



Research Article

Swimming Against the Stream: Non-normative Family Transitions and Loneliness in Later Life Across 12 Nations

Mioara Zoutewelle-Terovan, PhD^{1,2,*} and Aart Cornelis Liefbroer, PhD^{1,2,3}

¹Netherlands Interdisciplinary Demographic Institute (NIDI-KNAW), The Hague, The Netherlands. ²University of Groningen/ University Medical Centre, Groningen, The Netherlands. ³Faculty of Social Sciences, VU University Amsterdam, Amsterdam, The Netherlands.

*Address correspondence to: Mioara Zoutewelle-Terovan, PhD, Netherlands Interdisciplinary Demographic Institute (NIDI-KNAW), Lange Houtstraat 19, 2511 CV, The Hague, The Netherlands. E-mail: zoutewelle@nidi.nl

Received: April 26, 2017; Editorial Decision Date: October 13, 2017

Decision Editor: Nicholas G. Castle, PhD

Abstract

Background and Objectives: Relatively little research investigated whether experiences during young adulthood have longlasting consequences for older age loneliness. This article examines whether deviations from culturally based scripts regarding family transitions represent risk factors for later-life loneliness. Moreover, it analyzes whether and in which conditions long-term associations between family transitions and loneliness differ across nations.

Research Design and Methods: The analyses use micro-level data from the Generations and Gender Survey Wave 1 for 12 European countries. The sample comprises 61,082 individuals aged 50–85. The research questions are addressed using a step-wise approach based on linear regression analyses, meta-analyses, and meta-regressions.

Results: Results show that never having lived with a partner and childlessness are most strongly related to later-life loneliness. Whereas early transitions are unrelated to later-life loneliness, the postponement of partnership, and parenthood are associated with higher levels of loneliness compared to having experienced these transitions "on-time". Childlessness is more strongly associated with later-life loneliness in more traditionalist countries than in less traditionalist ones.

Discussion and Implications: This study reveals that individuals with non-normative family transitions are more exposed to loneliness in old age, and that this exposure is related to societal context. In traditionalist contexts, where people rely on families for support, older adults who have experienced non-normative family behavior, and childlessness in particular, may be particularly at risk of loneliness.

Keywords: Meta-analysis, Cross-cultural studies, Family issues, Life course/life span, Well-being

Loneliness, defined as a discrepancy between one's desired and existing quality or quantity of social relationships (Perlman & Peplau, 1982), is a concern for older adults. A vast literature examines the key risk factors associated with later-life loneliness such as lack or loss of partner, economic limitations, and poor health (Fokkema, De Jong Gierveld, & Dykstra, 2012; Hansen & Slagsvold, 2015; Sundström, Fransson, Malmberg, & Davey, 2009; Yang & Victor, 2011). Nevertheless, these studies focus mainly focus on how later-life conditions are associated with loneliness. Life-course scholars, however, argue that experiences during *earlier* life stages could have a long-lasting impact on the lives of individuals (O'Flaherty, Baxter, Haynes, & Turrell, 2016; Wrosch & Heckhausen, 1999). To date, there is relatively little research investigating whether experiences during young adulthood have *long-term consequences* for later-age loneliness.

Entering into a partner relationship and entering into parenthood are key events of young adulthood and have major impacts on individuals' lives (Neugarten, 1979). Some studies show that childless and never-married individuals (i.e., those who have *never* experienced these transitions) are lonelier

[©] The Author(s) 2017. Published by Oxford University Press on behalf of The Gerontological Society of America.

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (http://creativecommons.org/ licenses/by-nc/4.0/), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited. For commercial re-use, please contact journals.permissions@oup.com

in later-life (Dykstra & Keizer, 2009; Fokkema et al., 2012; Koropeckyj-Cox, 1998). Others, however, argue that such nontransitions have no repercussions for well-being (Kohler, Behrman, & Skytthe, 2005). The occurrence of transitions at a less usual (early or late) time of life (henceforth referred to as *off-time* transitions) may also be important. Deviating from societal and familial normative "scripts" regarding the optimal timing of life events can affect whether one is emotionally and economically prepared to engage in certain roles, and how much social support one can generate. Unpreparedness and lack of support may negatively affect later-life well-being (Dykstra & Keizer, 2009; Fokkema et al., 2012; Koropeckyj-Cox, Pienta, & Brown, 2007).

Several studies examine cross-national differences in the relationship between family events and loneliness (Fokkema et al., 2012; Hansen & Slagsvold, 2015; Yang & Victor, 2011), but pay no attention to non-normative family transitions. The consequences for loneliness of the nonor off-time occurrence of family-life events may differ by societal context. The stronger traditional family norms and values and the concomitant emphasis on conformity observed in Eastern and Southern Europe (Inglehart & Baker, 2000; Reher, 2005) may enhance the pressure on individuals to experience normative family transitions, and the transgression of these norms may result in severe social and emotional penalties in these contexts (de long Gierveld & Tesch-Römer, 2012). Further, a lower level of *economic development* in these countries may amplify the negative consequences of off-time transitions, in particular early transitions, because individuals might not yet have been able to achieve financial independence (Balestrino & Ciardi, 2008). Conversely, in Western societies in which individuals' self-expression tends to be central and economic instability less problematic (Inglehart, 2006), norm noncompliance might have fewer undesirable consequences.

Starting from the foregoing premises, we formulate our research questions: (a) *Are deviations from group-defined family behaviors associated with experiences of loneliness in later-life?* (b) *Are there cross-national differences in the association between off-script family patterns and later-life loneliness?* (c) *Can we explain this cross-national variation through cultural differences such as levels of traditionalism and economic development?*

Background and Hypotheses

Life-Course Norms and Age Grading

The life course is age-graded, and both formal norms prescribed in legislation and institutional arrangements and informal norms are part of the societal scripts that guide individuals with regard to the optimal occurrence and timing of major life-events in professional and family domains (Neugarten, 1979; Settersten & Hägestad, 1996). Scripts most often refer to timing (when events occur), ordering (in which order events occur) and quantum (how many events occur) of expected events (Liefbroer & Billari, 2010; Settersten & Hägestad, 1996). Individuals also have a "mental clock" keeping them aware of their alignment with this ideal scenario (Heckhausen, Wrosch, & Fleeson, 2001; Neugarten, 1979), and enabling them to define whether they are "on-time" or "off-time" regarding certain events (Neugarten et al., 1965). Whereas life course in the professional domain is, to a large extent, structured by formal rules and norms, scripts play a more important role in structuring the life course in the family domain (Billari et al., 2011; Settersten, 2003). Several studies showed that individuals acknowledge the existence of lower and upper age limits for entry into a romantic union and parenthood (Billari et al., 2011; Liefbroer & Billari, 2010; Liefbroer, Merz, & Testa, 2015; Settersten & Hägestad, 1996), and considerable variation in age norms exists within and across societal settings.

