

◆ REVISÃO SISTEMÁTICA

**Life course circumstances and adversities for loneliness in later life: A systematic literature review**

Circunstâncias do curso de vida e adversidades para a solidão na vida adulta: Uma revisão sistemática da literatura

Circunstancias del curso de la vida y adversidades de la soledad en la vejez: Una revisión sistemática de la literatura

Helena Luz<sup>1</sup>, Isabel Miguel<sup>2</sup>

<sup>1</sup> Faculty of Psychology and Educational Sciences, University of Coimbra (Coimbra, Portugal) & Center of interdisciplinary Studies (CEIS20)

<sup>2</sup> Portucalense Institute of Human Development & Department of Psychology and Education - Portucalense University (Oporto, Portugal)

Corresponding Author: [isabelm@upt.pt](mailto:isabelm@upt.pt)

**Abstract:**

**Background:** The onset of loneliness in the later life context has been attributed to the occurrence of considerable changes in life circumstances that are particularly related to older age. Despite this, earlier life circumstances and adversities may have longer-term implications and exert influence on loneliness in later life.

**Methods:** A systematic literature review was performed aiming to provide an updated analysis of studies investigating the association between circumstances and adversities throughout the life course and loneliness in later life. Full database searches were conducted across electronic databases for articles published between 2010 and July 2019. The literature review followed the PRISMA guidelines for systematic reviews and the quality of studies was rated by means of QUALSYST tool.

**Results:** Nine studies were identified out of 863 retrieved by the systematic search. Studies included were longitudinal (7) and cross-sectional (2). The quality of studies has proven to be high (Quality scores from .77 to .91; mean: .84; median: .86). Later life loneliness has been investigated mainly at the individual and interpersonal levels. In childhood, only sociodemographic, social, and family relationship factors are investigated as influencing changes towards later life loneliness. Life adversities experienced during mid and later adulthood show more consistent associations between later life loneliness and sociodemographic, health, psychological conditions, living arrangements and social and family relationships.

**Conclusions:** This systematic review has revealed that literature offers scarce evidence on life stage circumstances and adversities regarding later life loneliness. The available evidence is mostly focused on life adversities experienced during later adulthood. An in-depth understanding about the changes faced by individuals for nearly a lifetime gains considerable prominence for designing strategies to prevent loneliness from becoming an increasingly painful or even a chronic experience.

**Keywords:** loneliness; childhood, mid-adulthood and later life circumstances and adversities; life course; systematic literature review

**Sumário:**

**Enquadramento:** O aparecimento da solidão na fase mais avançada da vida tem sido atribuído à ocorrência de alterações consideráveis nas circunstâncias da vida, particularmente relacionadas com a idade avançada. Apesar disso, as circunstâncias e adversidades da vida anterior podem ter implicações de longo prazo e exercer influência sobre a solidão na vida adulta.

**Método:** Foi realizada uma revisão sistemática da literatura com o objetivo de fornecer uma análise atualizada de estudos que investigam a associação entre circunstâncias e adversidades ao longo da vida e a solidão na vida adulta. Foram realizadas pesquisas em bases de dados eletrônicas para artigos publicados entre 2010 e julho de 2019. A revisão da literatura seguiu as diretrizes PRISMA para revisões sistemáticas e a qualidade dos estudos foi avaliada por meio da ferramenta QALSYST.

**Resultados:** Foram identificados nove estudos dos 863 recuperados pela pesquisa sistemática. Os estudos incluídos foram longitudinais (7) e transversais (2). A qualidade dos estudos mostrou-se alta (scores de qualidade de 0.77 a 0.91; média: 0.84; mediana: 0.86). A solidão na vida tardia tem sido investigada principalmente nos níveis individual e interpessoal. Na infância, apenas fatores sociodemográficos, sociais e de relacionamento familiar são investigados como influenciando as mudanças para a solidão na vida adulta. As adversidades da vida vividas durante a idade adulta média e tardia mostram associações mais consistentes entre a solidão na vida adulta e as condições sociodemográficas, de saúde, psicológicas, acontecimentos de vida e relações sociais e familiares.

**Conclusões:** Esta revisão sistemática revelou que a literatura oferece poucas evidências sobre as circunstâncias de vida e as adversidades em relação à solidão na vida adulta. A evidência disponível é principalmente focada nas adversidades da vida vividas durante a idade adulta. A compreensão aprofundada das mudanças enfrentadas pelos indivíduos ao longo de quase toda a vida ganha destaque considerável para a elaboração de estratégias para evitar que a solidão se torne uma experiência cada vez mais dolorosa ou mesmo crônica.

**Palavras-chave:** solidão; circunstâncias e adversidades da infância; idade adulta e idade avançada; curso de vida; revisão sistemática da literatura

**Highlights:**

- Loneliness can have a long stand path: once relying on circumstances and adversities experienced throughout life, it has a continuous influence on loneliness levels much later.
- Loneliness in old age is determined by multiple and heterogeneous factors over time, ranging from individual experiences – e.g., changes in marital relationship, economic problems, living arrangements –, to interpersonal factors – e.g., family and social relationships – affecting wellbeing in later life.
- There are proximal – e.g., loss of partner and health decrease – and distal factors – e.g., family relationships and economic vulnerability – influencing loneliness, from childhood well into old age.
- Improving conditions of live for children, maintaining affective bonds or value proximity relationships/affective proximity, and safeguarding the overall health of older people are strategies that might help preventing loneliness from becoming an increasingly painful or even a chronic experience.

## Introduction

The world is facing an aging population, with individuals aged 65 and older numbering over 730 million in 2019 (i.e., around 9% of the world population), projected

to double to 1.5 billion in 2050 (United Nations, 2019). Considering that such a large number of individuals has entered older adulthood, the examination of psychosocial determinants that may impact population's wellbeing is essential. One unique risk factor relating to older adults' wellbeing is loneliness, a deeply painful experience acknowledged as a prevalent phenomenon within the older adult population. For example, findings show severe levels of loneliness in Europeans aged 60–80, with rates of 30-55% for men and women in Eastern Europe reporting feelings of loneliness, and 10–20 % among their peers in Western and Northern Europe (Hansen & Slagsvold, 2016).

Several factors have been found to influence loneliness in later life. A vast literature examines the key risk factors associated with later-age loneliness, showing that loneliness is related to small networks, weak family ties, lack or loss of a partner (Cohen-Mansfield, Shmotkin, & Goldberg, 2009; Hansen & Slagsvold, 2015; Rote, Hill, & Ellison, 2012; Schnittger, Wherton, Prendergast, & Lawlor, 2012; Victor & Yang, 2012), having poor health and having a lower economic status (Fokkema, De Jong Gierveld, & Dykstra, 2012; Hansen & Slagsvold, 2015; Victor & Yang, 2012). Longitudinal studies of loneliness show similar associations to those found in cross-sectional ones. For example, life events and changes like loss of a partner, reduced social activities, increased physical disability, changes in subjective health, and more negative feelings (e.g., increased feelings of low mood, uselessness and nervousness) have shown to increase late-life loneliness (Aartsen & Jylhä, 2011; Dykstra, Van Tilburg, & De Jong Gierveld, 2005). However, most of these studies restrict to later-adulthood factors and changes associated with late-life loneliness.

