



Childlessness and social support in old age: A literature review

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Abstract

This structured literature review is an attempt at a comprehensive overview of the research on childlessness and social support in old age. In total 33 articles published between January 2000 and July 2018 were reviewed. The articles covered nonparents and social support, social contacts, social networks, and various socio-demographic factors that may influence these. While there was no overall consensus on these topics, some findings emerged more frequently than others. Nonparents have smaller, more diverse social networks, fewer frequent social contacts with family members, but see friends and neighbours more often. Most articles also depict the childless elderly as a vulnerable group with higher rates of loneliness. They generally do not lack social support in the form of household help, yet their social networks appear to be less capable of providing more intensive care. Cultural context, marital status, gender, age, and health status also affect these. Interestingly among parents, family size and the gender and proximity of children also play an important role in social support provision. The review concludes that despite elderly nonparents having more diverse social networks to compensate for the absence of children, they seem to suffer more from social loneliness than parents, and their social networks may provide less support, which may result in a lack of social support when facing deteriorating health.

Keywords: Childlessness, old age, social support, social networks, social contact, structured literature review

Introduction

Since the second half of the 20th century, when the proportion of European women remaining childless reached its lowest level in the 1935–1949 birth cohort, the proportion of women remaining childless has increased significantly. Between 10% to 20% of the women born in the 1950s will never have children (Rowland, 2007; Tanturri et al., 2015). This trend has given rise to three main areas of investigation in the research and scholarly literature (Albertini & Mencarini, 2014). The first research area focuses on factors explaining the increasing rate of childlessness (Buhr & Huinink, 2017; Sobotka, 2017; Tanturri et al., 2015). The second area looks at the effects of being childless for psychological and physical well-being (Hank & Wagner, 2013; Hansen, 2012; Huijts, Kraaykamp, & Subramanian, 2013; Moor, de Graaf, & Komter, 2013). The third area, the one addressed in this review, concerns the risk of social isolation and possible lack of social support in old age. As children are often the main source of social contact and social support in old age, scholars wonder whether childless people will end up on the margins of society, potentially lacking social contact or needing assistance when faced with deteriorating health (Albertini and Kohli 2009; Albertini and Mencarini 2014; Deindl and Brandt 2017; Drageset, Kirkevold, and Espehaug 2011; Dykstra 2006; Grundy and Read 2012; Heylen 2010; Klaus and Schnettler 2016; Penning and Wu 2014; Wenger et al. 2007; Zoutewelle-Terovan and Liefbroer 2017).

When we investigate an individual's social networks, two main dimensions can be identified that are of great interest to researchers studying differences between parents and nonparents: social contacts and social support exchange. While social contact can be classified as contact with family or other members of the person's social network, participating in various social activities, being a member of a club or organisation, there is no such clear definition of social support. There are different types of social support: in general we can distinguish between financial help (including all types of economic help, both in the form of money and gifts), instrumental help (practical household help, help with personal care, and help with paperwork), and emotional support. As emotional support involves activities like giving moral support or providing company, this form of social support can be hard to distinguish from social contacts (Albertini & Kohli, 2009). However, in this review this overlap is addressed by looking at emotional support as social contact.

Childlessness in old age has many implications, not only concerning the various determinants affecting the well-being of elderly persons, but also for the social services in welfare states. The rising numbers of older people who remain childless may cause imbalances in service access and use; hence, there is a need to respond adequately and to reform ageing societies. Throughout the last two decades the topic of childlessness in old age has attracted more scholarly attention; however, findings on the effects of childlessness on social support in old age remain inconsistent. In this literature review I want to summarise the most recent trends and findings in the research and go some way in ascertaining the reasons for the inconsistencies. So as to gain a better under-

standing of overall views on social support for the childless elderly, this review attempts to answer the following research questions:

- RQ1 Do elderly nonparents lack social contact in old age more than their counterparts who have children?
- RQ2 Do elderly nonparents receive an insufficient amount of social support in old age?
- RQ3 Do elderly people's social networks differ on the basis of parental status?
- RQ4 Are there other socio-demographic factors that might affect social contact, receipt of social support, and quality of social networks more than parental status does?
- RQ5 What are the coping mechanisms that childless elderly people develop in order to counter the possible disadvantages of their parental status?

These research questions served as general guiding areas of interest within the topic, and their main function was to frame the structure of the review. The initial idea was to find answers to all of them; however, some received much greater coverage than others. I should also point out that readers should not expect definitive answers to any of them, as the goal of this review was simply to cover the existing research rather than provide conclusive answers to the research questions. On a similar note, since the research questions partly overlap, the reader should be aware that there is some repetition. However, I believe that this overview of the relevant information corresponding to each research question will help the reader to better navigate the issue as a whole rather than having to look at its specific parts of it.

Methods

When performing the literature search, I looked for academic articles written in English and published between January 2000 and July 2018. I decided to review published academic articles only based on the assumption that peer reviewed articles have to be of a certain quality before they can be published. Moreover, they can be found by searching the various databases, which is not always the case with books and book chapters. To avoid gaps and make the search process more feasible, I therefore eliminated books and book chapters from the search. The search was conducted using academic databases (Academic Search Complete, ScienceDirect, and Web of Science) and wide-ranging search engines (Google Scholar and Google search). The main two criteria were that the article had to cover the possible impacts of childlessness on social support in old age, and that the research had to be quantitative. The article abstracts were used to assess whether both criteria had been filled. As there is no clear age limit in the definition of old age, the articles selected cover the post-reproductive population: those aged 50 years and over. In some cases the age group was wider and covered middle age, or

later life generally, or the second half of life. Nonetheless, as these studies concerned the development of certain aspects of social support, I found them valuable for this review and decided not to drop them. To provide the widest range of studies, and ensure that they still met a certain level of quality, I decided to set the minimum number of research respondents to greater than 200. That way I could be sure quantitative research methods had been employed and included a variety of studies with different numbers of respondents.