Consequences of Script Deviation for Loneliness

A range of social, emotional, economic, or normative explanations have been suggested for why deviations from societal of scripts regarding the timing of major family life events may have negative consequences for loneliness. According to Weiss's situational theory (Weiss, 1973), loneliness is the result of relational shortfalls resulting from an unsatisfactory intimate attachment or social network. Individuals who never have a partner or remain childless may be constricted in terms of developing adequate social and emotional ties because they miss out on the opportunities to build relationships as provided by the presence of a partner and/or child. Moreover, social sup*port* theories argue that individuals whose life transitions do not conform to the "ideal" timeline do not benefit from immediate peer support and need to invest additional individual resources to compensate for the resulting shortage (Wrosch & Freund, 2001). Given the centrality of partnership and parenthood in many societal contexts, individuals who do not enter a partnership or remain childless may be stigmatized for transgressing such norms (Thornton & Young-DeMarco, 2001). It may be considered that a person who goes against social customs has not adapted to society and that person may therefore be socially excluded. Social sanctioning may also be applied to individuals who are "off-time" in terms of family formation. The economic model argues that early nuptials and childbearing compromise one's economic situation because education, employment, and income are all negatively affected (Alexander & Reilly, 1981; Moore & Waite, 1977; Ross & Huber, 1985), whereas economic needs are greater. Such early transitions trigger a set of economic disadvantages perpetuated into older adulthood. The same argument can be used for never entering a partner relationship. For childlessness, though, the economic argument could run in the opposite direction, with childlessness leading to economic advantages. Models of emotional immaturity, finally, suggest that "early birds" in marriage and parenthood may be emotionally unprepared for the transition (Marini, 1984). Inability to deal with this emotional distress may lead to an accumulation of negative affect throughout life.

Despite these possible explanations, however, to date, relatively little empirical research has focused on the relationship between non-normative family behavior and laterlife loneliness. Many empirical studies offer strong support for the idea that loneliness is lower among the partnered or married (de Jong Gierveld & Van Tilburg, 2006; Dykstra & Keizer, 2009; Fokkema et al., 2012; Hansen & Slagsvold, 2015; Sundström et al., 2009). Dykstra and de Jong Gierveld (2004) argue that it is not just the lack of a confidant that makes the unmarried lonelier, but that marriage also promotes engagement in partner-related activities, enlarging one's network and facilitating the formation of emotional and social bonds. Parenthood is also seen as a social integrator, and research has shown that the social networks of childless individuals are smaller (Dvkstra, 2006). A considerable body of research has found that parenthood is not related to later-life well-being because no differences between parents and nonparents were found for measures such as life satisfaction (Dykstra & Keizer, 2009), psychological well-being (Koropeckyj-Cox, 1998), and loneliness (Dykstra & Keizer, 2009; Hansen, Slagsvold, & Moum, 2009; Vikström et al., 2011). Still, other studies do find that childless individuals are lonelier than parents (Koropeckyj-Cox et al., 2007; Mullins, Elston, & Gutkowski, 1996). With regard to stigma effects, some studies found that stigmatization occurs for both singleness and childlessness (Byrne, 2000; Houseknecht, 1977). However, the long-term consequences of stigmatization remain unclear.

To date, few studies have examined off-time transitions and their long-term consequences. An early marriage has been associated with adverse health outcomes (O'Flaherty et al., 2016). An early transition to parenthood has been linked to lower well-being (Koropeckyj-Cox et al., 2007). Empirical findings regarding the consequences of postponing family transitions are also scarce. Settersten and Hägestad (1996) report that half their respondents perceived no consequences of missing age-related deadlines, about one-third evoked developmental concerns, and only small numbers mentioned other types of concerns (e.g., interdependency of lives, impact on financial status). Late parenthood was associated with better psychological wellbeing for fathers (Mirowsky & Ross, 2002), and a lower risk of depression and loneliness for mothers (Koropeckyj-Cox et al., 2007). Liefbroer and Billari (2010) found little evidence of social sanctions for those who engage in delayed parenthood (most commonly mentioned social consequences: gossip and being avoided). More severe sanctions (e.g., parental reduction of instrumental or financial help) were rarely mentioned.

Based on the theoretical considerations discussed above, we formulate the first three hypotheses of the study:

H1 — Older adults who have never experienced a family transition (living with partner or parenthood) are lonelier than older adults who have experienced such a transition.

- H2 Older adults experiencing "early" family transitions are lonelier than older adults who experienced family events "on-time".
- H3 Older adults experiencing "late" family transitions are lonelier than older adults who experienced family events "on-time".

Cross-National Differences Regarding Non-normative Family Transitions and Loneliness

Age norms regarding family events vary considerably across countries (Billari et al., 2011; Fokkema et al., 2012). Liefbroer and colleagues (2015) found substantial cross-national variation in disapproval rates of voluntary childlessness across 25 European countries (with stronger disapproval in Eastern European/former communist countries). Older adults' *loneliness* also varies cross-nationally and is more severe in Eastern and Southern than in Western and Northern European countries (Fokkema et al., 2012; Hansen & Slagsvold, 2015; Yang & Victor, 2011).

Deviations from life-course norms may have a stronger impact on loneliness in certain countries. Reher (2005) argues that "strong-family societies" are more conservative and traditional than weak-family ones. Given the greater level of social control, deviations from social customs may have more severe consequences in these traditionalist societies (e.g., Eastern and Southern European nations), which may involve withdrawal of support, social pressure, stigmatization, and even social isolation (Dykstra, 2009; Liefbroer & Billari, 2010). In more individualistic societies, where autonomous choices regarding demographic behavior are more widely accepted (Lesthaeghe, 2010), deviations from life-course norms may be disapproved of rather less, thus resulting in fewer consequences for older adults' loneliness. Differences in economic development and welfare arrangements may also explain cross-national variations in the nexus between non-normative family transitions and loneliness. In countries with less economic security, the transition to family life may represent an investment (Balestrino & Ciardi, 2008) with ulterior socio-emotional and economic benefits. Individuals experiencing non-normative transitions may miss benefits such as love and companionship, intergenerational care provision, combined income and shared goods and expenses, social security benefits (e.g., retirement or disability benefits), tax cuts related to family size and health insurance facilities (Balestrino & Ciardi, 2008; Liefbroer, 2005). Although some of these reductions in benefits may be temporary, others have a more permanent character and perpetuate into older adulthood (e.g., broken relationships with family members, reduced retirement benefits).

