.; et al. Effect of Long-Term Exposure to Air Pollution on Anxiety and Depression in Adults: A Cross-Sectional Study. Int. J. Hyg. Environ. Health 2017, 220, 1074–1080. [CrossRef] [PubMed]

- 152. South, E.C.; Hohl, B.C.; Kondo, M.C.; MacDonald, J.M.; Branas, C.C. Effect of Greening Vacant Land on Mental Health of Community-Dwelling Adults. *JAMA Netw. Open* **2018**, *1*, e180298. [CrossRef]
- 153. Mair, C.; Diez Roux, A.V.; Morenoff, J.D. Neighborhood Stressors and Social Support as Predictors of Depressive Symptoms in the Chicago Community Adult Health Study. *Health Place* **2010**, *16*, 811–819. [CrossRef]
- 154. Garvin, E.; Branas, C.; Keddem, S.; Sellman, J.; Cannuscio, C. More Than Just An Eyesore: Local Insights And Solutions on Vacant Land And Urban Health. *J. Urban Health* **2013**, *90*, 412–426. [CrossRef]
- 155. Woodward, A.; Samet, J. Active Transport: Exercise Trumps Air Pollution, Almost Always. *Prev. Med.* 2016, *87*, 237–238. [CrossRef]
- 156. Elliott, I. Poverty and Mental Health: A Review to Inform the Joseph Rowntree Foundation's Anti-Poverty Strategy; Mental Health Foundation: London, UK, 2016.
- 157. Hyde, M.; Phillipson, C. How Can Lifelong Learning, Including Continuous Training within the Labour Market, Be Enabled and Who Will Pay for This? Looking Forward to 2025 and 2040 How Might This Evolve? Foresight, Government Office for Science: London, UK, 2015.
- 158. UNESCO Institute for Lifelong Learning. *Learning Cities and the SDGs: A Guide to Action;* UNESCO Institute for Lifelong Learning: Hamburgo, Germany, 2017.
- 159. Zajacova, A.; Lawrence, E.M. The Relationship Between Education and Health: Reducing Disparities Through a Contextual Approach. *Annu. Rev. Public Health* **2018**, *39*, 273–289. [CrossRef]
- 160. Motoyama, Y.; Wiens, J. *Guidelines for Local and State Governments to Promote Entrepreneurship*; Kauffman Foundation Research Series on City, Metro, and Regional Entrepreneurship: Kansas City, MO, USA, 2015.
- Srinivas, H. The Role of Local Governments in Fostering Business Partnerships for Environmental Sustainability. GDRC Res. Output 2016, E-076, 1–8.
- 162. Hatak, I.; Zhou, H. Health as Human Capital in Entrepreneurship: Individual, Extension, and Substitution Effects on Entrepreneurial Success. *Entrep. Theory Pract.* 2021, 45, 18–42. [CrossRef]
- 163. Leyden, K.M.; Goldberg, A.; Michelbach, P. Understanding the Pursuit of Happiness in Ten Major Cities. *Urban Aff. Rev.* 2011, 47, 861–888. [CrossRef]
- McCrea, R.; Shyy, T.K.; Stimson, R. What Is the Strength of the Link between Objective and Subjective Indicators of Urban Quality of Life? *Appl. Res. Qual. Life* 2006, 1, 79–96. [CrossRef]
- 165. Menec, V.H.; Brown, C.L.; Newall, N.E.G.; Nowicki, S. How Important Is Having Amenities Within Walking Distance to Middle-Aged and Older Adults, and Does the Perceived Importance Relate to Walking? J. Aging Health 2016, 28, 546–567. [CrossRef] [PubMed]
- 166. Fraser, S.D.S.; Lock, K. Cycling for Transport and Public Health: A Systematic Review of the Effect of the Environment on Cycling. *Eur. J. Public Health* 2011, 21, 738–743. [CrossRef] [PubMed]
- 167. Padeiro, M. Comparing Alternative Methods to Measuring Pedestrian Access to Community Pharmacies. *Health Serv. Outcomes Res. Methodol.* **2018**, *18*, 1–16. [CrossRef]
- 168. Levasseur, M.; Généreux, M.; Bruneau, J.F.; Vanasse, A.; Chabot, É.; Beaulac, C.; Bédard, M.M. Importance of Proximity to Resources, Social Support, Transportation and Neighborhood Security for Mobility and Social Participation in Older Adults: Results from a Scoping Study. *BMC Public Health* 2015, 15, 503. [CrossRef]
- 169. Giles-Corti, B.; Broomhall, M.H.; Knuiman, M.; Collins, C.; Douglas, K.; Ng, K.; Lange, A.; Donovan, R.J. Increasing Walking. *Am. J. Prev. Med.* 2005, *28*, 169–176. [CrossRef]
- 170. Giles-Corti, B.; Bull, F.; Knuiman, M.; McCormack, G.; Van Niel, K.; Timperio, A.; Christian, H.; Foster, S.; Divitini, M.; Middleton, N.; et al. The Influence of Urban Design on Neighbourhood Walking Following Residential Relocation: Longitudinal Results from the RESIDE Study. Soc. Sci. Med. 2013, 77, 20–30. [CrossRef]
- Koohsari, M.J.; Kaczynski, A.T.; Giles-Corti, B.; Karakiewicz, J.A. Effects of Access to Public Open Spaces on Walking: Is Proximity Enough? *Landsc. Urban Plan.* 2013, 117, 92–99. [CrossRef]
- Boulange, C.; Gunn, L.; Giles-Corti, B.; Mavoa, S.; Pettit, C.; Badland, H. Examining Associations between Urban Design Attributes and Transport Mode Choice for Walking, Cycling, Public Transport and Private Motor Vehicle Trips. *J. Transp. Health* 2017, 6, 155–166. [CrossRef]
- 173. Lee, K.; Fernandes, F.; Ng, M.; Reznikov, V.-E.; Poos, M. Urban Design and Mental Health in Toronto, Canada: A City Case Study. *J. Urban Des. Ment. Health* **2020**, *6*, 1–12.