Table 1 Literature search key terms

Age determination terms	Childlessness terms	Social support terms
Old age	Childless	Social support
Ageing	Childlessness	Instrumental support
Aging	Nonparent	Social contact
	Nonparenthood	

In order to ensure the most thorough of searches, a combination of various terms was used: age determination terms, childlessness terms, and social support terms (see Table 1). Based on these search terms, a total of 2,405 articles (not including duplicates) were initially found and their abstracts reviewed. The most common reason for an article to subsequently be excluded was that the topic was not relevant (2,095 articles); the article was a review of another article (61 cases); the article focused only on medical infertility (55 cases); it did not meet the criteria of a scientific publication (38 cases); the article was focused on the causes of childlessness or on voluntary and involuntary childlessness (19 cases); and that the article used qualitative methods (19 cases). Out of the 75 articles that made it into the wider first selection, 33 articles did not cover social support, 8 articles did not have the required number of respondents, and 19 articles did not meet the required criteria on different levels (note that it was possible that an article did not meet multiple criteria and so may be mentioned in multiple categories above). In the end a total of 33 articles that met all the criteria set for this review were selected for further review. The articles in this final selection covered both childlessness in old age and social support to some extent. Despite some dealing peripherally with the issue, they nevertheless enriched the review by providing a wider range of topics. A detailed summary of the selected articles is provided in Table 2.

Results

Do elderly nonparents lack social contact in old age more than their counterparts who have children?

Social contacts and frequency of contact are crucially important to all humans, even more so in older age. Many of the studies investigated the potential lack of social contact among the childless elderly from the view that social contacts may have a protective effect on elderly nonparents.

In a study of 24 European societies it was found that in countries with high levels of social contact, nonparents were less disadvantaged when it comes to psychological well-being (Huijts et al., 2013). English nonparents had a lower chance of having at least weekly face-to-face contact, when compared with their parent counterparts (Grundy and Read 2012). According to Wenger et al.'s study (2007) using data from Australia, Germany, Israel, Japan, Netherlands, Spain, the United Kingdom, and the United States, more parents had at least weekly contact with relatives. In this study childless women were more likely to see their friends than mothers were, whereas childlessness seemed to be inconsequential to the frequency of contact among men. The quality of elderly people's social networks was investigated by looking at the regularity with which they kept in touch with others, and lifelong childlessness resulted in smaller social networks among those living in Berlin and Amsterdam (Dykstra & Wagner, 2007).

However, frequency of social contacts may not be related directly to satisfaction with social interactions. As Heylen (2010) points out, despite parents having more frequent social contacts than their childless counterparts, they were generally less satisfied with their social relations. According to another study, satisfaction with social relations was not only influenced by parental status, but also by the gender of the offspring. Older parents who had daughters only reported more satisfying relations and greater social support compared to older nonparents and older parents with sons only (Pushkar et al., 2014).

There are various categories of people that elderly persons may be in touch with, and these usually differ in importance in their social lives. Life satisfaction is often based on the presence of intimate family ties, in particular ties with the partner and children (Moor et al., 2013). Elderly nonparents had more relations with friends and fewer family intimate relations compared with elderly parents (Pushkar et al., 2014). Childless women were more likely to see their friends frequently, when compared with mothers, and married women without children were the most likely to have at least weekly contacts with neighbours, but overall more elderly parents had at least weekly contact with their relatives (Wenger et al., 2007).

Not having enough social contacts may result in social isolation, and isolated individuals may feel particularly lonely. Childlessness may be a source of vulnerability, particularly in the absence of a spouse (Penning & Wu, 2014). Only three studies countered the rather negative perception of elderly nonparents that depicts them as socially

Citation	Countries	Theory	Focus
1 Albertini and Kohli (2009)	10 European countries	None	Social, financial, and moral support
2 Albertini and Mancarini (2014)	Italy	None	Support given and received in later life Sources of support
3 Burholt and Sardani (2017)	United Kingdom	Wenger's typology of social networks	Effect of population turnover on support networks of older people
4 Chang, Wilber and Silverstein (2010)	United States	None	Relationship between childlessness and care and well-being
5 Chou and Chi (2004)	China	None	Relation of childlessness to loneliness and depression
6 Cwikel, Gramotnev and Lee (2006)	Australia	None	Use of services Belonging to a social group Volunteer work Physical and mental health
7 Deindl and Brandt (2017)	12 European countries	None	Social networks Formal and informal support
8 Drageset, Kirkeveld and Espehaug (2011)	Norway	None	Frequency of contact and loneliness Association between loneliness and social support
9 Dykstra (2006)	Netherlands, Germany	None	Differences in support networks

Data	Method	Key findings (on childlessness and social support)
N=22,777 over 50 years old <i>Survey of Health, Ageing and Retirement in Europe</i> (2004)	Descriptive analyses Logistic, multi-logit and ordinary least-squares linear regression	Nonparents tend to be more intensively involved in charities and organisations; they have low available support, thus are less likely than parents to receive social support; their networks may be characterised by stronger links with older relatives, lateral relatives, and non-relatives.
N=33,759 over 30 years old, <i>Gender and Generations Survey</i> (2003)	Multivariate regression	The childless elderly have structurally weaker social networks, and are more likely to receive help from nonrelatives, yet they are likely to lack support in the form of personal care and help with household chores and paperwork when suffering from bad health; nonparents are more likely to be helped by non-profit organisations, and to some extent by the welfare system.
N=1,870 over 65 years old, <i>Cognitive Function and Ageing Study</i> (2014)	Multinomial logistic regression models	Childlessness, among other socio-demographic variables, affects membership of different social networks.
N=2,048 over 75 years old people with disabilities <i>Health and Retirement Study</i> (1998–2004)	Logistic and ordinal regressions	Elderly nonparents with a disability do not receive less care or report worse psychological well-being than parents.
N=2,003 over 60 years old Randomly drawn from Census and Statistics Department (2003)	Logistic regression analyses	Childlessness is significantly associated with loneliness and depression even when various socio-demographic variables are controlled for.
N=10,108 73–78 years old <i>Australian Longitudinal Study on Women's Health</i>	Univariate analysis Multinomial logistic regression ANOVA	There is no evidence that never-married childless women have poor emotional or physical health, or that they make higher use of medical services, even though they make higher use of formal services like meal deliveries or home maintenance; they are considerably more likely to volunteer and to belong to a number of social groups.
N=14,394 over 50 years old people with daily living limitations <i>Survey of Health, Ageing and Retirement in Europe</i> (2004, 2006–2007)	Multivariate analyses Multinomial and linear two-level regressions	Sporadic informal support for elderly nonparents is often taken on by the extended family, friends and neighbours, thus the lack of children is compensated for within the social network; intensive care tasks are more likely provided by professionals, especially in the case of childless older people; in countries with low social services provision, childless elders are likely to experience a lack of (formal) support, especially when depending on vital care.
N=227 over 65 years old Survey in 30 nursing homes in Bergen (2004–2005)	Descriptive analyses Logistic regression	Gender and marital status rather than childlessness affect loneliness among elderly people.
N=661 and 516 over 70 years old <i>Netherlands Program for Research on Aging-Living Arrangements and Social Networks of Older Adults</i> (1992) and <i>Berlin Ageing Study</i> (1990–1993)	Descriptive analyses Hierarchical regressions	Social networks of elderly nonparents are generally smaller – possibly due to the limited supply of kin; there is no evidence to confirm the idea that childlessness is associated with greater sociability; no greater parenthood-history differences between men and women; having a child also appears to contribute to social integration.