These considerations lead us to formulate the final hypothesis:

H4 — In more traditionalist and less economic secure countries, non-normative transitions have a stronger impact on loneliness than in less traditionalist and more prosperous countries.

Method

Sample

For this study, we used nationally representative data from the Generations and Gender Programme (GGP) on individuals aged 18-85 (Fokkema, Kveder, Hiekel, Emery, & Liefbroer, 2016). Wave 1 GGP-data were collected between 2004 and 2009, and offer information on childbearing and relationship histories as well as cross-sectional information on loneliness levels. Given our focus on later life, we selected respondents aged 50 or older. Data on relevant dependent and independent variables were available for 12 European countries: Bulgaria, Belgium, Czech Republic, France, Germany, Lithuania, Norway, Poland, Romania, Russia, Sweden, and Georgia (although geographically Georgia is no part of Europe, it was included in the study because it is a member of the Council of Europe and other Pan-European institutions). Our final sample included 61,082 individuals.

Measurement

Dependent Variable

Loneliness levels were determined by the short (six-item) version of the loneliness scale developed by de Jong Gierveld and Van Tilburg (2006), showing good crossnational psychometric properties (de Jong Gierveld & Van Tilburg, 2010). Dichotomized scores per item were summed and final scores range from 0 (*not lonely*) to 6 (*severely lonely*). The six items are: "I experience a general sense of emptiness", "I miss having people around", "Often, I feel rejected", "There are plenty of people that I can lean on in case of trouble", "There are enough people that I feel close to".

Individual Level Predictors

The "Never" Events

Two dichotomous variables *never living with partner* and *never parent* were constructed to record whether individuals had ever lived with a partner or reported the birth of a biological child (1= *never experienced the event*). We did not make a distinction between whether respondents were married or cohabiting unmarried.

Off-Timed Events

To ascertain whether the occurrence of starting a partner relationship or entering parenthood occurred "off-time", we compared the actual timing of the event with the statistical average age at which these events occurred. Given that these average ages differ strongly between countries, birth cohorts, levels of education, and gender, we first calculated the average at which an event occurred within specific subgroups (e.g., low-educated women born between 1930 and 1939 in France) and compared the actual age for respondents with the average for their subgroup. An event was classified as early (*early partnership*, *early parenthood*) if it occurred at least 2 years before the average age for that subgroup, and as late (*late partnership*, *late parenthood*) if it occurred at least 2 years after the average age for that subgroup. The 2-year boundary was chosen based on preliminary analyses showing that loneliness increased with increased deviation from the ideal age. Using the 2-year boundary was optimal, because using a higher bound made some categories of this variable too small to allow meaningful analysis.

Control Variables

Several potential confounders were included in the analysis. Three age groups were created: *age 50–59*, *age 60–69*, and *age 70 or above*. Respondents' *educational level* was recorded as a continuous measure (ranging from 0 to 100), comparable across countries, using the International Standard Level of Education–ISLED (Schröder & Ganzeboom, 2014). The binary variable *disrupted family before age 15* has a value of 1 if the respondent did not live with both biological parents until age 15. *Father's occupational level* was recorded as a continuous measure based on the International Socio-Economic Index-ISEI of occupational status (Ganzeboom & Treiman, 1996). Finally, gender was included.

Macrolevel Moderators

To measure the level of traditionalism and economic security of countries, we used a classification of cultural values and beliefs developed by Inglehart (Inglehart, 1997, 2006; Inglehart & Baker, 2000) using the World Values Survey (WVS). The traditional/secular-rational dimension highlights the contrast between societies where religious and traditional family values are emphasized and authority is recognized (low scores), and societies where secular, rational, and bureaucratic values become central (high scores). More specifically, traditionalism emphasizes stronger parent-child ties, low level of tolerance toward divorce and abortion, traditional gender roles within the family, preference for families with more children, and social conformity (Inglehart, 2006). The survival/self-expression dimension distinguishes between societies where economic and physical security take priority, levels of interpersonal trust are low, and intolerance is high (low scores), and societies where quality of life, subjective well-being, and self-expression are central (higher scores). For example, individuals are asked to evoke the importance of certain job aspects such as good pay, good job security, pleasant people to work with, not too much pressure, good hours and meeting people. Although this survival dimension reveals subjective perceptions rather than objective estimates of economic security, it is useful because objective measures of economic security are difficult to compare between Eastern and Western European countries during most of the second half of the 20th century as a result of the divisions between the communist and capitalist parts of the continent. Our analyses use the national-level mean scores from Wave 2 WVS conducted in 1990 as they provide information on values closer

to the period when family transitions in our sample were likely to occur. In Georgia, no information was available for 1990, so we used the mean score of 1995 (Wave 3). The data for Germany reflect a weighted average (by population size in 1990) of the separate scores for East and West Germany.

Analytical Approach

A multi-step analysis approach was implemented in this study. First, we estimated the influence of diverse family transitions on older adults' loneliness separately for each country using OLS regression models. To control for possible selection bias, the models included a set of carefully chosen confounders, and were weighted using post-stratification weights (Fokkema et al., 2016). Second, we examined variation in observed effects across countries using random effects meta-analysis (Palmer & Sterne, 2016). In the final step, we examined whether heterogeneity in country effects could be accounted for by specific macro-level moderators. We did so using multivariable meta-regression analysis and a permutation test (10,000 random permutations) with an adjustment for multiplicity, suited for a small number of countries and multiple covariates (Harbord & Higgins, 2008). This approach is preferable to the use of multilevel models, because such models may provide biased estimates given the small number of countries available (Bryan & Jenkins, 2015).

Results

Descriptive Statistics

Complete weighted summary statistics are shown in Table 1. This section comments on the central variables of the study. Loneliness levels differ across Europe, with the lowest average score in Norway (1.0) and the highest in Georgia

(3.5). Generally, Eastern European countries report higher levels of loneliness than Western and Northern nations. Only a small group of respondents had never lived with a partner (8.1%) or remained childless (12.4%). Among individuals who had not experienced at least one family event, 30.0% were both unpartnered and childless. Romania registered the smallest percentage of individuals who had never lived with a partner (4.4%), whereas the highest percentage was observed in Germany (16.6%). Childlessness was least common in Russia (5.8%), but more prevalent in Belgium and Germany (21.9% and 21.2%, respectively). We also found that 22.7% of respondents entered partnerships "early" compared to the standards in their peer group, and 16.1% of respondents did so "late". Regarding the timing of parenthood, 22.3% of the respondents experienced this event "early", whereas 18.1% experienced it "late".

