

# Women's Retirement Intentions and Behavior: The Role of Childbearing and Marital Histories

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**Abstract** Although from a life course perspective women's retirement timing can be expected to be related to family events earlier in life, such as childbirth and divorce, empirical insights into these relationships are limited. Drawing on three-wave panel data, collected in 2001, 2006–2007, and 2011 among Dutch female older workers ( $n = 420$ ) and if applicable their partners, this study examines retirement intentions and behavior in relation to past and proximal preretirement family experiences. The results show that women who postponed childbearing and still have children living at home during pre-retirement years have the intention to retire relatively late. For retirement behavior, this effect was not statistically significant. Ever divorced single women both intend to and actually retire later than continuously married women. Repartnering after a divorce seems to offset the negative divorce effect: retirement timing intentions and behavior of repartnered women did not differ from continuously married women. Also the pre-retirement financial, health, and work opportunity structure—factors that are often central in studies among men—did play an explanatory role. Women who have a less beneficial preretirement financial situation, a better health situation, and challenging work intend to and actually retire relatively late.

**Keywords** Children · Divorce · Life course · Retirement · Women

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## 1 Introduction

Labor force participation of older women has increased considerably during the last decades in almost all OECD countries. This trend reflects the rising labor participation rates in successive cohorts of women, who increasingly stayed in the labor market when having children or returned to the labor market after a period of caring for the children (OECD 2006). Numerous studies have examined how motherhood and marital experiences affect women's labor market behavior during early- and mid-careers (e.g. Brewster and Rindfuss 2000; Drobnič et al. 1999; Van Damme et al. 2009; Vlasblom and Schippers 2004). Relatively little is known about the relationships between women's childbearing and marital experiences earlier in life and their late-career transitions from work into retirement. Insights into these relationships are highly relevant though. In light of population aging in many developed countries, policies are increasingly focused on prolonging the working lives of older individuals (OECD 2006), which raises the importance of understanding variation in retirement timing. At the same time, individual life courses have changed considerably during the last decennia and have become more and more diverse (Liefbroer and Dykstra 2000), raising questions about the interrelationships between earlier life experiences and later life outcomes. This study links these issues, by examining the following research question: *To what extent and how can intended and actual retirement timing of female older workers be explained by their childbearing and marital history experiences?*

From a life course perspective (Elder 1994; Settersten 2003), variation in family histories can be expected to be of importance for understanding differences in women's retirement transitions. The life course perspective proposes that transitions—gradual changes that are generally tied to entering or exiting roles—are closely linked to the lives of others and are embedded within life trajectories, implying that particular periods in life “cannot be adequately understood in isolation from other periods” (Settersten 2003, p. 18). In line with this perspective, scholars have started to investigate the role of earlier life experiences for explaining differences in women's retirement transitions. Insights are still rather fragmented though. Some qualitative studies have paid attention to the role of family histories for understanding women's retirement decisions and outcomes (e.g., August and Quintero 2001; Everingham et al. 2007). Quantitative studies have generally focused on either early life family experiences (Hank 2004; Hank and Korbmacher 2013; Pienta 1999) or the late-career family context (Brown and Warner 2008; Choi 2002; Szinovacz et al. 2001) for explaining women's late-career labor market behaviors. Very few studies have captured fertility or marital trajectories in more detail (e.g., Finch 2014). Moreover, prior studies commonly focused on explaining differences in actual behavior—i.e., labor force participation during late careers or retirement timing—and did not pay attention to more psychological aspects that precede actual retirement timing in the ‘process of retirement’, such as retirement preferences or intentions (Beehr 1986).

This study aims to contribute to our understanding of family histories and women's retirement timing in three ways. First, we examine the relationships between women's family histories and retirement in a more comprehensive way than often has been

done. Not only the role of the timing of childbearing and divorce experiences earlier in life will be examined, but information about the past and present family situation will be combined as well, to measure the impact of family trajectories in more detail. By taking this approach, insights are, for example, acquired regarding both the role of being ever divorced in retirement decision making, and the potential compensating effects of repartnering after a divorce. In this way, complexities are captured that often remain hidden in general marital status measures.