10	Dykstra and Wagner (2007)	Netherlands, Germany	Normal expectable life	Differences in network size Differences in equivalent income Differences in life satisfaction	N=661 and 516 over 70 years old <i>Netherlands Program for Research on Aging-Living Arrangements and Social Networks of Older Adults</i> (1992) and <i>Berlin Ageing Study</i> (1990–1993)	Unstandardised stepwise regression	Lifelong childlessness results in smaller social networks for both men and women; compared to parental history, marital history is a more powerful predictor of life satisfaction among the elderly.
11	Grundy and Read (2012)	England	None	Likelihood of face-to-face social contact Receipt of help	N=20,172 60–91 years old <i>English Longitudinal Study of Ageing</i> (2002–2003, 2004–2005)	Logistic regressions	Nonparents have lower chances of at least weekly face-to-face contact; childless women are, when compared with mothers, more likely to receive help from friends, but still have lower odds of receiving help from any informal source; having a larger family slightly increases the amount of daily help elderly persons with a limiting disability receive, but having at least one daughter is more important than family size.
12	Gu, Dupre and Liu (2007)	China	None	Differences in sociodemographic characteristics Family caregiving resources Health practices Religious activity Chronic conditions Mortality risks	N=13,297 80–105 years old <i>Chinese Longitudinal Healthy Longevity Survey</i> (1998, 2000, 2002)	Descriptive analyses Logistic regression models Weibull distributed hazard models	Institutionalised older adults are less likely to have a spouse and living children (or children living close by); number of children significantly reduces the odds of institutionalisation; however, when the child's proximity is taken into account, only those with three and more children still have lower odds of being institutionalised and the effect is largely weakened; family caregiving resources also play a substantial role in reducing the mortality gap between community-residing and institutionalised oldest-old.
13	Hank and Wagner (2013)	14 European countries and Israel	None	Association of parenthood and marital status with economic situation, psychological well-being and social connectedness	N= roughly 20,000 over 65 years old <i>Survey of Health, Ageing and Retirement in Europe</i> (2004–2005, 2006–2007)	Multivariate regression	There is no systematic association between parenthood or marriage and a person's tendency to participate in social activities; childless older persons generally do not report worse psychological, economic, or social well-being when compared with parents.
14	Hansen, Slagsvold and Moum (2009)	Norway	Cognitive and affective well-being	Links between parental status and a range of psychological well-being outcomes in midlife and old age	N=4,169 40–80 years old <i>Norwegian Life Course, Ageing and Generation study</i> (2002)	Analysis of variance	Motherhood does not affect feelings of depression or loneliness; fatherhood is not related to life satisfaction, self-esteem, depression, or loneliness. The effects of parental status do not vary across age, marital status, or education.
15	Heylen (2010)	Belgium	Theory of socio-emotional selectivity	Impact of social isolation on feelings of loneliness Direct and intermediate effects of number and quality of social relationships Detection of groups at risk of social loneliness	N=1,414 over 55 years old <i>Panel Study of Belgian Households</i> (2000)	Confirmatory factor analyses	Having children lowers the risk of social loneliness; parents have more frequent social contact, yet are generally less satisfied with their social relations. The older the respondents were, the lower the risk of social loneliness.
16	Huijts, Kraaykamp and Subramanian (2013)	24 European countries	None	Association of childlessness and psychological well-being To what extent societal norms towards childlessness and social contacts account for cross-	N=24,195 over 40 years old <i>European Social Survey</i> (2006)	Multilevel regression analyses	The disadvantage of being a nonparent in terms of psychological well-being is reduced in countries with tolerant norms regarding childlessness and high levels of social contacts.