Meta-Analysis of Cross-National Variation

We began by estimating the effects of never having experienced partnership and parenthood on older adults' loneliness separately by country (Table 2). The results show a very clear overall picture; in all countries, those who had never lived with a partner and those who had never had a child were lonelier in later life than those who had experienced these events. The meta-analyses presented in Figures 1 and 2 show that (averaged across countries) both never partnering and childlessness are associated with significantly higher levels of loneliness (.53 for never partner and .50 for childlessness) than having experienced these events. These results support *Hypothesis* 1. The I^2 values in Figures 1 and 2 suggest substantial betweencountry heterogeneity ($I^2 = 68.2\%$ for never partnering and

Table 1. Sociodemographic Profile of Individuals Within Countries (Mean and Prevalence)

Variables	BG	RU	GE	DE	FR	RO	NO	BE	LT	PL	CZ	SE	Total
Loneliness	3.1	2.4	3.5	1.7	1.6	3.1	1.0	1.6	3.0	1.8	2.5	2.1	2.2
Age at interview	62.8	61.9	63.3	63.2	62.4	62.6	62.4	62.5	63.5	62.8	62.2	64.1	62.8
Age 50–59 (%)	39.9	46.4	40.7	37.1	43.5	43	42.8	43	36.5	40.2	44.6	32.5	40.8
Age 60–69 (%)	35.1	31.5	30.8	37.6	32.7	32.2	34	32.4	35.9	34.4	32.5	38.7	34.1
Females (%)	54.3	64.4	57.4	53	51.8	54.8	50.8	51	58.8	55.7	54.7	49.6	54.6
Father's occupation [ISEI]	26.8	36.8	34.0	38.4	35.6	26.2	36.2	38.8	28.0	31.2	35.5	37.8	33.5
Disrupted family < 15 (%)	6.0	29.6	20.2	14.8	12.8	9.9	8.7	7.7	18.5	10.3	10.3	9.5	12.7
Education [ISLED]	40.8	53.4	49.5	47.5	40	37.7	49.6	48.7	46.5	52.0	49.2	52.2	47.3
Never living with partner (%)	8.9	5.4	7.6	16.6	7.2	4.4	5.9	8.8	12.2	6.6	11.4	5.6	8.1
Age first living with partner	22.4	23.6	24.9	25.1	23.6	22.8	24.4	23.4	24.7	23.7	24.0	23.7	23.8
Early partnership 3 years (%)	19.5	20.2	27.9	28.0	21.1	20.0	26.8	21.3	24.4	19.3	20.7	25.7	22.7
Late partnership 3 years (%)	14.4	15.9	20.5	14.9	14.7	16.3	17.2	14.5	16.4	15.9	15.3	17.2	16.1
Never parent (%)	7.1	5.8	9.6	21.2	12.1	12.7	11.7	21.9	16.7	10.7	15.2	10.4	12.4
Age first child	24.2	24.9	26.5	26	25.2	24.7	25.5	26.4	26.1	24.8	25.2	26.2	25.3
Early parenthood 3 years (%)	22.5	20.3	27.4	24.8	21.0	21.2	23.5	21.5	21.8	18.7	21.2	26.3	22.3
Late parenthood 3 years (%)	17.1	18.2	21.0	17.5	18.2	17.7	18.9	15.7	17.8	17.1	18.1	20.2	18.1
Ν	4,248	4,817	3,969	4,374	4,471	5,985	6,436	3,191	4,403	10,523	4,171	4,494	61,082

Note: BG = Bulgaria; RU = Russia; GE = Georgia; DE = Germany; FR = France; RO = Romania; NO = Norway; BE = Belgium; LT = Lithuania; PL = Poland; CZ = Czech Republic; SE = Sweden.

•)										
Variables	BG	RU	GE	DE	FR	RO	NO	BE	LT	PL	CZ	SE
Intercept	3.296***	2.715***	4.222***	2.500***	1.764^{***}	3.432***	1.346^{***}	1.975 * * *	3.230***	2.068***	2.628***	2.668***
Age 50–59	-0.167*	-0.026	-0.303^{***}	$0.124^{#}$	0.125*	-0.045	* 060.0-	$0.120^{#}$	0.241^{***}	0.156^{***}	0.099	0.086
Age 70 or above	0.333***	0.317^{***}	0.234^{**}	0.092	0.037	0.264^{***}	0.163 * *	-0.163*	0.221^{**}	0.173^{***}	0.352***	-0.041
Female	0.197^{***}	0.132*	$0.093^{#}$	-0.177**	0.241^{***}	-0.016	-0.030	0.097	0.020	0.014	0.007	-0.219
Father's occupation [ISEI]	-0.005*	-0.002	-0.004^{*}	-0.007**	-0.001	-0.001	-0.001	-0.001	-0.002	-0.002	0.000	-0.003
Disrupted family <15	0.292*	0.057	0.085	0.103	0.391^{***}	0.095	0.304 * * *	0.252*	0.155*	0.226^{***}	0.384^{***}	0.137
Education [ISLED]	-0.009***	-0.009***	-0.015^{***}	-0.015^{***}	-0.010^{***}	-0.011^{***}	-0.007***	-0.011^{***}	-0.011^{***}	-0.009***	-0.009***	-0.008***
Never living with partner	0.901^{***}	0.613 * * *	0.402**	0.704^{***}	0.251*	0.306**	0.476^{***}	0.661^{***}	0.410^{***}	0.614^{***}	0.505***	0.424
Never children	0.503***	0.456***	0.739***	0.534^{***}	0.406^{***}	0.646^{***}	0.377***	0.191^{*}	0.552***	0.786***	0.527 * * *	0.346^{**}
	0 6		1					-	-			

Table 2. Country Specific Estimates of OLS Regressions – Occurrence

PL = Poland; CZ = Czech Republic; SE = Sweden. LT = Lithuania;Belgium; *Note*: BG = Bulgaria; RU = Russia; GE = Georgia; DE = Germany; FR = France; RO = Romania; NO = Norway; BE = $*** < .001; .001 \le ** < .01; .01 \le * < .05; .05 \le # < .10.$ p-Values: I^2 = 78.2% for childlessness). Although in all countries never partnering was significantly associated with higher levels of loneliness, the strongest effects were observed in Bulgaria, Germany, and Belgium, and the weakest in Romania and France. Further, childlessness was linked with higher levels of loneliness in all countries, but here a clearer geographical pattern could be distinguished: Eastern European countries (Poland, Georgia, and Romania) showed stronger effects than Western and Northern European countries (Belgium, France, Norway, and Sweden).