Second, in this study women's retirement intentions and behavior will be examined simultaneously. Most studies solely focus on retirement behavior (e.g., Brown and Warner 2008; Finch 2014; Hank 2004; Henretta et al. 1993; Raymo et al. 2011; Szinovacz and DeViney 2000). Some studies pay attention to retirement intentions (e.g., Honig 1998; Zimmerman et al. 2000), but none of these examine behavior concurrently among the same women. Examining intentions in addition to behavior can, however, be expected to result in a more comprehensive understanding of the way in which women's retirement processes are embedded in the family life course. Prior studies have shown that a considerable share of retirement transitions (around 25–30 %) is perceived as involuntary or forced (Dingemans and Henkens 2014; Szinovacz and Davey 2005; Van Solinge and Henkens 2007), suggesting that control over the retirement transition is often limited. Therefore, experiences earlier in life might be more informative for explaining differences in retirement intentions than for explaining differences in retirement behavior (Beehr 1986).

Third, the relationships between family histories and women's retirement will be estimated both with and without controlling for established correlates of retirement timing and partner characteristics. In the “established modes of retirement” model (Pienta 2003, p. 342)—which has been developed for men—factors like age, pension income, health, and work characteristics are expected to be central predictors of retirement. In the “new modes of retirement” model (Pienta 2003, p. 343)—which has been developed for women—lifelong family responsibilities and spousal characteristics are expected to be more central. By estimating the relationships between family histories and women's retirement with and without taking established correlates of retirement timing (i.e., the preretirement financial, health, and work opportunity structure) and partner characteristics into account, we can assess whether and how the effects of family histories can be explained by these late-career characteristics (cf. Raymo et al. 2011).

In this study, three-wave panel data collected in 2001, 2006–2007, and 2011 among more than 400 Dutch female older workers—aged 50 and over at the first wave—and if applicable their partners will be analyzed to study the relationships between women's family histories and retirement timing. Given that all women were employed at Wave 1, we can study their retirement intentions at Wave 1 and their actual retirement timing in the 10 years after that. Retrospective questions on life histories offer the possibility to study the impact of childbearing and marital histories on retirement. In the Netherlands, the net labor participation rate among female older workers (ages 50–64) has increased noticeably in recent years: from 18 % in the beginning of the 1990s, to 30 % in 2001 and 49 % in 2011 (Statistics Netherlands 2012a). From 2001 to 2007, the mean retirement age of Dutch female employees has been around age 61. Since then the mean retirement age increased to about 63 in 2011 (Statistics Netherlands 2012b).

## 2 Theoretical Background

In the literature on life histories and retirement, past life experiences are generally expected to affect retirement transitions because they shape individual opportunities and constraints later in life (Damman et al. 2011; Raymo et al. 2011). The life course notion of ‘agency within structure’ proposes that individuals actively create their life course within the opportunities and constraints of their social worlds (Settersten 2003), but does not specify how individuals will make their decisions. Studies on retirement therefore often—implicitly or explicitly—incorporate a rational choice framework to formulate hypotheses. If the perceived benefits of retirement exceed the benefits of continued work, older workers will decide to transition into retirement (cf. Van Solinge and Henkens 2014). The theoretical utility of the conceptualization of retirement as a rational decision-making process will, however, be dependent upon the extent to which retirement is the result of personal choice (Wang and Shultz 2010).

As mentioned by Ajzen (1991) in his discussion of the Theory of Planned Behavior “a behavioral intention can find expression in behavior only if the behavior in question is under volitional control” (p. 181/182). According to the Theory of Planned Behavior, attitudes toward a specific behavior, subjective norms with respect to the behavior, and perceived behavioral control—which are founded on beliefs—together shape behavioral intentions. In turn, these intentions in combination with perceived behavioral control are hypothesized to explain differences in behavior (Ajzen 1991). In general, “a person will attempt to perform a behavior if he believes that the advantages of success (weighted by the likelihood of success) outweigh the disadvantages of failure (weighted by the likelihood of failure), and if he believes that referents with whom he is motivated to comply think he should try to perform the behavior” (Ajzen 1985, p. 36). The realization of plans is dependent upon both effort and individual control over the situation.

Following these theoretical considerations, older workers can be expected to form their retirement intentions based on beliefs about retirement (e.g. the belief that retirement will lead to mostly positive or rather negative outcomes), which will be affected by individual life histories and the resulting individual opportunity structure. External and internal factors might, however, restrict the control older workers have over their actual retirement behavior. Studying the relationships between family histories and both retirement intentions and behavior might therefore provide insights into the agency women have in shaping their retirement processes.