17	Iecovich et al. (2004)	Russia, Ukraine	None	Variables that affect feeling of loneliness	N=2,579 over 60 years old Survey of elderly Jews conducted by the William Rosenwald Institute for Communal and Welfare Workers (1998)	Regression analysis	Unmarried and childless elderly people report the highest feelings of loneliness; characteristics of social networks are significantly associated with feeling of loneliness.
18	Klaus and Schnettler (2016)	Germany	None	Differences in social networks and support between ageing childless and parents How these develop over time	N=13,672 40–94 years old <i>German Ageing Survey</i> (1996-2011)	Fixed-effects panel regression models	Nonparents seem to be successful in substituting for children and linear kin through friends and collateral kin, and these ties appear to be effective in providing them with support; people without children do not experience a steeper decline in network size than parents do.
19	Larsson and Silverstein (2004)	Sweden	None	Benefits of having been previously married and having had children in terms of informal care received	N=390 over 81 years old <i>Kungsholmen Study</i> (1994, 1996)	Descriptive analyses Logistic regression	Nonparents have considerably lower odds of receiving informal support; public home-help services do not have the capability to fully buffer the lack of care among elderly nonparents.
20	Litwin (2007)	Israel	Berkman's conceptual model of the determinants of health	Social network-mortality association	N=1,811 over 70 years old Household Survey by the Israeli Central Bureau of Statistics (1997) linked to register data (2004)	Multivariate Cox hazard regressions	Childlessness acts as a social network-related predictor of mortality.
21	Liu et al. (2012)	China	None	Role of children in differences in well-being between institutionalised and community-residing oldest-old	N=20,156 older than 80 years old <i>Chinese Longitudinal Healthy Longevity Survey</i> (1998, 2000, 2002)	Descriptive analyses Multivariate regression models	Child-related factors moderate the link between loneliness and quality of life among institutionalised and community-residing older adults.
22	Moor, de Graaf and Komter (2013)	24 European countries	Model of conservation of resources	Quality of life Life satisfaction Benefits of family resources	N=7,397 over 65 years old <i>European Value Study</i> (2008)	Linear regression analysis	Life satisfaction is influenced by the presence of intimate family ties, particularly ties with the partner and children; the childless elderly feel less satisfied with life; elderly persons are emotionally better off in wealthier welfare states.
23	Penning and Wu (2014)	Canada	Hierarchical compensatory or social care perspective Functional specificity model	Access to social support in later life	N=11,503 over 60 years old <i>General Social Survey</i> (2007)	Two-stage probit regression models	Elderly nonparents are particularly vulnerable when the spouse is absent; parental and marital status did not have uniform positive or negative effects on the amount of additional household social support received.
24	Pinquart (2003)	Germany	Hierarchical compensatory model	Predictors of loneliness in older adults	N=4,130 53–79 years old <i>Lebensführung älterer Menschen</i> (1993)	Hierarchical linear modelling	For divorced and widowed individuals, the most profitable interactions are those with their adult children, whereas for the never-married and childless elderly, the most profitable contacts are with siblings, friends, and neighbours.
25	Pushkar et al. (2014)	Canada	None	Differences in life satisfaction, satisfaction with relationships and social support satisfaction Differences in intimacy of family relations	N=351 *only mean age given *larger longitudinal study in Montreal	Descriptive analyses Unconditional models with a random intercept factors	Older parents with daughters only report more satisfying relationships, greater life satisfaction and also greater social support than older nonparents and older parents with sons only; elderly nonparents have more relationships with friends and fewer family intimate relationships than elderly parents do.
26	Schnettler and Wöhler (2016)	Germany	None	Substitution through adjustments to network size/composition Substitution through more effective personal ties	N=14,660 40–85 years old <i>German Ageing Survey</i> (1996, 2002, 2008)	Descriptive analyses Poisson regression models	Nonparents have more friends and members of extended kin in their social networks and they often consider them potential supporters; nonparents use two substitution mechanisms – substitution through adjustment of network size or composition and through more effective personal ties.

27	Vikström et al. (2011)	Sweden	None	Childlessness and psychological well-being Living situation and social support	N=496 over 85 years old <i>Elderly in Linköping Screening Assessment – The ELSA 85 project</i> (2007)	Cross tabulations Multivariate logistic regressions	The social networks of childless individuals have less support potential, yet they are not associated with lower psychological well-being.
28	Wenger et al. (2007)	Australia, Germany, Israel, Japan, Netherlands, Spain, United Kingdom, United States	Wenger's typology of social networks	Participation in community activities Contact with relatives, friends, and neighbours Patterns of support networks	N=2,063 (<i>ALSA</i>), 1,550 (<i>SFLC</i>), 497 (<i>BASE</i>), 1,799 (<i>NSFI</i>), 4,181 (<i>ICBS</i>), 3,829 (<i>NESTOR-LSN</i>), 2,458 (<i>CIS-INSERSO</i>), 4,667 (<i>ALPHA</i>), 2,039 (<i>NSFH</i>)	Descriptive analyses	The social networks of elderly nonparents are less likely to be robust and less capable of supporting them in maintaining independent living without needing to resort to residential care during times of frailty; parents more often have at least weekly contact with relatives, but childless women are more likely than mothers to see their friends; married women without children were the most likely to have at least weekly contacts with neighbours.
29	Wenger, Scott and Patterson (2000)	England	None	Differences in social support in old age	N=4,689 over 65 years old <i>Ageing in Liverpool Project – Health Aspects</i> (1989–1991)	Descriptive analyses Cross tabulations	Being without children has a negative impact on the strength of support networks for single men and for married women only.
30	Wu and Hart (2002)	Canada	Stress process model	Psychological distress and depression among childless elderly Stress process model	N=2,311 childless individuals over 55 years old <i>National Population Survey</i> (1996-1997)	Generalised linear model techniques	Perceived social support has a significant buffering effect on psychological distress and depression among the childless elderly.
31	Zhang and Liu (2007)	China	None	Feeling of anxiety, loneliness, uselessness and life satisfaction among childless elderly	N=13,447 over 65 years old <i>Chinese Longitudinal Healthy Longevity Survey</i> (2002)	Logistic analysis with a dichotomous category Ordered-logit regression models	After controlling for age, gender, and education, childlessness is significantly related to life satisfaction, feelings of anxiety and loneliness; when additional socioeconomic variables are added, childlessness is no longer associated with loneliness and anxiety but is still associated with lower life satisfaction.
32	Zhang and Hayward (2001)	United States	None	Effects of childlessness on loneliness and depression among the elderly	N=6,517 over 70 years old <i>Asset and Health Dynamics Among the Oldest Old</i> (1993)	Estimated logistic and ordinary least squares regression models	Childlessness per se does not increase the prevalence of loneliness at advanced ages; not having children does not increase loneliness and depression among divorced, widowed, or never-married older persons; never-married, divorced, or widowed men without children have higher rates of loneliness compared to women in similar circumstances, also divorced and widowed men display higher rates of depression than women in comparable situations.
33	Zoutewelle-Terovan and Liefbroer (2017)	12 European countries	None	Long-lasting consequences of young adult experiences for older age loneliness	N=61,082 50–85 years old <i>Generation and Gender Survey</i> (2004–2009)	Linear regression analyses	Never having lived with a partner and childlessness show the strongest relation to later-life loneliness; not having children is more strongly associated with later-life loneliness in countries that have more traditionalist values than in less traditionalist ones.