Next, we examined the effects of off-time transitions on loneliness. The results in Table 3 show quite large crossnational differences. Figures 3 and 4 present the results of the meta-analyses for early and late partnering and show that (on average across countries) both early and late partnering are associated with significantly higher levels of loneliness. However, the overall effect sizes are small (0.05 for early partnering, and 0.13 for late partnering). While the effects of early partnering on loneliness are rather homogenous, the effects of late partnering show moderate heterogeneity (48.7%). At the country level, early partnering was significantly associated with higher levels of loneliness only in Poland and Lithuania, whereas late partnering showed higher levels of loneliness in Lithuania, Germany, France, and Norway.

Analyses focusing on the timing of parenthood showed no overall effect of early parenthood on loneliness (Figure 5). Still, moderate between-country heterogeneity exists ($I^2 = 43.8\%$). Late parenthood (Figure 6) was associated with significantly higher levels of loneliness, but with a relatively small overall effect size (0.15). For late parenthood, cross-country differences showed moderate heterogeneity ($I^2 = 57.5\%$). Significant effects of late parenthood on loneliness are observed in Bulgaria, Romania, Belgium, Poland, and Sweden. Interestingly, effects of off-timed transitions were much smaller than effects of never-events. Because only early partnering was associated with somewhat elevated levels of loneliness, *Hypothesis 2* was only partially confirmed. However, *Hypothesis 3* was confirmed since both late partnering and late parenthood were linked with higher levels of lone-liness.

Explaining Cross-National Heterogeneity

Finally, we examined whether cross-national heterogeneity in the effect of never- and off-time transitions on loneliness could be explained by cross-national variation in traditionalism/secular-rational values and survival/self-expression values. Results of random-effects meta-regressions, in which the size of the effects of never- and off-time effects on loneliness are regressed on these two value dimensions, are presented in Table 4. With one exception, no relationship between the value dimensions and the size of effects is statistically significant. The exception is that the effect size of childlessness (compared to those who experience having a child "on-time") on loneliness is stronger in more traditional societies. To further explore this moderation effect,



Figure 1. Forest plot never partner.



Figure 2. Forest plot never children.

we plotted the relationship between traditionalism values and the size of the "never children" effect (Figure 7). In countries scoring highly on traditionalism, not having children has an almost twice as strong impact on being lonely (.8 on a score ranging between 0 and 6) than in countries scoring low on traditionalism (.4 on the 0–6 range).

In conclusion, *Hypothesis 4* was only partially supported, because the negative effect of never having children on loneliness is stronger the more traditionalist a country is.

Discussion and Implications

Using a life-course perspective, this study advances our knowledge on how deviations from family formation scripts have lasting consequences for later-life loneliness. Moreover, it shows that these consequences differ across European countries, and examines how cultural norms and values may affect them.

Social, emotional, economic, and normative arguments have been put forward for why the nonoccurrence or the

Variables	BG	RU	GE	DE	FR	RO	ON	BE	LT	PL	CZ	SE
Intercept	3.266***	2.688***	4.170***	2.533***	1.679^{***}	3.404***	1.293^{***}	1.859***	3.186***	1.989^{***}	2.611^{***}	2.594***
Age 50–59	-0.167*	-0.028	-0.299***	0.133*	0.114*	-0.041	-0.090*	0.108	0.231	0.157^{***}	0.102	0.067
Age 70 or above	0.327 * * *	0.320^{***}	0.231^{**}	0.089	0.033	0.259 * * *	0.169 * *	-0.162*	0.217^{**}	0.162^{**}	0.342 * * *	-0.063
Female	0.199^{***}	0.131^{*}	$0.101^{#}$	-0.172^{**}	0.244	-0.012	-0.016	$0.108^{#}$	0.020	0.023	0.015	-0.237
Father's occupation [ISEI]	$-0.005^{#}$	-0.002	-0.004*	-0.008**	-0.001	-0.002	-0.002	-0.001	-0.002	-0.002	-0.001	-0.003
Disrupted family <15	0.292*	0.059	0.083	0.090	0.380***	0.103	0.296***	0.239*	0.146^{*}	0.224^{***}	0.374 * * *	0.146
Education [ISLED]	-0.009***	-0.009***	-0.015^{***}	-0.016^{***}	-0.010^{***}	-0.011^{***}	-0.006***	-0.011^{***}	-0.011	-0.009***	-0.008***	-0.008***
Never living with partner	0.903***	0.631^{***}	0.464^{**}	0.801^{***}	0.303**	0.304 * *	0.560***	0.705***	0.520 * * *	0.639***	0.542 * * *	0.370*
Never children	0.537***	0.476^{***}	0.739***	0.443	0.440^{***}	0.683	0.320***	0.270^{**}	0.482 * * *	0.835***	0.524^{***}	0.442**
Early living with partner	-0.011	-0.044	0.037	0.085	0.034	-0.004	0.027	0.040	0.183*	0.144*	0.030	0.022
Late living with partner	0.013	0.015	0.142	0.329^{***}	0.184*	-0.013	0.258***	$0.183^{#}$	0.218^{*}	0.057	$0.177^{#}$	0.062
Early parenthood	0.040	0.068	0.004	-0.202*	$0.150^{#}$	-0.071	0.015	0.169^{*}	-0.128	-0.034	-0.095	0.002
Late parenthood	0.197*	0.119	0.115	-0.009	$0.153^{#}$	0.279 * * *	0.018	0.234*	-0.053	0.280^{***}	0.141	0.279 * *

p-Values: ***<.001; .001 \leq ** < .01; .01 \leq * < .05; .05 \leq # < .10.

Table 3. Country Specific Estimates of OLS Regressions – Timing

1103

off-time occurrence of entry into a partner relationship or entry into parenthood would lead to higher levels of loneliness in later life. In line with our hypothesis (H1), we found that older adults who had not experienced either living with a partner or parenthood were considerably lonelier than older adults who had experienced these events. Interestingly, the effects on loneliness of not experiencing life with a partner and childlessness are quite similar, but also independent. Both the lack of a partner and the lack of children increase loneliness among older adults across a range of countries. Also, in line with our hypothesis (H3), older adults who had experienced entry into a partner relationship or entry into parenthood relatively late were lonelier than those who experienced these events "on-time". However, the consequences for loneliness of being late were much less severe than the consequences of not experiencing these events at all. Finally, no effects for experiencing these events relatively early (H2) were observed. Hence, the economic, emotional, and social support models, which suggest that loneliness penalties arise for "early birds" are not supported by these results. Although it is possible that "early birds" may be stigmatized to some degree, the consequences of this seem to have worn off among older adults. This is not true for those who experience these events at a relatively late age. Once young adults have passed the period during which these events are socially expected, the consequences in terms of their stigmatization may appear gradually under continuous peer and family pressure and penalties. The additional analyses that we conducted suggest that the effects of postponing these events on loneliness become gradually stronger as the postponement continues. The higher levels of loneliness registered for the "late birds" contrast with results from previous studies suggesting that people do not expect negative consequences from the postponement of transitions in their lives (Liefbroer & Billari, 2010; Settersten & Hägestad, 1996). However, these previous studies asked about expected consequences of late partnership and parenthood, whereas our study focused on the actual long-term consequences of late transitions. To further explain our findings, future research may need to integrate qualitative information of how communities react to postponement, and the manner in which individuals experience these reactions.