It has been argued that experiences during earlier life stages could have a long-lasting impact on the lives of individuals (O'Flaherty, Baxter, Haynes, & Turrell, 2016). For example, research has shown that early social relationship adversities may launch chains of disadvantage in social relationships across the life course that have cumulative effects over time, with earlier experienced social relationships adversities enhancing the risk of later ones (Katz, Conway, Hammen, Brennan, & Najman, 2011; Umberson, Williams, Thomas, Liu, & Thomeer, 2014). A life course approach has therefore been proposed to examine the role of early, mid-life, and later events in understanding patterns of later life loneliness, providing a better understanding of the

longer-term implications of earlier life adversities (Ejlskov, Bøggild, Kuh, & Stafford, 2019). Building upon a life course approach to loneliness in later adulthood, some studies show that marital dissolution and losing a partner are predictors of subsequent loneliness (Dykstra & de Jong Gierveld, 2004). Also, enhanced or decreased risk of feeling lonely may derive from earlier experienced social relationship adversities, which interact with later life social relationship exposures (Cable, 2014).

Relying on a life course trajectory to loneliness in later adulthood, the present study intends to present a systematic literature review identifying studies that report on the association between circumstances and adversities throughout the life course and loneliness in later life, aiming to come up with a comprehensive analysis by investigating crucial literature.

## **Method**

### *Search strategy*

Full database searches of Web of Science, Scopus, EBSCOHost (SocINDEX with Full Text), EHSC (Emerald Health and Social Care eJournal Collection) and b-On (Complementary Index, Academic Search Complete, ScienceDirect, Business Source Complete, Science Citation Index) were handled between April and July 2019. Search terms were (loneliness) AND (ageing\* OR "elderly" OR "older adults" OR "seniors") AND (life course\* OR "trends" OR "transitions" OR "pathways").

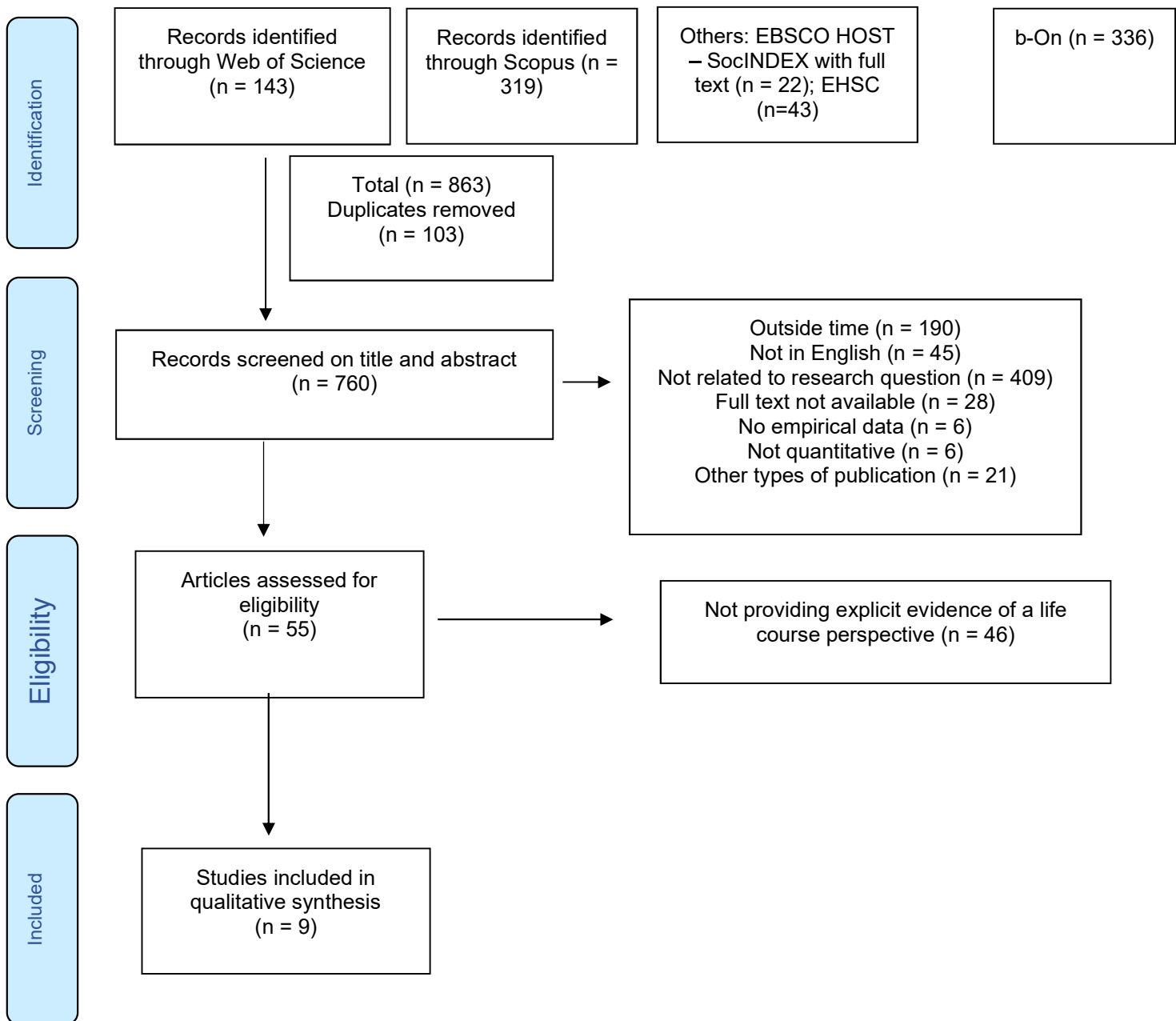
### *Selection of the studies*

To include studies in the review, searches were limited to full English language peer reviewed articles from 2010 to 2019, as the beginning of the 2<sup>nd</sup> decade of the 21<sup>st</sup> century showed an increase in the number of the aged in world developed and developing countries (UNDESA Population Division medium projection scenario 1950-2050, cited in UNFPA, 2012). Also, Reher and Requena (2018) developed an approach based on comparative data (2010–11), using micro census data from a large set of countries, showing highest levels of living alone in North American, European, and other developed countries. As living alone has proven to be a key risk factor to

loneliness in old age, the analysed period was chosen considering the expected increased research to understand the phenomenon of ageing, including the loneliness issue and potential studies focusing a life course perspective of later life loneliness. Therefore, a focus on studies which provided evidence of a life course perspective or a multi-timed retrospective assessment of the effect of life circumstances and adversities in later life loneliness were included in the systematic literature review.