### 2.1 Childbearing Histories and Women’s Retirement Timing

The age at which women make the transition into parenthood increased considerably in many countries during the past decennia (Gustafsson 2001). One argument that has been used to link the timing of first birth with the timing of retirement is the career orientation of women (Hank 2004). Women who had their first child relatively late will generally have made more investments in education and their early working career than women who had their first child early (Liefbroer

and Dykstra 2000). Educational investments have been found to be an important predictor of access to jobs involving substantively complex or challenging work (Hyllegard and Lavin 1992), which in turn have been found to be associated with later (intended) retirement (Hayward et al. 1998, 1989; Henkens 1999). Consequently, it can be hypothesized that women who had their first child relatively late (intend to) retire later than women who had their first child relatively early (Hypothesis 1) because of their more beneficial pre-retirement work situation and stronger labor force attachment (Pienta 1999).

The effect of the timing of childbearing cannot be seen in isolation from the preretirement household situation. Women who had their first birth relatively late will be more likely than mothers who had their first birth early to have relatively young children—who might still be living at home—during the preretirement years. Previous research has shown that having children in the household delays women's retirement (Pienta 2003; Szinovacz and DeViney 2000; Szinovacz et al. 2001). The financial needs of dependent children might pose a barrier for women to stop working (Hank 2004; Szinovacz et al. 2001). Moreover, for women who have children living at home, the retiree status might not feel appropriate yet. As shown in a study by Choi (2002), older women who have a child living at home are less likely to define themselves as retired than childless women and the 'child-not-at-home' group, suggesting they are hesitant to view themselves as retirees. Consequently, mothers who still have child(ren) living at home during pre-retirement years are expected to (intend to) retire later than mothers who have a so-called 'empty nest' during these years (Hypothesis 2).

## 2.2 Marital Histories and Women's Retirement Timing

Since the 1960s a rise in divorce rates can be observed in most European countries (González and Viitanen 2009). Divorces have been found to have important consequences for women's financial resources. The low household income of women in the years after divorce (Poortman 2000) might limit the possibilities to retire early. Compared with women who have continuously been married, women who have ever been divorced have been found to have accumulated significantly lower wealth in pre-retirement years, though remarriage partly offsets the negative effects of a prior divorce (Addo and Lichter 2013; Holden and Kuo 1996; Wilmoth and Koso 2002). As noted by Szinovacz and DeViney (2000), "a history of marital disruptions can be expected to lower the economic feasibility of retirement even among remarried individuals" (p. 477). The experience of a divorce might also affect women's social resources. While divorced women are more involved with friends than first married women, they have less contact with neighbors, participate less in social clubs, and are less likely to participate in volunteer work (Kalmijn and Broese van Groenou 2005). Hence, especially for divorced women the social support offered at work (Bossé et al. 1990) can be expected to be highly relevant in terms of their social integration. Retiring early therefore can be expected to be relatively unattractive for divorced women. Based on these arguments, we generally hypothesize that female older workers who have ever been divorced (intend to) retire later than continuously married women (Hypothesis 3).

Marital or partner relationships are highly diverse and dynamic (Coleman et al. 2000; De Graaf and Kalmijn 2003; De Jong Gierveld 2004; Mills 2004). Some divorced women remain single, whereas others will find a new partner and remarry or start cohabiting. Having a partner is likely to affect retirement opportunities of women positively. The partner's financial resources might enable married or cohabiting women to stop working earlier than women who do not live with a partner. Moreover, for women who have a partner the transition into retirement might be more attractive than for women who are single, given that they have their partner to spend their leisure time with (Blau 1998; Blau and Riphahn 1999). We hypothesize that women who are married or cohabit with a partner in preretirement years (intend to) retire earlier than women who do not live with a partner (Hypothesis 4).

### 3 Method

#### 3.1 Sample

The NIDI Work and Retirement Panel data are three-wave panel data collected by the Netherlands Interdisciplinary Demographic Institute among Dutch older workers and (if applicable) their partners. In 2001 (Wave 1), data were collected among a random sample of civil servants aged 50–64 years, and all workers aged 50–64 years of three large Dutch multinational private-sector organizations (active in information and communication technology, retail, and manufacturing). In total 3,899 older workers received a mail questionnaire, including 1053 female workers. Of these women, 611 completed the questionnaire (response rate 58 %). A follow-up study was carried out in 2006–2007 among surviving and traceable participants of the first wave. Of the 574 questionnaires that were sent out to women, 433 were returned (response rate 75 %). The third round of data collection took place in 2011 among all 422 surviving and traceable respondents of the second wave. The wave-three questionnaire was completed by 314 women (response rate 74 %). Given that in the ICT and manufacturing organizations relatively few women aged 50 and over were employed, the large majority of the female respondents worked in the retail industry (i.e., shop personnel) or as civil servants for the central government.