Our results suggest that the negative consequences of never- and off-time occurrence of partnership and parenthood differ across countries. Although *nonevents* are linked to higher levels of later-life loneliness in all countries, the magnitude of these effects differ across Europe. Neverpartnering showed the strongest effect in Bulgaria and the weakest in France, with no clear geographical pattern. However, the effects of childlessness on loneliness showed a clearer geographical distinction: childless individuals are lonelier in Eastern Europe than in Western Europe and Scandinavia. We further tested whether these cross-national differences are linked to familialistic values and opinions

2tra			14/-1-1-4
Country		ES (95% CI)	weight
Georgia		0.04 (-0.15, 0.23)	4.99
Bulgaria		-0.01 (-0.19, 0.16)	5.68
Russia		-0.04 (-0.20, 0.12)	6.94
Lithuania		0.18 (0.01, 0.35)	6.23
Romania		-0.00 (-0.13, 0.12)	11.86
Poland		0.14 (0.02, 0.27)	11.85
Czech Republic	···· e ····	0.03 (-0.14, 0.20)	5.79
Germany		0.09 (-0.06, 0.23)	7.92
France		0.03 (-0.11, 0.18)	8.01
Belgium		0.04 (-0.12, 0.20)	7.13
Norway		0.03 (-0.08, 0.13)	16.19
Sweden	.	0.02 (-0.13, 0.18)	7.40
Overall (I-squared = 0.0%, p = 0.726)	\diamond	0.05 (0.00, 0.09)	100.00
NOTE: Weights are from random effects a	nalysis		

Figure 3. Forest plot early partner.





about economic insecurity (Inglehart, 2006). Interestingly, we found that the association between childlessness and loneliness was stronger in countries in which people felt more strongly attached to traditional, familialistic values. This suggests that in cultural settings where the importance of the family is stressed, childlessness may be viewed as the strongest deviation from these family norms, with higher levels of loneliness as a result. Our result is in line with the findings of Huijts, Kraaykamp, and Subramanian (2013) showing that parents reveal higher levels of psychological

well-being in countries more tolerant of childlessness. *Off-timed* transitions also revealed interesting crossnational patterns. Loneliness penalties of late partnering were more visible in Western societies (Germany, France, and Norway) and Lithuania, whereas loneliness penalties of late parenthood were spread across Europe (Bulgaria, Romania, Poland, Belgium, and Sweden). However, these cross-national patterns could not be explained by the value dimensions suggested by Inglehart (2006). Maybe the questions used in the WVS to measure these dimensions

rinning barry pa			%
Country		ES (95% CI)	Weight
Georgia		0.00 (-0.19, 0.19)	6.36
Bulgaria	···· • ····	0.04 (-0.13, 0.21)	7.28
Russia		0.07 (-0.09, 0.23)	7.87
Lithuania	····•	-0.13 (-0.30, 0.05)	7.07
Romania		-0.07 (-0.19, 0.05)	10.51
Poland		-0.03 (-0.16, 0.09)	10.34
Czech Republic	····	-0.09 (-0.27, 0.08)	6.93
Germany		-0.20 (-0.36, -0.04)	8.08
France		0.15 (-0.00, 0.30)	8.49
Belgium		0.17 (0.00, 0.34)	7.57
Norway		0.01 (-0.09, 0.12)	12.00
Sweden		0.00 (-0.17, 0.17)	7.49
Overall (I-squared = 43.8%, p = 0.052)	\diamond	-0.01 (-0.07, 0.05)	100.00
NOTE: Weights are from random effect	s analysis		

Figure 5. Forest plot early parenthood.



Figure 6. Forest plot late parenthood.

were too broad, and more fine-grained information on family values in Europe is needed to explain the patterns we observe. Moreover, additional insights may be gained if future research is able to explore traditionalism and selfexpression at the individual level.

Although this study advances knowledge in multiple ways, some caveats must be noted. *First*, one may contest the proposed operationalization of being "off-time". The few studies addressing this issue (Liefbroer & Billari, 2010; Liefbroer et al., 2015; Settersten & Hägestad, 1996) refer to individuals' viewpoint on age-appropriate behavior. Unfortunately, our data do not provide information on individuals' perceptions. Nevertheless, we consider our approach of using the deviation in timing from the stratified mean age at which an event occurs to be an adequate measure of being off-time. *Second*, not all known predictors of loneliness have been included in our regression models. In particular, we decided not to include later-life predictors (e.g., current health, current partner status, current income) simultaneously with early-life predictors given the unclear

	Tradition/secular-	rational	Survival/self-expre	ession
Outcomes	Estimate	p-Adj.	Estimate	p-Adj.
Never living with partner vs ever	.072	.675	025	.889
Never parent vs ever	141	.151	108	.078
Never living with partner vs on-time	.078	.623	021	.934
Never parent vs on-time	177	.041	106	.100
Late living with partner	.052	.546	.064	.130
Early parenthood	017	.941	.014	.843
Late parenthood	083	.222	.007	.982

Table 4. Meta-Regressions Using Cultural Values as Predictors

Note: Models were estimated only for transitions that showed some level of cross-national heterogeneity. p-Adj. = adjusted p value (see Analytical approach section).



Figure 7. Graph meta-regression for never parent effects (moderator = traditionalism).

causal relationship between the variables. To avoid variable collision bias (Elwert & Winship, 2014), we omitted laterage variables from our analysis. However, current family circumstances such as nonresiding with a partner or child do not correlate with any of the variables reflecting the timing of family transitions (Table 5). Moreover, although such later-age circumstances have, in many countries, an impact on loneliness levels, they do not alter the conclusions of this study. Third, selection may be operative because individuals with certain characteristics (e.g., derived from personality or socialization) may end up experiencing outof-script family transitions as well as other types of disruptive behaviors associated with loneliness. Still, our models include a carefully chosen set of childhood and adult circumstances aiming to diminish selection bias. Fourth, the relationships investigated are not discussed across genders. However, our background analyses showed that results are, to a large extent, similar for men and women. Fifth, we were unable to include Southern European countries in our study. Because these countries are often viewed as

Table 5. Correlations Between Current Partner and ParentalSituation and Off-Time Transitions

Variables	Currently having a partner	Currently living with child/children
Early living with partner	.036	045
Late living with partner	.039	.100
Off-time living with partner	.061	.035
(early or late)		
Early parenthood	.026	050
Late parenthood	.034	.209
Off-time parenthood (early or late)	.049	.120

Note: None of the correlations is significant at .05 level.

being very familialistic (Reher, 2005), their inclusion may offer valuable insights. *Sixth*, in future research it might be interesting to examine whether country-level effects differ between cohorts (with younger cohorts showing smaller effects). *Lastly*, our study did not consider aspects regarding migrant groups. With the increase of migrants in many Western European countries, the proportion of inhabitants who hold more traditional family values may increase, and the consequences of the non- or off-time occurrence of family events may resemble that in the more traditional Eastern European countries in our sample. In future research, it would be interesting to pay attention to such within-country sources of variation.