The study selection process followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement guidelines (Moher, Liberati, Tetzlaff, & Altman, 2009), which is a detailed and well-described protocol consisting of an item checklist and a four-phase flow diagram, intended to facilitate the understanding and appraisal of review methods. Following the PRISMA statement, after a total of 863 results were retrieved, duplicate items (n = 103) were removed. Then, inclusion and exclusion criteria were applied, based on the date of publication (n = 190 articles excluded before 2010), language (n = 45 articles excluded because not in English), not being related to the research question (n = 409), availability of full text (n = 28 articles excluded because full text was not available), information provided (n = 6 articles excluded because no empirical data was presented), not being quantitative (n = 6), and type of publication (n = 21 publications excluded because other than published paper in peer-reviewed journals). The remaining 55 studies were retrieved in full and further examined. Of these, 46 studies were excluded due to not providing explicit evidence of a life course perspective. A total of nine original articles were identified for inclusion. Figure 1 illustrates the refinement of the literature search and identification of eligible sources for the review.

The two authors of this study screened all the 863 records, checking for consistency with the research goal. Also, both authors independently and systematically applied the exclusion criteria to the eligible records and were involved in the screening of the full text of articles. Disagreements with regards to the inclusion of articles were also discussed and resolved by both authors.



**Figure 1.** Flow diagram of study selection

*Data extraction*

A common template was considered to extract data from the included studies. Information regarding publication details – i.e., title of article, authors, publication year, study design, sample characteristics, country, cohort, measurement of loneliness, statistical methods, potential determinants investigated, and main results – were retained from each study. The two authors engaged in the article selection extracted data independently. Selected studies were submitted to a quality assessment to assure that the systematic review met a high-quality standard rather than using a threshold for including studies into the review.

### *Quality assessment*

This systematic review used the QUALSYST – Standard Quality Assessment Criteria for Evaluating Primary Research Papers from a Variety of Fields – quality assessment tool, developed by researchers from the Alberta Heritage Foundation for Medical Research (Kmet, Lee & Cook, 2004). This tool incorporates two scoring systems for quality assessment of both quantitative and qualitative research using any study design. For the assessment of quantitative studies, Qualsyst tool provides a checklist of 14 criteria which must be scored (yes =2; partial=1; no=0 and NA/not applicable). The Qualsyst score is obtained by summing the total score obtained of applicable criteria divided by the total possible scores of applicable criteria. A threshold of .75 has been defined as the lower cut-point for identifying high-quality studies and therefore followed by the authors. In this review, the two authors independently assessed the quality of each study following guidelines and instructions to calculate quality assessment scores. The overall quality scores resulted from inter-rater agreement and are presented in Table 1. Discrepancies between reviewers were resolved by discussion.

### *Data analysis*

Once included, the studies were analysed thematically to report the main findings from each study that was relevant to the research goal. The two authors read and integrated the results and constructed the thematic categories, following a content analysis methodology (Bardin, 2013), structured through phases of pre-analysis,

exploration of the material, and treatment and interpretation of results. Individual and interpersonal levels were identified, in which seven theoretical categories were included, concerning sociodemographic, health, psychological, behavioural, living arrangements, social relationships, and family relationships. This categorization allowed authors to synthesize the data of the nine studies.

## Results

All included studies ( $n = 9$ ) were quantitative, the majority of which was longitudinal ( $n = 7$ ), and two were cross-sectional studies. The sample range varied between 304 and 61,082 participants and included male and female participants. Participants of all studies were community dwelling (older) adults. The majority ( $n = 6$ ) of studies were conducted in European countries, namely Ireland ( $n = 1$ ), Norway ( $n = 1$ ), United Kingdom ( $n = 1$ ), Germany ( $n = 1$ ) and Sweden ( $n = 1$ ). One study involved several European countries. The remaining studies were conducted in the United States of America ( $n = 2$ ) and in Asia (Israel:  $n = 1$ ). An increase in publications was observed from 2014 onwards, with most studies ( $n = 6$ ) published between 2017 and 2019, which indicates a recent increase in a life course approach to later life loneliness, probably due to an increased availability of more (longitudinal) data. The overall quality scores of the included studies ranged from .77 to .91. Details and the investigated determinants to later life loneliness can be found in Table 1.



**Table 1: Quantitative studies investigating the life course circumstances and adversities for loneliness in later life**

Study	Method	Sample (N)	Country	Age (yrs)	cohort	Loneliness measure	Potential determinants investigated	Quality score
Böger and Huxhold (2018)	Longitudinal	Total sample: 11,010 Aged 64 and older: 8,650	Germany	Full sample range: 40-84 years <sup>1</sup>	Community-dwelling adults	Six-item De Jong Gierveld Loneliness Scale	Age; social integration (network size and social engagement); negative affect; physical health problems	.91
Carr, Kail, Matz-Costa, and Shavit (2018)	Longitudinal	5,882	USA	51-99	Community-dwelling adults from the Health and Retirement Study (HRS)	Three-item composite measure of loneliness located in the Leave Behind Questionnaire (LBQ) of the Health and Retirement Study (HRS)	Primary determinants: become widowed by Time 2 (compared to remaining continuously married); change in volunteer engagement  Controlled demographic factors: gender; race; years of education; wealth; and age  Controlled health factors: self-rated health; cognitive performance; depressive symptoms; activities of daily living (ADL); limitations; personality; social interaction; social support	.77
Ejlskov, Bøggild, Kuh, and Stafford (2019)	Longitudinal	2,453	England, Scotland and Wales	68	Community-dwelling older adults	Three-item short UCLA Loneliness Scale	Adverse social relationship experiences at 3 life stages: childhood (e.g., difficulties with other children in school; divorce of parents), mid-adulthood (e.g., number of divorces; lost contact with friend/relative; partners' illness) and later-adulthood (e.g., widowed; serious disagreement with children)  Social relationship variables at age 68 (frequency of contact with friends or relatives;	.82

Hawkey and Kocherginsky (2018)	Longitudinal	2,261	USA	57-85	Community-dwelling adults from the National Social Life, Health, and Aging Project - NSHAP	Validated three-item version of the UCLA Loneliness Scale	<p>quality of attachment to the participant's identified closest confidante; emotional support and negative aspects of the relationship between the participants and their closest confidante)</p> <p>Confounding variables: degree of extroversion and neuroticism measured at age 26; childhood social class measured by father's occupation; serious illness requiring hospitalization for 28 days or more until the age of 20 and gender</p>	.82
Kamiya, Doyle, Henretta, and Timonen (2014)	Cross-sectional	2,645	Ireland	65+	Community-dwelling adults from the first wave of the Irish Longitudinal Study on	Five-item modified version of the UCLA Loneliness Scale	<p>Structural factors: living arrangements; social roles (marital status; employment status); social network features (social network size; proportion kin; number of close relatives and friends); social activity (frequencies of socializing with close friends and relatives; group meeting attendance; church service attendance)</p> <p>Functional factors: health; social relationship quality</p> <p>Demographic variables: current marital status; age; current residential location</p> <p>Independent variables: - Early-life circumstances: childhood socioeconomic condition (father's social class, family's relative income level, and residential</p>	.86