In the survey respondents were, among other things, asked about their retirement intentions (Wave 1), year/age of retirement (Waves 2 and 3), preretirement situation (Wave 1), and life histories (mainly Wave 2). Given that the retrospective data on childbearing and divorce histories were collected during the second wave, the base sample consists of 433 women who at least participated in the first and second wave of data collection. Women who lacked critical information on the dependent variables (3 % of base sample,  $n = 13$ ) were removed from the sample, resulting in an analytic sample of 420 women, who were on average 53.9 years old at Wave 1 (age range is 50–62 years). A partner questionnaire was available for 90 % of the respondents who were living with a partner at Wave 1 ( $n = 286$ ).

## 3.2 Measures

### 3.2.1 *Dependent Variables*

Early retirement *intentions* were measured at Wave 1 by means of four questions that constitute an extended version of the scale used by Henkens (1999): Do you intend to stop working before age 65? (1 = *no*, 2 = *I don't know (yet)*, 3 = *yes*); At which age do you want to stop working? (reversed); Do you intend to continue working after you reach the age of 60? (1 = *yes, certainly* to 5 = *no, certainly not*); If you were able to choose, at what age would you like to stop working? (reversed). The responses to these items clearly reflect the early retirement culture in the Netherlands at the beginning of the 21st century: Only a small percentage of the studied women (9 %) intends to continue working until the Dutch public pension age, which was age 65 in 2001. The majority intends to retire considerably earlier. The median age the studied women want to stop working is 60. Given that response categories differed between the items, an aggregated retirement intention measure was constructed by calculating the mean score of the available standardized items ( $\alpha = 0.87$ ). We standardized the scale to obtain effect sizes for the dummy variables in the analyses. Higher scores on the scale indicate that respondents are more inclined to retire early.

At Wave 1, all studied women were employed at one of the participating organizations. Based on information provided during Waves 2 and 3 retirement behavior—that is, whether and when (age) respondents retired—was determined. Respondents were considered as retired if they exited their job by making use of an (early) retirement arrangement during the study period, which implies they shifted from receiving wages to receiving an early retirement benefit or pension income. Women who did not yet retire at Wave 3 (or at Wave 2 if they did not participate at Wave 3) were treated as right-censored. Of the studied women, 70 % retired within the time period they were observed. Their mean retirement age was 59.70 years ( $SD = 2.50$ ).

### 3.2.2 *Independent Variables*

To measure *childbearing histories*, respondents were asked at what age they became a mother for the first time (if applicable). Responses were coded into three categories: (1) childless, (2) early childbearing, and (3) late childbearing. We distinguish between 'early' and 'late' childbearing by the upper quartile of the age of first birth in the sample (age 27). By combining the childbearing history information with characteristics of the household composition at Wave 1—that is, whether the respondent has children living at home—different *child-rearing career* groups were distinguished that reflect both past and present experiences with respect to having children in the household: (1) childless, (2a) early childbearing—empty nest, (2b) early childbearing—child at home, (3a) late childbearing—empty nest, (3b) late childbearing—child at home (see Table 1 for descriptive statistics). We used information about the respondent's age when the last child left the parental

**Table 1** Descriptive sample statistics

Variables	Full sample $n = 420$ (Partner variables $n = 286$ ) M (SD) or % <sup>a</sup>	Person-Years $n = 2841$ (Partner variables $n = 1870$ ) M (SD) or % <sup>a</sup>
Childbearing history		
No children	23.1	23.2
Early first birth ( $\leq 27$ )	60.5	59.7
Late first birth ( $> 27$ )	16.4	17.1
Child-rearing career (past & present)		
No children	23.1	23.2
Early first birth—empty nest	52.1	54.8
Early first birth—child at home	8.3	4.8
Late first birth—empty nest	6.9	12.3
Late first birth—child at home	9.5	4.9
Marital history		
Never married	9.8	10.4
Married—never divorced	62.1	61.0
Ever married—ever divorced	23.8	24.8
Widowed	4.3	3.8
Marital career (past & present)		
Never married, no partner	8.6	9.0
Married—never divorced <sup>b</sup>	64.3	63.1
Ever divorced, repartnered	11.2	10.4
Ever divorced, no partner	12.6	14.4
Widowed, no partner	3.3	3.0
Age	53.92 (2.67)	56.78 (3.16)
Wealth		
Low (<50,000 guilders)	31.2	32.2
Middle	19.0	19.7
High (>200,000 guilders)	39.0	37.0
Missing	10.7	11.1
Perceived pension shortage		
Yes	46.4	48.4
Don't know	26.0	25.6
No	27.6	26.0
Subjective health	4.02 (0.80)	4.05 (0.76)
Education	10.85 (2.68)	10.95 (2.77)
Years in labor force	29.51 (8.38)	32.34 (8.60)
Subjective work challenge	3.07 (0.93)	3.12 (0.94)
Number of work hours	30.26 (9.27)	30.83 (9.03)
Partner variables <sup>c</sup>		
Age difference partners	3.02 (3.90)	3.01 (3.73)
Subjective health partner	4.09 (0.80)	4.10 (0.82)