- 174. Freeman, H. Mental Health and the Environment; Freeman, H., Ed.; Churchill Livingstone: London, UK, 1984.
- 175. Dalgard, O.S.; Tambs, K. Urban Environment and Mental Health. A Longitudinal Study. *Br. J. Psychiatry* **1997**, *171*, 530–536. [CrossRef] [PubMed]
- 176. Melis, G.; Gelormino, E.; Marra, G.; Ferracin, E.; Costa, G. The Effects of the Urban Built Environment on Mental Health: A Cohort Study in a Large Northern Italian City. *Int. J. Environ. Res. Public Health* **2015**, *12*, 14898–14915. [CrossRef]
- 177. Boyko, C.T.; Cooper, R. Density and Mental Wellbeing. In Wellbeing; John Wiley and Sons Ltd.: Hoboken, NJ, USA, 2014; pp. 1–22.
- 178. Harris-Roxas, B.; Simpson, S.; Harris, L. *Equity Focused Health Impact Assessment: A Literature Review*; Centre for Health Equity Training Research and Evaluation: Sidney, Australia, 2004.
- 179. Steptoe, A.; Di Gessa, G. Mental Health and Social Interactions of Older People with Physical Disabilities in England during the COVID-19 Pandemic: A Longitudinal Cohort Study. *Lancet Public Health* **2021**, *6*, e365–e373. [CrossRef]

- da Conceição, V.; Rothes, I.; Gusmão, R.; Barros, H. Depression and Anxiety before and during the COVID-19 Lockdown: A Longitudinal Cohort Study with University Students. *medRxiv* 2021. [CrossRef]
- Cherrie, M.; Curtis, S.; Baranyi, G.; Cunningham, N.; Dibben, C.; Bambra, C.; Pearce, J. A Data Linkage Study of the Effects of the Great Recession and Austerity on Antidepressant Prescription Usage. *Eur. J. Public Health* 2021, *31*, 297–303. [CrossRef]
- Torales, J.; O'Higgins, M.; Castaldelli-Maia, J.M.; Ventriglio, A. The Outbreak of COVID-19 Coronavirus and Its Impact on Global Mental Health. Int. J. Soc. Psychiatry 2020, 66, 317–320. [CrossRef]
- 183. Bert, F.; Scaioli, G.; Gualano, M.R.; Siliquini, R. How Can We Bring Public Health in All Policies? Strategies for Healthy Societies. *J. Public Health Res.* **2015**, *4*, 393. [CrossRef]
- 184. Partidario, M.R. Transforming the Capacity of Impact Assessment to Address Persistent Global Problems. *Impact Assess. Proj. Apprais.* **2020**, *38*, 146–150. [CrossRef]
- 185. Public Health England. Health Impact Assessment in Spatial Planning. In *A Guide for Local Authority Public Health and Planning Teams;* Public Health England: London, UK, 2020.
- Dunstan, F.; Fone, D.L.; Glickman, M.; Palmer, S. Objectively Measured Residential Environment and Self-Reported Health: A Multilevel Analysis of UK Census Data. *PLoS ONE* 2013, *8*, e69045. [CrossRef]
- 187. Rega, C.; Baldizzone, G. Public Participation in Strategic Environmental Assessment: A Practitioners' Perspective. *Environ. Impact Assess. Rev.* 2015, *50*, 105–115. [CrossRef]
- 188. Freitas, Â.; Rodrigues, T.C.; Santana, P. Assessing Urban Health Inequities through a Multidimensional and Participatory Framework: Evidence from the EURO-HEALTHY Project. J. Urban Health 2020, 97, 857–875. [CrossRef] [PubMed]
- Jokela, M. Are Neighborhood Health Associations Causal? A 10-Year Prospective Cohort Study With Repeated Measurements. *Am. J. Epidemiol.* 2014, 180, 776–784. [CrossRef] [PubMed]
- 190. McDaid, S.; Kousoulis, A. Tackling Social Inequalities to Reduce Mental Health Problems: How Everyone Can Flourish Equally; Mental Health Foundation: UK, 2020.