Moreh, Jacobs, and Stessman (2010)	Longitudinal	2,848	Jerusalem	70-88	Ageing (TILDA)	Frequency of loneliness feelings (often or occasionally vs never)	location); childhood self-reported health; parental substance problem.  - Early-adult circumstances: educational attainment  - Later-life circumstances: later-life socioeconomic status (current income and home ownership); current health (self-reported health and instrumental activities of daily living); current ability to drive	.86
Nicolaisen and Thorsen (2014)	Longitudinal	Total sample: 3,750  Aged 60-80: 1,181	Norway	Total sample: 40-80 <sup>2</sup>	Community-dwelling adults from the Norwegian Panel Study on Life Course, Ageing and Generation - NorLAG	Single global question: 'Do you feel lonely?'	Demographic variables: gender; financial status; education; marital status  Fatigue; functional status; self-rated health; cognitive status; depression; chronic back or joint pain; global sleep satisfaction; major diseases; deterioration in functional status and health; body mass index; mortality  Demographic variables: age; partner status; educational level  Adverse life events during childhood (a conflictual relationship between the respondent's parents; having been bullied over a long time period; economic problems at home as a child); subjective health	.86

Nyqvist, Cattán, Conradsson, Näsman, and Gustafsson (2017)	Longitudinal	304	Sweden	85+	Community-dwelling adults from the Umeå85+ Gerontological Regional Database-study (GERDA)	Single global question: 'Do you ever feel lonely?'	Social resources: having children; living situation: having a good friend to talk to when needed; frequency of social contact  - Cognitive capacity; activities of daily living; depressive symptoms  - Sociodemographic characteristics: sex; age; type of region; years of education; type of residence; current living situation	.82
Zoutewelle, Terovan and Liefbroer (2018)	Cross-sectional	61,082	12 European countries	50-85	Community-dwelling adults	Six-item de Jong Gierveld-van Tilburg Loneliness Scale	Individual level predictors: - The "Never" Events: never living with partner and never parent - Off-Timed Events (early partnership; early parenthood; late partnership; late parenthood)  Control variables: age group; educational level; disrupted family before age 15; father's occupational level  Macrolevel moderators – countries' level of traditionalism and economic security	.86

<sup>1</sup> Full sample range is from 40 to 84 years old. However, specific results are reported per age group. Results considered for the purpose of this paper refer to participants aged 76 and older.

<sup>2</sup> Full sample range is from 40 to 80 years old. However, specific results are reported per age group. Results considered for the purpose of this paper refer to participants aged 60-80.

The content analysis of each article led to the identification of a structure of categories on the association between life course circumstances and adversities and later life loneliness. Table 2 provides a summary of correlates identified by the selected studies mapped onto two levels – individual and interpersonal – across the three investigated life stages (childhood, mid-adulthood, and later adulthood). For analysis purposes, the following age range were considered: childhood from birth to 17 years-old; mid-adulthood from 18 to 64 years-old; later adulthood from 65 onwards. These are discussed in detail below.

**Table 2. Mapping of the results of the nine quantitative studies: Life circumstances and adversities associated to later life loneliness, according to the life stage when these adversities were experienced**

LEVEL	CATEGORY	COVARIATE	CHILDHOOD	MID-ADULTHOOD	LATER ADULTHOOD			
Individual	Sociodemographi c		Changes in marital relationship					
				<i>Breakup of a relationship by divorce or separation</i>	Nicolaisen and Thorsen (2014) (+)	Kamiya et al. (2014) (+)		
					Carr et al. (2018) (+)	Nicolaisen and Thorsen (2014) (+)		
					Nicolaisen and Thorsen (2014) (+)	Kamiya et al. (2014) (+)		
				Economic problems		Kamiya et al. (2014) (+)		
						Nicolaisen and Thorsen (2014) (+)		
				Health	Decrease in self-rated physical health			Kamiya et al. (2014) (+)
								Nicolaisen and Thorsen (2014) (+)
								Nicolaisen and Thorsen (2014) (+)
					Functional limitations		Hawkey and Kocherginsky (2018) (+)	Hawkey and Kocherginsky (2018) (+)
		Kamiya et al. (2014) (+)						
		Moreh et al. (2010) (+)						
	Cognitive impairment			Nyqvist et al. (2017) (+)				
				Böger and Huxhold (2018) (+)				
				Nyqvist et al. (2017) (+)				
Behavioural	Volunteer engagement		Carr et al. (2018) (-)	Carr et al. (2018) (-)				

Living arrangements		
Interpersonal	Changes in living arrangements	Nyqvist et al. (2017) (+)
Social relationships	Small social network	Böger and Huxhold (2018) (+)
	Low social activity	Böger and Huxhold (2018) (-) Hawkey and Kocherginsky (2018) Hawkey and Kocherginsky (2018) (+)
	Low frequent contact with friends	Ejlskov et al. (2019) (+)
	Strain with friendships	Hawkey and Kocherginsky (2018) (+)
	Social isolation	Nyqvist et al. (2017) (+)
	High social relationship adversities	Ejlskov et al. (2019) (+)
	Having been bullied over a lengthy period	Nicolaisen and Thorsen (2014) (+)
Family relationships	Family support	Hawkey and Kocherginsky (2018) (-) Hawkey and Kocherginsky (2018) (+)
	Family strain	Hawkey and Kocherginsky (2018) (+)
	Conflicts between parents	Nicolaisen and Thorsen (2014) (+)
	Parental substance abuse	Kamiya et al. (2014) (+)
	Non-events ( <i>never partnering and childlessness</i> )	Zoutewelle-Terovan and Liefbroer (2018) (+)
	Off-timed events ( <i>early or late partnering: late parenthood</i> )	Zoutewelle-Terovan and Liefbroer (2018) (+)

(+) Positive association with later life loneliness; (-) Negative association with later life loneliness

### ***Circumstances and adversities faced in childhood***

Some childhood circumstances and adversities were identified as influencing the onset of old age loneliness. At the individual level, sociodemographic context experienced during childhood emerged as a factor influencing loneliness in old age. More specifically, two studies reported on the influence of economic issues during childhood in later life loneliness, showing that the experience of economic problems in early life was related mainly with women's loneliness in late age (Nicolaisen & Thorsen, 2014) and that growing up in relative poverty in childhood had direct effects on loneliness at later ages, for both men and women (Kamiya, Doyle, Henretta, & Timonen, 2014).

Considering the interpersonal level, social and family relationships were both categories where childhood circumstances and adversities appeared related to loneliness in old age. In particular, one study distinguished the fact that a high number of problematic social relationships, which means a greater exposure to social relationship adversities experienced at earlier life stages – i.e., difficulties with other children in school, tending to be ignored in school, unable to make friends, divorce of parents – have a cumulative effect on loneliness in later life stages, suggesting that these earlier relationships produce a strong negative impact on loneliness (Ejlskov et al., 2019). Having been bullied over a lengthy period in childhood was additionally related with loneliness in oldest age, especially for men (Nicolaisen & Thorsen, 2014). Literature also reports that conflicts in the relationships between child's parents (Nicolaisen & Thorsen, 2014) or parents' substance abuse (Kamiya et al., 2014) were events associated with the experience of loneliness.