An implication of our findings for policy and practice is that professional care and family support providers should pay particular attention to individuals with non-normative family transitions because they are more prone to feel lonely. Given that loneliness is the strongest predictor of a low quality of life for the aged (Ekwall, Sivberg, & Hallberg, 2005) and has negative consequences in multiple life-domains such as mental and physical health, economic hardship, and mortality (Heinrich & Gullone, 2006), such an approach may improve well-being in a broader sense.

Funding

The research leading to these results has received funding from the European Research Council under the European Union's Seventh Framework Programme (FP/2007–2013)/ERC Grant Agreement n. 324178 (Project: Contexts of Opportunity. PI: Aart C. Liefbroer).

Conflict of Interest

None reported.

References

- Alexander, K. L., & Reilly, T. W. (1981). Estimating the effects of marriage timing on educational attainment: Some procedural issues and substantive clarifications. *American Journal of Sociology*, 87, 143–156. doi:10.1086/227422
- Balestrino, A., & Ciardi, C. (2008). Social norms, cognitive dissonance and the timing of marriage. *The Journal of Socio-Economics*, 37, 2399–2410. doi:10.1016/j.socec.2008.05.002
- Billari, F. C., Goisis, A., Liefbroer, A. C., Settersten, R. A., Aassve, A., Hagestad, G., & Spéder, Z. (2011). Social age deadlines for the childbearing of women and men. *Human Reproduction* (Oxford, England), 26, 616–622. doi:10.1093/humrep/deq360
- Bryan, M. L., & Jenkins, S. P. (2015). Multilevel modelling of country effects: A cautionary tale. *European Sociological Review*, 32, 1–20. doi: 10.1093/esr/jcv1059
- Byrne, A. (2000). Singular identities managing stigma, resisting voices. Women's Studies Review, 7, 13–24.
- 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. doi:10.1007/ s10433-012-0248-2
- de Jong Gierveld, J. D. J., & Van Tilburg, T. (2006). A 6-item scale for overall, emotional, and social loneliness confirmatory tests on survey data. *Research on Aging*, 28, 582–598. doi:10.1177/0164027506289723

- de Jong Gierveld, J., & Van Tilburg, T. (2010). The de Jong Gierveld short scales for emotional and social loneliness: Tested on data from 7 countries in the UN generations and gender surveys. *European Journal of Ageing*, 7, 121–130. doi:10.1007/ s10433-010-0144-6
- Dykstra, P. A. (2006). Off the beaten track childlessness and social integration in late life. *Research on Aging*, 28, 749–767. doi:10.1177/0164027506291745
- Dykstra, P. A. (2009). Older adult loneliness: Myths and realities. *European Journal of Ageing*, 6, 91–100. doi:10.1007/ s10433-009-0110-3
- Dykstra, P. A., & de Jong-Gierveld, J. (2004). Gender and maritalhistory differences in emotional and social loneliness among Dutch older adults. *Canadian Journal on Aging*, 23, 141–155. doi:10.1353/cja.2004.0018
- Dykstra, P. A., & Keizer, R. (2009). The wellbeing of childless men and fathers in mid-life. *Ageing and Society*, **29**, 1227–1242. doi:10.1017/S0144686X08008374
- Ekwall, A. K., Sivberg, B., & Hallberg, I. R. (2005). Loneliness as a predictor of quality of life among older caregivers. *Journal of Advanced Nursing*, 49, 23–32. doi:10.1111/j.1365-2648.2004.03260.x
- Elwert, F., & Winship, C. (2014). Endogenous selection bias: The problem of conditioning on a collider variable. Annual Review of Sociology, 40, 31–53. doi:10.1146/annurev-soc-071913-043455
- Fokkema, T., De Jong Gierveld, J., & Dykstra, P. A. (2012). Crossnational differences in older adult loneliness. *The Journal of Psychology*, **146**, 201–228. doi:10.1080/00223980.2011.631 612
- Fokkema, T., Kveder, A., Hiekel, N., Emery, T., & Liefbroer, A. C. (2016). Generations and gender programme wave 1 data collection: An overview and assessment of sampling and fieldwork methods, weighting procedures, and cross-sectional representativeness. *Demographic Research*, 34, 499–524. doi:10.4054/ DemRes.2016.34.18
- Ganzeboom, H. B. G., & Treiman, D. J. (1996). Internationally comparable measures of occupational status for the 1988 international standard classification of occupations. *Social Science Research*, 25, 201–239. doi:10.1006/ssre.1996.0010
- Hansen, T., & Slagsvold, B. (2015). Late-life loneliness in 11 European countries: Results from the generations and gender survey. Social Indicators Research, 124, 1–20. doi:10.1007/ s1120
- Hansen, T., Slagsvold, B., & Moum, T. (2009). Childlessness and psychological well-being in midlife and old age: An examination of parental status effects across a range of outcomes. *Social Indicators Research*, 94, 343–362. doi:10.1007/ s11205-008-9426-1
- Harbord, R. M., & Higgins, J. P. (2008). Meta-regression in stata. In T. M. Palmer, J. A. C. Sterne, H. J. Newton, & N. J. Cox, (Eds.). *Meta-Analysis in Stata: An Updated Collection from the Stata Journal* (2nd edn, pp. 493–519). College Station, TX: Stata Press.
- Heckhausen, J., Wrosch, C., & Fleeson, W. (2001). Developmental regulation before and after a developmental deadline: The sample case of "biological clock" for childbearing. *Psychology and Aging*, 16, 400–413. doi:10. I037//0882-7974.16.3.400