isolated (Klaus & Schnettler, 2016) or associates the lack of children with loneliness (Drageset et al., 2011). One study from the United States even found that childlessness per se does not increase the prevalence of loneliness at advanced ages (Zhang and Hayward 2001). Similarly nonparents who had outlived their children were not more socially isolated than people who were childless in the long-term (Dykstra, 2006). Nevertheless a majority of studies found the opposite: unmarried and childless elderly people reported the highest levels of loneliness (Iecovich et al., 2004); never having lived with a partner and childlessness correlated most strongly to loneliness in later life (Zoutewelle-Terovan & Liefbroer, 2017); childlessness was significantly related to loneliness even after various socio-demographic variables were controlled for (Chou and Chi 2004); and nonparents felt more anxious and lonely than parents did (Zhang and Liu 2007). Furthermore, contacts with children had a stronger negative relationship with loneliness, especially for unmarried older persons (Pinquart, 2003); and that overall, having children lowers the risk of social loneliness (Heylen, 2010).

It is likely that in order to overcome the disadvantages potentially posed by a lack of children, nonparents are more socially active and involved in charities and other similar organisations. The findings on this appear to be contradictory as well. Nonparents tend to be more intensively involved in charities and similar organisations (Albertini & Kohli, 2009). Never-married childless women were less likely to provide care within their family, but also considerably more likely to volunteer and to belong to a number of social groups (Cwikel, Gramotnev, & Lee, 2006). However, in a Dutch and German study there was no evidence to confirm the hypothesis that childlessness is associated with greater sociability (Dykstra, 2006), and on a similar note, in a study of 14 European countries and Israel, there was no systematic association between parental or marital status and a person's tendency to participate in social activities (Hank & Wagner, 2013).

In general, research found that elderly nonparents were more in contact with their neighbours and friends, and less so with family members. There is stronger empirical evidence to support the argument that childless elderly people are socially lonely, despite tending to be more involved in social activities and volunteer work.

Do elderly nonparents receive an insufficient amount of social support in old age?

The second research question led me to investigate the possible disadvantages related to receipt of any kind of social support, including instrumental support, such as help with household chores and paperwork, and care of any kind from any source. The findings were inconsistent. Some studies did not find that childless persons were lacking in support (Klaus & Schnettler, 2016) and others reported that parents and nonparents with disabilities came out similarly on measures of care provision (Chang, Wilber, & Silverstein, 2010). Others reported that nonparents had considerably lower odds of receiving informal support (Larsson & Silverstein, 2004), and that in countries with a lower provision of social services, childless elders were likely to lack (formal) support

(Deindl & Brandt, 2017). Elderly nonparents had low levels of available support therefore they were also less likely than parents to receive social support (Albertini & Kohli, 2009) as their social networks had less support potential (Vikström et al., 2011).

Currently married or separated nonparents were more likely to report instrumental and emotional support from people outside the household, while the never-married or widowed childless reported lower levels of domestic support (Penning & Wu, 2014). Furthermore, even when the childless elderly did not face significant support deficits, they were likely to lack desirable forms of support when they needed them most – when faced with deteriorating health (Albertini & Mencarini, 2014).

Sources of social support in old age often differed between nonparents and parents. Parents had noticeably higher odds of receiving informal support (Larsson & Silverstein, 2004) and, although childless women in England were more likely to receive help from friends, they still had considerably lower odds of receiving help from any informal source when compared with mothers (Grundy & Read, 2012). German nonparents had more friends and members of extended kin in their social networks, and they often considered them to be potential supporters (Schnettler & Wöhler, 2016). Sporadic informal support for the childless elderly can often be taken on by extended family, friends, or neighbours (Deindl & Brandt, 2017). Correspondingly, nonparents can be successful in substituting for children and linear kin through friends and collateral kin, and as they systematically build closer relationships with them throughout their life, these ties end up being more effective in providing support (Klaus & Schnettler, 2016). Currently married or divorced nonparents were more likely to receive help with domestic tasks or transportation from people outside the household (Penning & Wu, 2014). Even though the childless elderly were more likely to receive help from nonrelatives, they were still likely to lack support in forms of personal care and help with household chores and paperwork when suffering from bad health (Albertini & Mencarini, 2014). Perceived social support also had a significant buffering effect on psychological distress and depression among the childless elderly (Zheng & Hart, 2002). Additionally, having children not only reduced the odds of institutionalisation, family caregiving resources also played a substantial role in reducing the mortality gap between the community-residing and institutionalised oldest-old population (Gu, Dupre, & Liu, 2007).

Any ageing individual may end up in the position of needing some kind of formal assistance, regardless of parental status. The childless elderly may find themselves in a more vulnerable position, due to the absence of children, who usually take on the caregiving role. Nonparents were more likely to be helped by non-profit organisations, and to some extent by the welfare system as well (Albertini & Mencarini, 2014), while never-married childless women in Australia made greater use of formal services like meal deliveries or home maintenance (Cwikel et al., 2006). Intensive care tasks were usually not taken on by extended family or friends, but were commonly provided to childless individuals by professionals (Deindl & Brandt, 2017). However, according to Larsson and Silverstein (2004) public home-help services do not have the capability to fully buffer the lack of care among elderly nonparents.

Overall, the studies reviewed show that elderly nonparents were more likely to report a lack of social support, especially when faced with deteriorating health and in countries with lower access to formal care provision.

Do elderly people's social networks differ on the basis of parental status?