### ***Circumstances and adversities faced in mid-adulthood***

Mid-adulthood represents a life stage when major circumstances can contribute to the occurrence of loneliness on late adulthood. At the individual level, changes in marital relationships emerged from studies concerning adversities faced in mid-adulthood for older adults' loneliness. One study reported that breakup of a relationship by divorce or separation influences loneliness, namely older adults who divorced in



their mid-adulthood commonly report greater loneliness in older age, particularly women (Nicolaisen & Thorsen, 2014). As it was emphasized by this study, considering different life stages, divorce strikes more often in midlife and it is a pathway to loneliness in more advanced ages.

Furthermore, two studies have mentioned the link between partner's death in mid-adulthood and loneliness in old age, showing that losing a partner by death was an important incident leading to loneliness, more prevalent among women (Nicolaisen & Thorsen, 2014). As the death of a spouse represents a singular type of loss, volunteering – a behavioral correlate also associated to later life loneliness – has also been identified as a path to attenuate loneliness, especially when starting to volunteer two or more hours per week (Carr, Kail, Matz-Costa, & Shavit, 2018).

The influence of health factors emerged in one study, suggesting a relationship between poor reported physical health and feelings of loneliness, as well as the association between functional limitations (limited activity domains) and increased loneliness in old age (Hawkey & Kocherginsky, 2018). On the other hand, one study identified a psychological determinant of later life loneliness, suggesting, although, that variations in negative affect (NA) seems to be less important in determining changes in levels of loneliness as people get older (Böger & Huxhold, 2018). Mainly, this study emphasizes that the absence of connectedness to a large social network has more negative impacts for middle-aged adults when compared to older adults, as NA displays a linear decrease across time.

Four studies considered interpersonal factors. More specifically, a risk factor for loneliness in old age is related to small social networks (Böger & Huxhold, 2018) and low participation in social activities (Hawkey & Kocherginsky, 2018). Also, a high number of social relationship adversities experienced in mid-adulthood – e.g., death of friend or relatives, serious accident or illness of a family member or partner – are associated to feelings of increased loneliness in old age (Ejlskov et al., 2019). Besides, research has emphasized that low family support and social strain from different sources – e.g., friends and family – intensified loneliness (Hawkey & Kocherginsky, 2018), suggesting, in parallel, that complex and late entry into parenthood, associated with other non-normative family transitions such as childlessness or postponement of

partnership, appear to be more strongly related to later life loneliness (Zoutewelle-Terovan & Liefbroer, 2018).

### ***Circumstances and adversities faced in later adulthood***

Most of the studies analyzed the impact of late life experiences and adversities in perceived loneliness amongst old adults. Although loneliness can be present at any life stage, several specific old-age related events lead to feelings of loneliness only beginning to be experienced in the most advanced life stage.

Considering the individual level, changes in marital relationships are issues leading to loneliness amongst the elderly, whether it being due to breakup of a relationship – although divorce is less common for older age groups – (Kamiya et al., 2014; Nicolaisen & Thorsen, 2014), or due to partner's death (Carr et al., 2018; Kamiya et al., 2014; Nicolaisen & Thorsen, 2014). Negative health emerged as one of the most prominent antecedents of loneliness, as described in five studies. More specifically, poor self-rated health (Hawkey & Kocherginsky, 2018; Kamiya et al., 2014; Nicolaisen & Thorsen, 2014), functional limitations in daily activities (Hawkey & Kocherginsky, 2018; Kamiya et al., 2014), the presence of fatigue (Moreh, Jacobs, & Stessman, 2010) and cognitive impairments have shown to be associated to greater levels of experienced loneliness (Nyqvistet, Cattan, Conradsson, Näsman, & Gustafsson, 2017). Psychological correlates related to negative affect and depressive symptoms also appear as predictors of loneliness in old age (Böger & Huxhold, 2018; Nyqvistet et al., 2017), and behavioral changes concerning volunteering has been identified by one study revealing that high volunteer involvement is a factor that attenuates later life loneliness (Carr et al., 2018). Finally, one study argues that oldest adults experiencing changes in living arrangements – i.e., institutional care (Nyqvistet et al., 2017) – are more prone to experience loneliness. This study observed that there was a trend in changing living arrangements over the study periods, showing that living in institutional settings is a key risk factor for experiencing loneliness.

As in mid-adulthood, the quantity and quality of social relationships emerge also in this life stage as a key finding for explaining loneliness in later adulthood, as sustained by four studies. Two studies report that small social networks and reduced

social engagement are found to predict higher levels of loneliness (Böger & Huxhold, 2018; Hawkley & Kocherginsky, 2018). Low frequent contact with friends, social isolation and strain with friendships are also associated with increased levels of loneliness (Ejlskov et al., 2019; Hawkley & Kocherginsky, 2018; Nyqvist et al., 2017). Poor relationship quality also results in increased levels of loneliness, especially those associated to low family support and family strain (Hawkley & Kocherginsky, 2018). Lastly, one study also shows that loneliness was stronger for those who have more social relationship adversities – e.g., serious disagreement with partner or other close family members, loss of contact with friends or relatives – especially in later adulthood (Ejlskov et al., 2019).

## Discussion

Loneliness has been considered a major social problem in modern society and is often perceived as particularly associated with old age. Because loneliness is linked to adverse outcomes that may be preventable or modifiable if its causes are understood, the analysis of who is affected by loneliness, and why, is of crucial importance. Building on a life course perspective, the present study aimed at collecting, organizing, and analyzing research about loneliness in old age, considering life course circumstances and adversities – lived in childhood, mid-adulthood and later adulthood – that might influence the experience of loneliness in old age. To this end, nine studies were included, out of 863, from 2010 to 2019. To the authors' knowledge, this is the first systematic literature review to explore such a perspective.

A content analysis was performed in all retained articles, according to the experienced adversities in three life stages – childhood, mid-adulthood, and later adulthood –, considered at the individual and interpersonal levels. Evidence suggests that in childhood socio-demographic context and social and family relationships are the main factors related to loneliness in old age. A small number of studies examined childhood socio-demographic factors associated to loneliness in old age. Scholars have proposed that family economic status in childhood may be consequential for late-life loneliness through the impact of early-life events (Deary et al., 2005). Such experience might be detrimental to self-esteem and self-efficacy, give rise to feelings

of powerlessness (De Jong Gierveld, 1998), or predispose individuals to later life financial, health, and social circumstances, which in turn can have long-lasting effects on loneliness, either directly or indirectly (Kamiya et al., 2014).

Findings stress in addition that a high number of social relationship adversities, bullying, the influence of conflicts between parents and parental substance abuse appeared as factors contributing to a higher risk of loneliness in old age. These results also support previous research suggesting that a greater exposure to social relationship adversities experienced in early life stages – either considering quantity and quality aspects – continue to influence loneliness levels much later in life (Ejlskov et al., 2019; Nurius, Green, Logan-Greene, & Borja, 2015). At the same time and as it has been suggested, when it comes to influences of early life events on loneliness, non-optimal relationships between children and their attachment figures – e.g., parents and peers – may translate into a failure to sustain a sense of security and reduce resilience in coping with stressful life events, constraining the experience of intimate relationships which might enhance the feeling of loneliness in later life (Mikulincer & Shaver, 2012; Savla et al., 2013).