**Table 1** continued

Variables	Full sample $n = 420$ (Partner variables $n = 286$ ) M (SD) or % <sup>a</sup>	Person-Years $n = 2841$ (Partner variables $n = 1870$ ) M (SD) or % <sup>a</sup>
Income partner	1732.85 (643.11)	1724.65 (649.60)
Work status partner		
Not working	29.4	25.4
Intends to retire early (<age 65)	56.3	57.5
Intends to retire late ( $\geq$ age 65)	14.3	17.1

<sup>a</sup> No standard deviations are displayed for binary variables

<sup>b</sup> This group also includes 5 never married and 4 widowed women who are living with a partner

<sup>c</sup> Based on the partner questionnaire,  $n = 286$

home to construct a time-varying measure of child-rearing careers, which was included in the models for retirement behavior.

To measure *marital histories* information about the marital status at Wave 1 is combined with retrospective information about divorce histories (i.e., whether respondents have ever been divorced). Based on this information, the following categories were distinguished: (1) never married, (2) married and never divorced, (3) ever divorced, and (4) widowed. By combining these marital histories with information about the preretirement partner status (i.e., whether the respondent lives with a partner), we further divided the 'ever divorced' group into (3a) those who re-partnered, and (3b) those who remained single, to construct a measure of *marital careers*. Unmarried cohabitation is uncommon for the studied cohort, therefore, we do not distinguish between married and cohabiting women. The few never married ( $n = 5$ ) and widowed ( $n = 4$ ) women who live with a partner, were grouped with the married women in the marital careers measure.

Models are estimated with and without controlling for established correlates of retirement timing, which were measured at Wave 1. In all models the respondents' *age* is controlled for, either as a time-constant (intention models) or a time-varying (behavior models) variable. In the retirement literature, employees' financial and health situation have been shown to be highly relevant for understanding retirement (Byles et al. 2013; Schalk et al. 2010). Two measures of the preretirement financial situation were used. The respondents were asked to estimate their total *wealth* (i.e., own house, savings, stocks, etc., minus debts/mortgage; 1 = *less than 10,000 guilders* [ $\pm 4500$  Euros] to 7 = *more than 1 million guilders* [ $\pm 450,000$  Euros]); responses were coded into four categories. Moreover, respondents were asked whether they perceive to have a *pension shortage* by the question "Do you think you have sustained pension shortcomings during your career" (1 = *yes*; 2 = *don't know*; 3 = *no*). The preretirement *subjective health* situation was measured by the question "How would you characterize your health in general?" (1 = *very good* to 5 = *very poor*). The variable was recoded in such a way that higher values reflect a better health situation.

Additionally, we account for several work-related predictors of retirement. The respondent's highest *educational degree* (1 = *elementary education* to 7 = *university*) was recoded into the minimum number of years necessary to reach the respective educational levels (i.e., 6–17 years). Regarding their work histories, women were asked at Wave 1 to indicate the age at which they started working and for how many years in total they have been out of the labor force after that (if applicable). We used this information to calculate the *number of years spent in the labor force* at Wave 1. In the models for retirement behavior, this measure is included as a time-varying covariate. Prior research has shown that *subjective work challenge* is an important predictor of (intended) retirement timing (e.g., Henkens 1999). Work challenge was measured by a scale based on the following three items ( $\alpha = 0.76$ ): The work that I am doing is not very challenging; My work is characterized by many challenging tasks (reversed); The work that I am doing has become more and more boring and routine (1 = *completely agree* to 5 = *completely disagree*). High scale scores reflect higher levels of subjective work challenge. Given that part-time work is common among women in the Netherlands, we control for the weekly *work hours* of the respondents. Information on work hours was provided by the participating organizations (range 0.10–1.00, where 1 represents a full-time work week). We multiplied these values by 40 to obtain the formal number of work hours per week.