Various factors shape social networks throughout an individual's life. The social networks of elderly nonparents were less likely to be robust (Wenger et al., 2007) and are generally smaller (Dykstra, 2006; Dykstra & Wagner, 2007), partly due to the limited supply of kin (Dykstra, 2006). Older childless people were more likely to have local self-contained networks (smaller networks with low levels of engagement with local community groups) than parents were, and were more likely to belong to private restricted networks (where local kin or friends are absent and the person has little contact with neighbours) than to locally integrated ones, and also had a lower risk of belonging to family dependent networks (Burholt & Sardani, 2018). Nonparents' social networks seemed to have less support potential (Vikström et al., 2011) and appeared to be structurally weaker (Albertini & Kohli, 2009; Albertini & Mencarini, 2014).

However, partly contradicting these findings, some studies indicated that childlessness had a negative impact only on the strength of support networks for single men and married women (Wenger, Scott, & Patterson, 2000). Nonparents had more potential diverse support networks, as they were not limited to parent-child relations like parents were, and their networks could be characterised by stronger links to extended kin and friends (Albertini & Kohli, 2009; Schnettler & Wöhler, 2016). Nonparents had more links to friends and fewer intimate family relationships (Pushkar et al., 2014).

The different characteristics of social networks can have numerous impacts; however, the vast majority of studies found that childlessness had a negative impact on the social networks of elderly individuals. Characteristics of social networks were associated with feeling of loneliness (Iecovich et al., 2004), while the networks of elderly nonparents were less capable of providing certain types of support, such as personal care and help with housework (Albertini & Mencarini, 2014), which may mean that they are less likely to continue living independently without needing to resort to residential care when experiencing frailty (Wenger et al., 2007). Childlessness even emerged as a social network-related predictor of mortality (Litwin, 2007). These studies contrasted to others that found that nonparents did not experience a steeper decline in the size of their social network, nor did they suffer a greater reduction in social support than parents did (Klaus & Schnettler, 2016), and even though their networks had less support potential, they did not fare worse on some psychological well-being indicators (Vikström et al., 2011). Nevertheless, there seems to be stronger empirical evidence for the idea that childlessness negatively affects older people's social networks.

Despite the negative impact of childlessness on their social networks, elderly persons seemed to be rather successful in compensating for these disadvantages. Childless older

persons had more diverse social networks with stronger links to older relatives, lateral relatives, and non-relatives (Albertini & Kohli, 2009). They substituted for children and linear kin through friends and collateral kin and created ties that were more effective in providing them with support (Klaus & Schnettler, 2016). Extended family, friends, and neighbours seemed to compensate for the lack of children within the social networks of the childless elderly (Deindl & Brandt, 2017). On the whole nonparents used two substitution mechanisms – substitution by adjusting network size or composition; and substitution through more effective personal ties (Schnettler & Wöhler, 2016).

In summary, elderly nonparents' social networks seem to be more diverse, yet smaller and less effective in providing them with more intensive care.

Are there any other socio-demographic factors that might affect social contact, receipt of support, and quality of social networks more than parental status does?

Most of the studies reviewed found that in addition to parental status, other factors had a crucial effect on social networks, social contacts, and support. This underscores the extent to which the various aspects of social support for the childless elderly are interconnected. Among the commonly mentioned factors were gender, partnership status, health, age, education or employment history, family size, and culture of the country where the childless older adult lived.

Gender is a strong predictor of social relations in later life. Women were on average less socially lonely than men were (Heylen, 2010), as gender appeared to be significantly associated with loneliness (Drageset et al., 2011). Gender can also alter the way in which childlessness and marital status affect psychological well-being. Never-married, divorced, and widowed men without children had higher rates of loneliness compared to women in similar circumstances, and divorced and widowed childless men displayed higher rates of depression than women in a comparable situation (Zhang and Hayward 2001). Throughout their lives childless individuals in Italy were less likely to receive or give support outside the household; the biggest differences were found among men. At the same time, elderly childless women received more help from outside the household (Albertini & Mencarini, 2014). Formerly married childless men reported lower levels of contact with relatives than their female counterparts did, women were also more likely to be in contact with their friends on a weekly basis (Wenger et al., 2007). Furthermore, a study in Australia, Germany, Israel, Japan, Netherlands, Spain, the United Kingdom, and the United states showed that being without children had a negative impact on the strength of support networks for single men and married women only (Wenger et al., 2000). By contrast, some studies found that gender did not affect aspects of well-being among the childless elderly (Hansen, Slagsvold, & Moum, 2009), that parenthood-history differences were not greater between men and women (Dykstra, 2006), and that lifelong childlessness resulted in smaller social networks for both men and women (Dykstra & Wagner, 2007). There seems to be no systematic pattern to the

discrepancies between these results. Overall, claims that support the idea that women in old age are in a better position appear to be backed up by slightly stronger empirical evidence.

Similarly, the presence of a partner or a spouse has an effect on the availability of social networks, feelings of loneliness and depression, social contacts, and social support. Marriage rather than parenthood seems to make the difference in support networks; although the scale of these varied between countries (Wenger et al., 2007). Being unmarried reduced the likelihood of the person receiving personal assistance and was associated with depressive feelings (Chang et al., 2010). On the other hand, previously married elderly nonparents had similar chances of receiving social support than their never-married counterparts (Larsson & Silverstein, 2004). Correspondingly, currently married or separated childless were more likely to receive instrumental and emotional support from outside the household (Penning & Wu, 2014). There was also no evidence that never-married women without children made greater use of medical services, despite them using formal services more often (Cwikel et al., 2006). Never-married women without children were particularly socially active, while formerly married childless men reported lower levels of contact with relatives, but generally, there were no consistent marital status differences in levels of family contact among the group of nonparents (Wenger et al., 2007). Having a child also appeared to contribute to level of social integration, regardless of marital status (Dykstra, 2006).

The results were inconsistent on social loneliness and partnership status. Unmarried elderly nonparents reported the highest levels of feelings of loneliness (Iecovich et al., 2004). Interestingly, it was gender and marital status rather than childlessness that impacted on the loneliness of older adults living in nursing homes in Norway (Drageset et al., 2011). By contrast, not having children did not increase loneliness and depression among divorced, widowed, or never-married older persons (Zhang and Hayward 2001). One finding that contrasted with almost all the other research findings was from a study in Belgium that found that not living with a partner or spouse lowered the risk of social loneliness (Heylen, 2010). Divorced and widowed individuals seem to have the most satisfying social interactions with their adult children, while for never-married and childless elderly people the most beneficial contacts were with siblings, friends, and neighbours (Pinquart, 2003). Overall, marriage or partnership seemed to provide some protection to ageing childless individuals.