A larger number of studies examined the influence of mid-adulthood adversities to loneliness in later life. Overall, the review found that the influence of family and social relationships in old age loneliness is a more prevalent investigated factor, showing that the context of life circumstances related to transitions – e.g., ending relationships by divorce or by death of a partner – may be especially salient for explaining feelings of grief, loss and loneliness (Merz & De Jong Gierveld, 2016). Results are in line with previous findings pointing out that mid-adulthood support from partner and friends is significantly related to lower levels of loneliness (Stevens & Westerhof, 2006), and that satisfying partnerships protect individuals from loneliness (De Jong Gierveld, Van Groenou, Hoogendoorn, & Smit, 2009). Other family and social transitions have shown to have long term consequences for late life loneliness, with research showing the negative impacts for later life loneliness of mid-adulthood low family support, reduced social networks, and non-normative transitions. Also, the present review underlines that socio-demographic context, reported decrease in physical health and functional limitations have been associated with loneliness, as similar to previous research showing loneliness as consequence of both mid-adulthood situational (Clark, Glick, &

Bures, 2009; Victor, Burholt, & Martin, 2012) and individual level factors (Aartsen & Jylhä, 2011; Ward, Mathias, & Hitchings, 2007).

As mentioned before, later life circumstances and life course adversities, like loss of partner, reduced social activities or deteriorated health, are likely to impact on feelings of loneliness (Aartsen & Jylhä, 2011; Dykstra et al. 2005; Heikkinen & Kauppinen, 2011). Our results parallel these findings, by highlighting the role of the quality and quantity of later life family ties and social relationships in shaping loneliness. Also, sociodemographic characteristics have been found to be important in understanding loneliness. Further, transitions in living arrangements have been mentioned as factors affecting wellbeing and the prevalence of loneliness in later life (Agren & BerenSSon, 2006; Gray & Worlledge, 2018).

The evidence presented, even if only revealed by nine studies, seems trustworthy as it comes from studies generally scored as having robust or superior quality (Kmet et al., 2004). Indeed, the median quality score was .86 and the score quality mean was .84 (standard deviation: .04). Constraints in some studies were found in the way they described the study objective and/or reported some estimate of variance and/or controlled for potential confounders. These features did not appear to be determining characteristics of quality as all articles included well described the study design and the method, used appropriate samples and validated instruments as well as analytic methodologies, and reported results in sufficient detail, providing generally focused analysis in loneliness as a derivative of circumstances experienced throughout life.

Transversely, life course gathers dynamics that are meaningful for understanding loneliness in old age which is, from the contents analyzed, multicausal and anchored in personal experience, both at the individual and interpersonal levels, as other studies have pointed out (e.g., Tiilikainen & Seppänen, 2017).

### ***Implications for research and practice***

The current literature review reveals that academia is producing results concerning the life course onset of later life loneliness especially in the European

context (66.6%). This empirical achievement may reflect a major concern of most European countries – the “grey continent” – dealing with strong population ageing. However, it should not be assumed that life course circumstances exert the same effect on later life loneliness across the wide range of sampled countries. As social norms and values tend to differ between cultures (De Jong Gierveld & Tesch-Römer, 2012), for future studies it should be interesting to address whether the relationships between life course adversities and later life loneliness are moderated by such characteristics.

Given that loneliness is a strong predictor of low quality of life for the aged (Dahlberg & McKee, 2014; Musich, Wang, Hawkins, & Yeh, 2015) and has negative consequences in multiple life-domains, such issue should become of central concern for policy agenda. Implications for practice include developing strategies in tackling the growing challenges arising from loneliness in ageing populations. However, to develop effective interventions, the theorizing behind the relationships between life course adversities and later life loneliness needs to be more explicit. Although the present systematic literature review has offered some insight on such a relationship, a deeper understanding of the link between the individual and the interpersonal levels and later life loneliness can provide a generalizable framework to inform the delivery of multimodal intervention strategies. For example, a systematic review of interventions to alleviate loneliness identified four primary strategies that are generally adopted: *i*) improving social skills, *ii*) enhancing social support, *iii*) increasing opportunities for social interaction, and *iv*) addressing maladaptive social cognition (Masi, Chen, Hawkey, & Cacioppo, 2011).

Regarding studies of the present review, strategies relying on *a*) improving conditions of live for children – knowledge coming from *childhood life stage*- ; *b*) maintaining affective bonds or value proximity relationships/affective proximity – knowledge coming from *mid-adulthood life stage*, and *c*) safeguarding the health of older people as well as their connections and /or social activities – knowledge coming from *older adulthood life stage* –, are predictors of more successful aging, preventing loneliness from becoming an increasingly painful or even chronic experience. So, in the long term, considering life course-based research, integrating theoretical approaches at the individual and interpersonal levels, could inform interventions

tailored to meet the multifactorial causes of loneliness and its embeddedness in specific life stages.

### **Strengths and limitations**

The present study has two main strengths. First, it provides a comprehensive analysis on changes over time influencing later life loneliness, as most of the information comes from longitudinal studies with only two quantitative cross-sectional studies. The first and the latter rely on a life course approach, providing an examination on early and later life circumstances or transitions on loneliness among older people (Kamiya et al., 2014; Zoutewelle-Terovan & Liefbroer, 2018). Even when retrospective reports were considered, such an interpretative regard has allowed to discuss loneliness as a dynamic process, instead of facing its determinants or its actual static dimension. Second, it benefits from recognized protocols, either for data selection (PRISMA statement), either for the quality assessment of nine quantitative studies of this review (QUALSYST tool), which could be useful to encourage further research in systematic review methodology, as well as for retaining this research as trustful for initiating research dealing with the challenge of understanding loneliness as associated with the “path of life”.

However, it also has a few limitations. Whilst the research strategy was comprehensive, it did not include qualitative studies which, due to its intensive and deepening characteristics, could have provided more individual and/or context-specific circumstances leading to loneliness. On the other hand, since only studies which provided evidence of a life course perspective were considered, the present study only retained a limited number of nine studies converging with the main purpose of this systematic review. Even if loneliness is a major social problem in advanced societies, it is commonly understood as associated only to later life circumstances, lacking a connection with early life factors which might cause its experience. The range of participants' age in the included studies is also worth noting. Although the focus of the present study was on old age, some studies included participants as young as in their 40s (e.g., Nicolaisen & Thorsen, 2014) to explain loneliness in later life. Such sample heterogeneity turns it difficult to make quantitative and analytic synthesis, even if they report specific data for age groups. Lastly, the systematic review included studies

which did not directly examine loneliness as its central focus, but which were included since they establish connections between loneliness and other variables.