Among women who live with a partner, characteristics of the partner are incorporated in the analyses. In line with the life course notion of 'linked lives', various studies have shown that women's retirement is related to partner characteristics (e.g., Denaeghel et al. 2011; Pienta 2003; Szinovacz and DeViney 2000)—such as age, health, and income—and retirement transition of the spouse (e.g., Henretta et al. 1993; Moen et al. 2005; Smith and Moen 1998; Szinovacz 2002). By subtracting the respondent's age from the partner's age, the *age difference* between partners was determined. The *partner's subjective health* was measured by asking the partner the following question: "How would you characterize your health in general?" (1 = *very good* to 5 = *very poor*; reversed). To determine the *partner's net monthly income*, we used the class averages of the reported income (1 = *no income* to 7 = *more than 5000 Guilders*) and transformed these values to Euros. The following categories were distinguished to measure the *partner's work status*: (1) not working, (2) working, expects to retire before the public pension age of 65 (reference category), (3) working, expects to retire late (at age 65 or later).

In general item non-response was low (<3.6 %) and dealt with using single-regression imputation (STATA command *impute*). On the wealth variable item non-response was higher (10.7 %) and missing values were therefore coded into a separate category.

### 3.3 Analyses

Linear regression models were estimated to study the relationships between family experiences and retirement intentions. Given that the information on retirement behavior is available in discrete time units (i.e., ages), we turned to discrete-time event history models to test our hypotheses regarding retirement behavior (Mills

2011). The data were reorganized into a person-year file. Each year the respondent was observed—from the age at Wave 1 until the age of retirement/right censoring—contributes an observation to the data. Left-truncation was accounted for using the age at Wave 1 as the moment respondents enter the study. Respondents need to be under observation to be included in the risk set (Guo 1993). The person-year file is analyzed by logistic regression models, in which the occurrence of an event (i.e., retirement) rather than experiencing no event is the dependent variable. Duration dependency is assessed using dummy variables of age groups in the model. To allow for unobserved heterogeneity, a random effect was included in the model, which corresponds to unobserved characteristics that are specific to an individual and fixed over time (Steele 2005). Organizational dummy variables were included in all models to control for potential organizational effects.

## 4 Results

Table 2 shows the results of the multivariate linear regression analyses to explain retirement intentions at Wave 1. In Table 3, the discrete-time event history models for explaining retirement behavior are presented. The statistical models are estimated in four steps. In the first step, the relationships between childbearing and marital history experiences and retirement are examined (a Models). In the second step, the childbearing and marital history models are extended by also taking the preretirement household situation into account (b Models). In the third step, we added measures of the preretirement financial, health, and work opportunity structure to the equations to assess the extent to which the relationships between family experiences and retirement can be explained by these factors (c Models). In the fourth step, the model is solely estimated for women who live with a partner and partner characteristics are incorporated (d Models).

### 4.1 Retirement Intentions

The results of Model 1a in Table 2 show that childless women and women who made the transition into parenthood relatively late do not differ from women who had their first birth earlier in terms of their score on the retirement intention scale. When the preretirement family situation is taken into account (see Model 1b), group differences become more pronounced. The findings suggest that especially women who made the transition into parenthood relatively late and still have children living at home during preretirement years intend to retire later than those in the reference group (i.e., women who had their first child early and have an 'empty nest' during preretirement years). Given that we standardized the retirement intention scale, the coefficients of the dummy variables reflect effect sizes in terms of Cohen's *d*. The Cohen's *d* value is  $-0.38$ , which is a medium effect. Retirement intentions of women in the 'early first birth—child at home' group did not differ significantly from those in the reference group.

Regarding marital histories, the results of Model 1a clearly show that women who have ever been divorced intend to retire later than women who have

**Table 2** Linear regression models of retirement intentions (four-item scale, standardized), coefficients and standard errors