Obviously, age may influence various aspects of a person's social life. Some researchers mentioned age peripherally, stating that even after controlling for socio-demographic variables, including age, childlessness was significantly related to life satisfaction, feelings of anxiety, and loneliness (Zhang and Liu 2007), and to loneliness and depression (Chou & Chi, 2004), and that the effects of parental status on well-being were not modified by age (Hansen et al., 2009). Within a group of childless persons, the likelihood of receiving help generally did not vary by age, with the exception of women in later life, where there was a visible increase in the proportion receiving help from outside the household (Albertini & Mencarini, 2014). Remarkably, in Belgium,

age appeared to have an indirect effect on social loneliness, meaning that with age, the risk of social loneliness decreased. The author of that study surmised that the contradiction between that finding and previous findings on social loneliness could be explained by the fact that previous studies had not taken into account the indirect effect age has on the attributes of social relationships. Heylen also pointed out that the results were in keeping with the theory of socio-emotional selectivity: with increasing age more importance is placed on the quality of relationships (Heylen, 2010). Being without children did not increase the prevalence of loneliness and depression at advanced ages (Zhang and Hayward 2001). In summary, most of the studies concluded that age did not have a large effect on the social relationships of elderly nonparents.

Another logical aspect impacting on the social support of elderly person was health. Institutionalised elders reported better psychological health than their community counterparts, but the connection was moderated by child-related factors, for instance by the number of children or by the frequency of visits (Liu, Dupre, Gu, Mair, & Chen, 2012).

The number of children and larger family size also had a slight positive effect on the help elderly persons received in relation to activities of daily living or instrumental activities of daily living limitations (Grundy and Read 2012). On a similar note, family caregiving resources played a significant role in reducing the mortality gap between institutionalised and community-residing oldest old (Gu et al., 2007), and older nonparents were more likely to experience a lack of the most needed support when suffering from bad health (Albertini & Mencarini, 2014). However, elderly nonparents with a disability did not receive less care nor did they report worse psychological well-being (Chang et al., 2010), and correspondingly, there was no evidence that childless never-married women have poor physical or psychological health (Cwikel et al., 2006). The logical conclusion is that personal health is connected to the support childless elderly persons receive, as either they receive more support, or report having received insufficient support.

Education and employment history may also affect social relations among older adults. Some findings showed that parenthood contributed to social integration regardless of marriage or employment status (Dykstra, 2006), and that parental status effects were not modified by marital status, age, or education (Hansen et al., 2009). One study pointed out that education level, among other socio-demographic variables, had no universal effect on social loneliness (Heylen, 2010), while studies from China reported that even after controlling for education and other socio-demographic variables, childlessness was associated with loneliness and depression (Chou & Chi, 2004) and with life satisfaction and feelings of anxiety and loneliness (Zhang and Liu 2007). In general, education and employment history did not stand out as strong factors affecting social relations among elderly nonparents.

Another rather interesting point made by some scholars is that whether the elderly person has children or not is not the only important thing. The number of children, their gender, and whether they live within reachable proximity also count. Institutionalised older adults were generally less lonely than those living in the community, but this as-

sociation was modified by number of children, their proximity, and the frequency of their visits (Liu et al., 2012). Number of children also significantly reduced the odds of institutionalisation; however, when the child's proximity was taken into account, only those who had three or more children had lower odds of being institutionalised, and the effect was weak (Gu et al., 2007). On a similar note, when we look at the size and composition of the social networks and the effectiveness of personal ties, parents with no children in close proximity appeared to constitute a mixed group that shared similarities with both nonparents and parents with at least one child living nearby, at least on some indicators of social support (Schnettler & Wöhler, 2016). For parents with some level of activity limitation larger family size was found to positively relate to receipt of help; elderly parents were also more likely to have at least weekly face-to-face contact; however, larger family size had only a minor additional effect. Interestingly, having at least one daughter was more important than family size was (Grundy and Read 2012). Elderly parents who had daughters only also reported greater life satisfaction, more satisfying relationships with their children, and greater social support satisfaction compared to childless people and parents of sons only (Pushkar et al., 2014). The findings of these studies show that simple binary parental status is often insufficient in explaining the differences, as child-related factors play a strong role in the quality of parents' social relations.

Finally, the cultural context matters. In some countries marriage rather than parenthood seemed to be the cause of differences in social support networks. In Australia it was both parenthood and marriage; in Finland it was marriage and fatherhood for men, and motherhood for women; in Israel marriage had the strongest effect; in the Netherlands it was parenthood; in Spain whether the person was currently married was most important, especially for women; in the United Kingdom it was parenthood, particularly for men; and in the United States it was primarily parenthood (Wenger et al., 2007). In research looking at the economic, psychological, and social well-being of older persons in 14 European countries and in Israel, childless individuals fared no worse than parents, and this finding did not vary systematically between the countries (Hank & Wagner, 2013). Another study conducted in 12 European countries found that nonparents were likely to experience a lack of support in countries with low social service provision (Deindl & Brandt, 2017). Correspondingly, a study comprising 24 European countries observed that older people living in countries with a bigger proportion of older persons in institutional care were more satisfied with life, suggesting that elderly persons were emotionally better off in wealthier welfare states (Moor et al., 2013). Other research in 24 European countries found that the disadvantages of nonparents for psychological well-being were reduced in countries that had more tolerant norms on childlessness (Huijts et al., 2013). Similarly, a study in 12 European countries showed that not having children was more strongly associated with later-life loneliness in countries that had more traditionalist values than it was in less traditionalist ones (Zoutewelle-Terovan & Liefbroer, 2017). Overall, cultural context played an important role in the social support networks of elderly nonparents.

What are the coping mechanisms that childless elderly people develop in order to counter the possible disadvantages of their parental status?