- Heinrich, L. M., & Gullone, E. (2006). The clinical significance of loneliness: A literature review. *Clinical Psychology Review*, 26, 695–718. doi:10.1016/j.cpr.2006.04.002
- Houseknecht, S. K. (1977). Reference group support for voluntary childlessness: Evidence for conformity. *Journal of Marriage and the Family*, **39**, 285–292. doi:10.2307/351124
- Huijts, T., Kraaykamp, G., & Subramanian, S. V. (2013). Childlessness and psychological well-being in context: A multilevel study on 24 European countries. *European Sociological Review*, 29, 32– 47. doi:10.1093/esr/jcr037
- Inglehart, R. (1997). Modernization and postmodernization: Cultural, economic, and political change in 43 societies (Vol. 19). Princeton, NJ: Princeton University Press.
- Inglehart, R. (2006). Mapping global values. Comparative Sociology, 5, 115–136. doi:10.1163/156913306778667401
- Inglehart, R., & Baker, W. E. (2000). Modernization, cultural change, and the persistence of traditional values. *American Sociological Review*, 65, 19–51. doi:10.2307/2657288
- Kohler, H. P., Behrman, J. R., & Skytthe, A. (2005). Partner + children = happiness? The effects of partnerships and fertility on well-being. *Population and Development Review*, **31**, 407–445. doi:10.1111/j.1728-4457.2005.00078.x
- Koropeckyj-Cox, T. (1998). Loneliness and depression in middle and old age: Are the childless more vulnerable? The Journal of Gerontology, Series B: Psychological Sciences and Social Sciences, 53, S303–S312. doi:10.1093/geronb/ 53B.6.S303
- Koropeckyj-Cox, T., Pienta, A. M., & Brown, T. H. (2007).
 Women of the 1950s and the "normative" life course: The implications of childlessness, fertility timing, and marital status for psychological well-being in late midlife. *International Journal of Aging & Human Development*, 64, 299–330. doi:10.2190/8PTL-P745-58U1-3330
- Lesthaeghe, R. (2010). The unfolding story of the second demographic transition. *Population and Development Review*, **36**, 211–251. doi:10.1111/j.1728-4457.2010.00328.x
- Liefbroer, A. C. (2005). The impact of perceived costs and rewards of childbearing on entry into parenthood: Evidence from a panel study. *European Journal of Population*, **21**, 367–391. doi:10.1007/s10680-005-2610-y
- Liefbroer, A. C., & Billari, F. C. (2010). Bringing norms back in: A theoretical and empirical discussion of their importance for understanding demographic behaviour. *Population, Space and Place*, 16, 287–305. doi:10.1002/psp.552
- Liefbroer, A. C., Merz, E., & Testa, M. R. (2015). Fertility-related norms across Europe: A multi-level analysis. In D. Philipov, A. C. Liefbroer, & J. E. Klobas (Eds.), *Reproductive decision-making in a macro-micro perspective* (pp. 141–163). Dordrecht: Springer.
- Marini, M. M. (1984). Age and sequencing norms in the transition to adulthood. Social Forces, 63, 229–244. doi:10.1093/ sf/63.1.229
- Mirowsky, J., & Ross, C. E. (2002). Depression, parenthood, and age at first birth. *Social Science & Medicine (1982)*, **54**, 1281–1298. doi:10.1016/S0277-9536(01)00096-X
- Moore, K. A., & Waite, L. J. (1977). Early childbearing and educational attainment. *Family Planning Perspectives*, 9, 220–225. doi:10.2307/2134432

- Mullins, L. C., Elston, C. H., & Gutkowski, S. M. (1996). Social determinants of loneliness among older Americans. Genetic, Social, and General Psychology Monographs, 122, 453–473.
- Neugarten, B. L. (1979). Time, age, and the life cycle. *The American Journal of Psychiatry*, **136**, 887–894. doi:10.1176/ajp.136.7.887
- Neugarten, B. L., Moore, J. W., & Lowe, J. C. (1965). Age norms, age constraints, and adult socialization. *American Journal of* Sociology, 70, 710–717. doi:10.1086/223965
- 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. doi:10.1007/s13524-016-0478-6
- Palmer, T. M., & Sterne, J. A. C. (2016). *Meta-analysis in Stata: An updated collection from the Stata journal* (2nd edn). College Station, TX: Stata Press.
- Perlman, D., & Peplau, L. A. (1982). Perspectives on loneliness. In I. A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook* of current theory, research and therapy (pp. 1–18). New York: John Wiley.
- Ross, C. E., & Huber, J. (1985). Hardship and depression. Journal of Health and Social Behavior, 26, 312–327. doi:10.2307/2136655
- Reher, D. S. (2005). Family ties in western Europe strong family and low fertility: A paradox? (pp. 45–76). Netherlands: Springer.
- Schröder, H., & Ganzeboom, H. B. G. (2014). Measuring and modelling level of education in European societies. *European* Sociological Review, 30, 119–136. doi:10.1093/esr/jct026
- Settersten, R. A., Jr., & Hägestad, G. O. (1996). What's the latest? Cultural age deadlines for family transitions. *The Gerontologist*, 36, 178–188. doi:10.1093/geront/36.2.178
- Settersten, R. A. J. (2003). Normative structuring of the life course. In J. T. Mortimer, & M. J. Shanahan (Eds.), *Handbook of the life course* (pp. 81–98). New York: Kluwer Academic Press.
- Sundström, G., Fransson, E., Malmberg, B., & Davey, A. (2009). Loneliness among older Europeans. *European Journal of Ageing*, 6, 267–275. doi:10.1007/s10433-009-0134-8
- Thornton, A., & Young-DeMarco, L. (2001). Four decades of trends in attitudes toward family issues in the United States: The 1960s through the 1990s. *Journal of Marriage and Family*, 63, 1009– 1037. doi:10.1111/j.1741-3737.2001.01009.x
- Vikström, J., Bladh, M., Hammar, M., Marcusson, J., Wressle, E., & Sydsjö, G. (2011). The influences of childlessness on the psychological well-being and social network of the oldest old. *BMC Geriatrics*, 11, 78. doi:10.1186/1471-2318-11-78
- Weiss, R. S. (1973). Loneliness: The experience of emotional and social isolation. Cambridge, MA: MIT Press.
- Wrosch, C., & Freund, A. M. (2001). Self-regulation of normative and non-normative developmental challenges. *Human Development*, 44, 264–283. doi:10.1159/000057066
- Wrosch, C., & Heckhausen, J. (1999). Control processes before and after passing a developmental deadline: Activation and deactivation of intimate relationship goals. *Journal* of Personality and Social Psychology, 77, 415–427. doi:10.1037/0022-3514.77.2.415
- Yang, K., & Victor, C. (2011). Age and loneliness in 25 European nations. Ageing and Society, 31, 1368–1388. doi:10.1037/0022-3514.77.2.415