Variable	Model 1a full sample		Model 1b full sample		Model 1c full sample		Model 1d living with partner	
	B	SE	B	SE	B	SE	B	SE
Intercept	-0.20 <sup>†</sup>	0.11	-0.16	0.11	-0.28*	0.13	-0.24	0.19
Age at baseline (standardized)	-0.26***	0.04	-0.27**	0.05	-0.29***	0.05	-0.23***	0.06
Childbearing history								
No children	0.03	0.13						
Early first birth (≤27)	Ref.							
Late first birth (>27)	-0.21 <sup>†</sup>	0.13						
Child-rearing career (past & present)								
No children			-0.00	0.13	-0.14	0.13	-0.06	0.18
Early first birth—empty nest			Ref.		Ref.		Ref.	
Early first birth—child at home			-0.14	0.16	-0.15	0.16	-0.23	0.20
Late first birth—empty nest			-0.01	0.18	0.01	0.18	-0.05	0.24
Late first birth—child at home			-0.38*	0.16	-0.36*	0.15	-0.49**	0.19
Marital history								
Never married	-0.32 <sup>†</sup>	0.17						
Married—never divorced	Ref.							
Ever married—ever divorced	-0.43***	0.11						
Widowed	-0.46*	0.22						
Marital career (past & present)								
Never married, no partner			-0.41*	0.18	-0.38*	0.18		
Married—never divorced <sup>a</sup>			Ref.		Ref.		Ref.	
Ever divorced, repartnered			-0.16	0.14	-0.08	0.14	0.04	0.18
Ever divorced, no partner			-0.71***	0.14	-0.51***	0.14		
Widowed, no partner <sup>b</sup>			-0.56*	0.25	-0.52*	0.24		

Table 2 continued

Variable	Model 1a full sample		Model 1b full sample		Model 1c full sample		Model 1d living with partner	
	B	SE	B	SE	B	SE	B	SE
Wealth								
Low (<50,000 guilders)			Ref.		Ref.		Ref.	
Middle			0.19	0.12	0.19 <sup>†</sup>	0.11	0.11	0.17
High (>200,000 guilders)			0.27*	0.11	0.23*	0.10	0.25 <sup>†</sup>	0.14
Missing			0.04	0.15	-0.11*	0.04	-0.07	0.20
Perceived pension shortage								
Yes			Ref.		Ref.		Ref.	
Don't know			0.19 <sup>†</sup>		0.19 <sup>†</sup>		0.34*	0.14
No			0.23*		0.23*		0.25 <sup>†</sup>	0.13
Subjective health (standardized)			-0.11*		-0.11*		-0.07	0.06
Education (standardized)			-0.02		-0.02		0.02	0.07
Years in labor force (standardized)			0.11*		0.11*		0.11 <sup>†</sup>	0.06
Subjective work challenge (standardized)			-0.21***		-0.21***		-0.23***	0.06
Number of work hours (standardized)			-0.12*		-0.12*		-0.11	0.06
Age difference partners (standardized)							0.12 <sup>†</sup>	0.06
Subjective health partner (standardized)							0.02	0.06
Income partner (standardized)							0.12 <sup>†</sup>	0.06
Work status partner								
Not working							-0.14	0.16
Intends to retire early (<age 65)							Ref.	
Intends to retire late (≥age 65)							-0.43**	0.17
R <sup>2</sup>	0.21		0.24		0.34		0.28	
F	11.98		10.59		9.19		4.31	

Table 2 continued

Variable	Model 1a full sample		Model 1b full sample		Model 1c full sample		Model 1d living with partner	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
<i>N</i>	420		420		420		286	

The dependent variable and continuous independent variables are standardized. In all models organization is controlled for by including organizational dummy variables. Retirement intention—high scores indicate that respondents are more inclined to retire earlier

<sup>a</sup> This group also includes 5 never married and 4 widowed women who are living with a partner

<sup>b</sup> The group of widowed women is very small ( $n = 14$ ) so the coefficients should be interpreted with caution

†  $p < 0.10$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

**Table 3** Discrete-time logistic regression models of retirement behavior, coefficients and standard errors

Variable	Model 2a full sample		Model 2b full sample		Model 2c full sample		Model 2d living with partner	
	B	SE	B	SE	B	SE	B	SE
Intercept	-4.94***	0.39	-4.95***	0.39	-3.88***	0.78	-4.93***	1.19
Age category <sup>a</sup>								
50-55	Ref.		Ref.		Ref.			
56-57	2.30***	0.35	2.31***	0.35	2.31***	0.35	2.56***	0.47
58-59	2.62***	0.36	2.64***	0.36	2.67***	0.37	3.13***	0.52
60-61	3.37***	0.40	3.42***	0.40	3.49***	0.42	4.09***	0.62
62-63	4.34***	0.51	4.44***	0.50	4.59***	0.53	5.07***	0.79
64-65	4.77***	0.69	4.90***	0.68	5.11***	0.70	5.60***	1.02
Childbearing history								
No children	0.05	0.20						
Early first birth (≤27)	Ref.							
Late first birth (>27)	-0.32	0.20						
Child-rearing career (past & present) <sup>a</sup>								
No children			0.02	0.20	-0.19	0.22	-0.02	0.31
Early first birth—empty nest			Ref.		Ref.		Ref.	
Early first birth—child at home			-0.00	0.41	0.01	0.42	-0.17	0.52
Late first birth—empty nest			-0.33	0.22	-0.27	0.23	-0.39	0.31
Late first birth—child at home			-0.53	0.47	-0.60	0.49	-0.68	0.57
Marital history								
Never married	-0.20	0.29						
Married—never divorced	Ref.							
Ever married—ever divorced	-0.22	0.18						
Widowed	-0.54	0.38						