Although there is a variety of research on nonparents and their social support in old age, interestingly not much emphasis is put on the ways in which childless older persons cope with their possible disadvantages. Some researchers mentioned in passing that the childless elderly apparently found ways to manage the possible negative effects childlessness might have (Vikström et al., 2011), or that the life experiences and opportunities of childless older women prepare them for a successful and productive older age (Cwikel et al., 2006), but neither specified what those might be. This omission may also reflect lacunae in the data used.

The few studies did agree that various types of substitution were used to beat the negative odds of being childless. Mechanisms like substitution by adjusting network size and composition and building more efficient personal ties played an important role (Schnettler & Wöhler, 2016). Nonparents seemed to successfully substitute for the lack of children with their extended family, friends, and neighbours (Deindl & Brandt, 2017; Klaus & Schnettler, 2016), and these ties were supposedly more effective in providing them with support (Klaus & Schnettler, 2016), or relied on sporadic help from outside the household. Nonetheless, these networks did not appear capable of providing intensive support for those with deteriorating health (Deindl & Brandt, 2017). Similarly, substituting for the lack of children through nephews or nieces provided only fairly limited compensation (Albertini & Kohli, 2009).

If the needs of the childless elderly are not met by their close or extended family they will probably search for help from formal sources. Australian never-married women without children made greater use of formal services, but still coped well financially, likely due to private health insurance (Cwikel et al., 2006). However, public home-help services seemed to be unable to fully compensate for the lack of care provided to childless individuals (Larsson & Silverstein, 2004). Similarly the capacity of the welfare system was unable to buffer the informal support deficits (Albertini & Men-carini, 2014).

Again the findings conflict. This time in relation to greater sociability and charitable involvement, which may be another possible coping mechanism for elderly nonparents. On the one hand, there was no evidence that nonparents were more likely to participate in social activities (Hank & Wagner, 2013), nor that childlessness led to greater sociability (Dykstra, 2006). On the other hand, never-married women were significantly more likely to volunteer (Cwikel et al., 2006), and the nonparent elderly tended to be more intensively involved in charities and similar organisations (Albertini & Kohli, 2009).

Again, there seems to be no general pattern in the studies reviewed. We can state that nonparents try to substitute for the lack of children through extended family and friends and compensate for this by being more involved in social activities. What must also be addressed when thinking about this research question is that the imbalance in

the information obtained could have resulted from the search terms selected, which may have related less to the last research question. At the same time this lack also indicates that this is a topic that should be further investigated in order to establish more thoroughly what the different ways of compensating might be.

Conclusion

The articles reviewed covered various themes and topics, starting from the disadvantages nonparents may face in social contacts and receipt of social support to differences in social networks and other factors that may affect these besides parental status. De-Ollos and Kapinus (2002), in their review of what was then the current literature, pointed to a vacuum in the research on elderly nonparents and raised questions regarding the potential providers of any social support. This literature review shows that considerable progress has been made in studying elderly nonparents and social support, but there is still no overall consensus on the effects childlessness have on social support in old age, as it is a highly complex issue.

Nonparents had smaller, but more diverse social networks, as they were not limited to parent-child relations. They had less frequent social contact with family, but they were in touch with friends and neighbours more often and seemed to be slightly more sociable.

Most of the articles depicted childless people as a rather vulnerable group with higher levels of loneliness. The childless elderly generally did not lack social support in the form of household help, but their social networks appeared to be less capable of providing intensive care. Nonparents were also more likely to receive help from professionals, the welfare system, and non-profit organisations.

In light of this evidence, societies need to create targeted policies that would help elderly nonparents to successfully combat the difficulties they may face. In order to ensure policymaking is as effective and sustainable as possible, more research should be conducted to look at the needs of childless older persons and how they can be met. This information could be valuable even in a wider context, as children are now extremely geographically mobile in today's globalised world, therefore even parents may face a similar situation if their children do not live within reasonable proximity (Schnettler & Wöhler, 2016).

The wellbeing and opportunities of the childless elderly vary according to socio-cultural context. In countries that have a more tolerant view of childlessness, nonparents were generally better off. Another crucial factor was marital status: the never-married or those without a partner usually fared worse. Gender is important, since women overall more frequently received help and other forms of support than men did. Another interesting point is that in terms of social support provision, it is not only about whether the person has children or not, but also about family size and the gender and proximity of any children.

Without a doubt, more research needs to be conducted. It has been predicted that the proportion of long-term childless people will increase further (Buhr & Huinink, 2017; Hoem, Neyer, & Andersson, 2006; Mencarini & Tanturri, 2006; Sobotka, 2005, 2017; Tanturri et al., 2015). Also the populations of all developed countries are ageing, and in combination these factors will pose a challenge to the welfare systems of developed states. Future research should investigate the coping mechanisms that the childless elderly can use to combat possible disadvantages.

Although this review constitutes an extensive methodical search of articles in the selected databases and broad search engines, some articles may have been missed owing to the search terms selected or the limitations of the databases. The scope of the vast majority of the studies was limited to respondents living in independent households, leaving out institutionalised elderly persons, who might need some kind of social support the most. There were only three studies that in any way addressed the situation of the elderly living in institutions: looking at loneliness and social support among elderly people living in nursing homes (Drageset et al., 2011); differences in family caregiving resources of institutionalised and community-living old persons (Gu et al., 2007); the role of children in relation to the psychological well-being of the institutionalised and community-residing elderly (Liu et al., 2012). Furthermore, non-western countries may be underrepresented, as I found results from only one study in Israel (Litwin, 2007), one in Russia and Ukraine (Iecovich et al., 2004), and four studies on China's elderly population (Chou & Chi, 2004; Gu et al., 2007; Liu et al., 2012; Zhang & Liu, 2007). Another possible limitation is that many researchers treated nonparents as a homogeneous group, mainly because of the low numbers of childless in the samples. This means that many of the studies ignored the differences between voluntary childlessness and involuntary childlessness, or between those who did not have children as a result of life circumstances, and those who were unfortunate enough to outlive their own children. Looking at all these nonparents as one group may skew the image of this otherwise heterogeneous group.

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