## Conclusion

Given the increasing ageing population of developed societies and the anticipated enhanced risk of loneliness in later life, it is important to investigate the life paths which increase the probability of later life loneliness. A life course perspective was taken as a standpoint to develop the present systematic literature review, focusing on circumstances and adversities that over time conduct to later life loneliness. This systematic review has revealed that literature offers scarce evidence on life stage adversities regarding later life loneliness, once the available evidence is mostly focused on life adversities experienced during later adulthood. Nevertheless, this study extends the current knowledge on how earlier, mid-life and later life impacting experiences influence the prevalence of loneliness in old age. A key finding of the present study is that it provides a comprehensive perspective of loneliness as it highlights that loneliness can have a long stand path, relying on circumstances and adversities experienced throughout life which might have a continuous influence on loneliness levels much later.

Above all, loneliness is determined by multiple and heterogeneous factors over time, ranging from individual experiences – e.g., transitions in marital relationships, economic problems/deprivation, transitions in living arrangements –, to interpersonal factors – e.g., strain with friendships or family – affecting wellbeing in later life. In fact, loneliness is mainly a personal experience informed by live circumstances, inducing intensive changes that across time interact with individuals' feeling of loneliness in later life. This research might contribute to enlarge debate on the complex interplay amongst proximal and distal factors influencing loneliness, from childhood well into old age, which might inform policies and related actors on how to deal with elders experiencing loneliness. From content analysis one can suggest that, improving conditions of live for children, maintaining affective bonds or value proximity relationships/affective proximity, and safeguarding the overall health of older people could be strategies that might prevent loneliness from becoming an increasingly painful or even a chronic



experience. So, an in-depth understanding about the changes faced by individuals for nearly a lifetime gains considerable prominence for designing policies and innovative programs, as well as for guiding care professionals and practitioners in successful individualized interventions (e.g., assessment care plans to prevent loneliness).

## References

- Aartsen, M., & Jylhä, M. (2011). Onset of loneliness in older adults: Results of a 28-year prospective study. *European Journal of Ageing*, 8(1), 31–38. <https://doi.org/10.1007/s10433-011-0175-7>
- Agren, G., & BerenSSon, K. (2006). *Healthy ageing: A challenge for Europe*. Östersund: Swedish National Institute of Public Health Research.
- Bardin, L. (2013). *L'analyse de contenu [Content analysis]*. Paris: Presses Universitaires de France.
- Böger, A., & Huxhold, O. (2018). Do the antecedents and consequences of loneliness change from middle adulthood into old age? *Developmental Psychology*, 54(1), 181–197. <https://doi.org/10.1037/dev0000453>
- Carr, D.C., Kail, B.L., Matz-Costa, C., & Shavit, Y.Z. (2018). Does becoming a volunteer attenuate loneliness among recently widowed older adults? *Journals of Gerontology*, 73(3), 501–510. <https://doi.org/10.1093/geronb/gbx092>
- Cable, N. (2014). Life course approach in social epidemiology: An overview, application and future implications. *Journal of Epidemiology* 24, 347–352. <https://doi.org/10.2188/jea.je20140045>
- Clark, R. L., Glick, J. E., & Bures, R. M. (2009). Immigrant families over the life course: Research directions and needs. *Journal of Family Issues*, 30(6), 852-872. <https://doi.org/10.1177/0192513X09332162>

- Cohen-Mansfield, J., Shmotkin, D., & Goldberg, S. (2009). Loneliness in old age: Longitudinal changes and their determinants in an Israeli sample. *International Psychogeriatrics*, 21(6), 1160–1170. <https://doi.org/10.1017/S1041610209990974>
- Dahlberg, L., & McKee, K. J. (2014). Correlates of social and emotional loneliness in older people: Evidence from an English community study. *Aging & Mental Health*, 18, 504-514. <https://doi.org/10.1080/13607863.2013.856863>
- Deary, I. J., Taylor, M. D., Hart, M. D., Wilson, V., Davey Smith, G., Blane, D., & Starr, J.M. (2005). Intergenerational social mobility and mid-life status attainment: Influences of childhood intelligence, childhood social factors, and education. *Intelligence*, 33, 454–472. <https://doi.org/10.1016/j.intell.2005.06.003>
- De Jong Gierveld, J. (1998). A review of loneliness: Concepts and definitions, causes and consequences. *Reviews in Clinical Gerontology*, 8, 73–80. <https://doi.org/10.1016/j.intell.2005.06.003>
- De Jong Gierveld, J., Van Groenou, M.B., Hoogendoorn, A. W., & Smit, J. H. (2009). Quality of marriages in later life and emotional and social loneliness. *Journals of Gerontology: Social Sciences*, 64B(4), 497–506. <https://doi.org/10.1093/geronb/gbn043>
- De Jong Gierveld, J., & Tesch-Römer, C. (2012). Loneliness in old age in Eastern and Western European societies: Theoretical perspectives. *European Journal of Ageing*, 9, 285–295. <https://doi.org/10.1007/s10433-012-0248-2>
- Dykstra, P. A., & de Jong Gierveld, J. (2004). Gender and marital-history differences in emotional and social loneliness among Dutch older adults. *Canadian Journal on Aging/La Revue Canadienne du Vieillessement* 23, 141–155. <https://doi.org/10.1353/cja.2004.0018>
- Dykstra, P.A., Van Tilburg, T., & De Jong Gierveld, J. (2005). Changes in older adults' loneliness: Results from a seven-year longitudinal study. *Research on Aging*, 27(6), 725–747. <https://doi.org/10.1177/0164027505279712>
- Ejlskov, L., Bøggild, H., Kuh, D., & Stafford, M. (2019). Social relationship adversities throughout the lifecourse and risk of loneliness in later life. *Ageing & Society*, 1–17. <https://doi.org/10.1017/S0144686X19000345>

- Fokkema, T., De Jong Gierveld, J., & Dykstra, P.A. (2012). Cross-national differences in older adult loneliness. *Journal of Psychology*, 146(1–2), 201–228. <https://doi.org/10.1080/00223980.2011.631612>
- Gray, A., & Worlledge, G. (2018). Addressing loneliness and isolation in retirement housing. *Ageing and Society*, 38(3), 615–644. <https://doi.org/10.1017/S0144686X16001239>
- Hansen, T., & Slagsvold, B. (2016). Late-Life loneliness in 11 European countries: Results from the Generations and Gender Survey. *Social Indicators Research*, 129, 445–464. <https://doi.org/10.1007/s11205-015-1111-6>
- Hawkley, L. C., & Kocherginsky, M. (2018). Transitions in loneliness among older adults: A 5-year Follow-Up in the National Social Life, Health, and Aging Project. *Research on Aging*, 40(4), 365–387. <https://doi.org/10.1177/0164027517698965>
- Heikkinen, R.-L., & Kauppinen, M. (2011). Mental well-being: A 16-year follow-up among older residents in Jyvaskyla. *Archives of Gerontology and Geriatrics*, 52(1), 33–39. <https://doi.org/10.1016/j.archger.2010.01.017>
- Kamiya, Y., Doyle, M., Henretta, J. C., & Timonen, V. (2014). Earlylife circumstances and later-life loneliness in Ireland. *The Gerontologist*, 54(5), 773–783. <https://doi.org/10.1093/geront/gnt097>
- Katz, S. J., Conway, C.C., Hammen, C. L., Brennan, P. A., & Najman J. M. (2011). Childhood social withdrawal, interpersonal impairment, and young adult depression: A mediational model. *Journal of Abnormal Child Psychology* 39, 1227–1238. <https://doi.org/10.1007/s10802-011-9537-z>
- Kmet, L., Lee, R., & Cook, L. (2004). Standard quality assessment criteria for evaluating primary research papers for a variety of fields. Available at: <https://era.library.ualberta.ca/items/48b9b989-c221-4df6-9e35-af782082280e> Retrieved 07 September 2019.
- Masi, C. M., Chen, H. Y., Hawkley, L. C., & Cacioppo, J. T. (2011). A meta-analysis of interventions to reduce loneliness. *Personality and Social Psychology Review*, 15(3), 219–266. <https://doi.org/10.1177/1088868310377394>

- Merz, E., & De Jong Gierveld, J. (2016). Childhood memories, family ties, sibling support and loneliness in ever-widowed older adults: Quantitative and qualitative results. *Ageing and Society*, 36(3), 534-561. <https://doi.org/10.1017/S0144686X14001329>
- Mikulincer, M., & Shaver, P.R. (2012). An attachment perspective on psychopathology. *World Psychiatry*, 11(1), 11–15. <https://doi.org/10.1016/j.wpsyc.2012.01.003>
- Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). The PRISMA Group. Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Med*, 6(7), 332–339. <https://doi.org/10.1371/journal.pmed.1000097>.
- Moreh, E., Jacobs J. M., & Stessman, J. (2010). Fatigue, function, and mortality in older adults. *Journals of Gerontology - Series A - Biological Sciences and Medical Sciences*, 65(8), 887–895. <https://doi.org/10.1093/gerona/glq064>
- Musich, S., Wang, S. S., Hawkins, K., & Yeh, C. S. (2015). The impact of loneliness on quality of life and patient satisfaction among older, sicker adults. *Gerontology & Geriatric Medicine*, 1, 2333721415582119. <https://doi.org/10.1177/2333721415582119>
- Nicolaisen, M., & Thorsen, K. (2014). Loneliness among men and women: A five-year follow-up study. *Aging & Mental Health*, 18(2), 194-206. <https://doi.org/10.1080/13607863.2013.821457>
- Nurius, P. S., Green, S., Logan-Greene, P., & Borja, S. (2015). Life course pathways of adverse childhood experiences toward adult psychological well-being: A stress process analysis. *Child Abuse and Neglect* 45, 143–153. <https://doi.org/10.1016/j.chiabu.2015.03.008>
- Nyqvist, F., Cattan, M., Conradsson, M., Näsman, M., & Gustafsson, Y. (2017). Prevalence of loneliness over ten years among the oldest old. *Scandinavian Journal of Public Health*, 45(4), 411–418. <https://doi.org/10.1177/1403494817697511>
- O’Flaherty, M., Baxter, J., Haynes, M., & Turrell, G. (2016). The family life course and health: Partnership, fertility histories, and later-life physical health trajectories in Australia. *Demography*, 53, 777–804. <https://doi.org/10.1007/s13524-016-0478-6>

- Reher, D., & Requena, M. (2018). Living Alone in Later Life: A Global Perspective. *Population and Development Review*, 44(3), 427–454. <https://doi.org/10.1111/padr.1214910.1111/padr.12149>
- Rote, S., Hill, T. D., & Ellison, C. G. (2012). Religious attendance and loneliness in later life. *The Gerontologist*, 53, 39–50. <https://doi.org/10.1111/padr.1214910.1093/geront/gns063>
- Savla, J.T., Roberto, K.A., Jaramillo-Sierra, A.L., Gambrel, L.E., Karimi, H., & Butner, L.M. (2013). Childhood abuse affects emotional closeness with family in mid- and later life. *Child Abuse & Neglect*, 28, 1–12. <https://doi.org/10.1016/j.chiabu.2012.12.009>
- Schnittger, R.I.B., Wherton, J., Prendergast, D., & Lawlor, B.A. (2012). Risk factors and mediating pathways of loneliness and social support in community-dwelling older adults. *Aging & Mental Health*, 16(3), 335–346. <https://doi.org/10.1080/13607863.2011.629092>
- Stevens, N., & Westerhof, G. J. (2006). Partners and others: Social provisions and loneliness among married Dutch men and women in the second half of life. *Journal of Social and Personal Relationships*, 23, 921–941. <https://doi.org/10.1177/0265407506070474>
- Tiilikainen, E., & Seppänen, M. (2017). Lost and unfulfilled relationships behind emotional loneliness in old age. *Ageing and Society*, 37(5), 1068-1088. <https://doi.org/10.1017/S0144686X16000040>
- Umberson, D., Williams, K., Thomas, P. A., Liu, H., & Thomeer, M. B. (2014). Race, gender, and chains of disadvantage: Childhood adversity, social relationships, and health. *Journal of Health and Social Behavior*, 55, 20–38. <https://doi.org/10.1177/0022146514521426>
- United Nations Population Fund (UNFPA), & HelpAge International. (2012). *Ageing in the Twenty-First Century: A Celebration and A Challenge*. New York: UNFPA and HelpAge International. ISBN: 978-0-89714-981-5
- United Nations, Department of Economic and Social Affairs, Population Division (2019). *World population aging 2019: Highlights (ST/ESA/SER.A/430)*.

Victor, C. R., Burholt, V., & Martin, W. (2012). Loneliness and ethnic minority elders in Great Britain: an exploratory study. *Journal of Cross-Cultural Gerontology*, 27(1), 65-78. <https://doi.org/10.1007/s10823-012-9161-6>.

Victor, C.R., & Yang, K. (2012). The prevalence of loneliness among adults: A case study of the United Kingdom. *Journal of Psychology*, 146(1–2), 85–104. <https://doi.org/10.1080/00223980.2011.613875>

Ward, L., Mathias, J. L., & Hitchings, S. E. (2007). Relationships between bereavement and cognitive function in older adults. *Gerontology*, 53, 362-372. <https://doi.org/10.1159/000104787>

Zoutewelle-Terovan, M., & Liefbroer, A. C. (2018). Swimming against the stream: Non-normative family transitions and loneliness in later life across 12 nations. *The Gerontologist*, 58(6), 1096–1108. <https://doi.org/10.1093/geront/gnx184>

**Funding statement:** This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

**Conflict of interest disclosure:** The authors declare that they have no conflicts of interest with respect to the authorship or the publication of this article.

**Ethics Approval Statement:** All ethical procedures were followed.

**Informed consent:** Due to the nature of the manuscript (Systematic literature review) informed consent does not apply.

**Author contribution statement:** Both authors contributed equally to the development of the manuscript.