Table 3 continued

Variable	Model 2a full sample		Model 2b full sample		Model 2c full sample		Model 2d living with partner	
	B	SE	B	SE	B	SE	B	SE
Marital career (past & present)								
Never married, no partner			-0.30	0.31	-0.31	0.32		
Married—never divorced <sup>b</sup>			Ref.		Ref.		Ref.	
Ever divorced, repartnered			0.12	0.23	0.16	0.24	0.27	0.33
Ever divorced, no partner			-0.58*	0.25	-0.39	0.26		
Widowed, no partner <sup>c</sup>			-0.78 <sup>†</sup>	0.43	-0.70	0.44		
Wealth								
Low (<50,000 guilders)			Ref.		Ref.		Ref.	
Middle			0.36 <sup>†</sup>	0.21	0.36 <sup>†</sup>	0.19	0.43	0.31
High (>200,000 guilders)			0.33 <sup>†</sup>	0.19	0.33 <sup>†</sup>	0.19	0.36	0.27
Missing			-0.18	0.26	-0.18	0.26	-0.05	0.36
Perceived pension shortage								
Yes			Ref.		Ref.		Ref.	
Don't know			0.30	0.20	0.30	0.20	0.26	0.26
No			0.43*	0.18	0.43*	0.18	0.37	0.24
Subjective health			-0.23*	0.10	-0.23*	0.10	-0.22	0.14
Education			0.01	0.03	0.01	0.03	0.06	0.05
Years in labor force <sup>a</sup>			0.02 <sup>†</sup>	0.01	0.02 <sup>†</sup>	0.01	0.02	0.01
Subjective work challenge			-0.21*	0.09	-0.21*	0.09	-0.16	0.12
Number of work hours			-0.01	0.01	-0.01	0.01	-0.02	0.01
Age difference partners							-0.01	0.03
Subjective health partner							-0.06	0.13
Income partner							0.00	0.00



**Table 3** continued

Variable	Model 2a full sample		Model 2b full sample		Model 2c full sample		Model 2d living with partner	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Work status partner								
Not working							0.16	0.27
Intends to retire early (<age 65)							Ref.	
Intends to retire late (≥age 65)							-0.46	0.31
Lnsig2u	-3.44	9.29	-2.67	4.06	-2.41	3.31	-0.95	1.28
Wald $\chi^2$	82.56		87.10		90.11		53.54	
Number of observations	2841		2841		2841		1870	
Number of groups	420		420		420		286	

In all models organization is controlled for by including organizational dummy variables. Retirement behavior—high scores indicate that respondents have a higher chance of retirement

<sup>a</sup> Time-varying covariate

<sup>b</sup> This group also includes 5 never married and 4 widowed women who are living with a partner

<sup>c</sup> The group of widowed women is very small ( $n = 14$ ) so the coefficients should be interpreted with caution

†  $p < 0.10$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

continuously been married, which supports Hypothesis 3. The timing of the divorce also seems to play a role. While the general effect of being ever divorced is  $-0.43$ , the effect is  $-0.27$  ( $t(409) = -1.87$ ,  $p = 0.062$ ) for those who divorced before age 40, and  $-0.59$  ( $t(409) = -4.03$ ,  $p < 0.001$ ) for those who divorced at age 40 or later (not shown in Table). In Model 1b, the group of women who have ever been divorced is subdivided into those who repartnered and those who remained single after the divorce. The results suggest that repartnering can compensate the effect of divorce on retirement intentions. Whereas ever divorced single women intend to retire later than continuously married women, for divorced women who repartnered the contrast is not statistically significant. In terms of Cohen's  $d$ , the effect size for single divorced women is  $-0.71$ , which is relatively large. The difference between the two 'ever divorced' groups is statistically significant ( $b = -0.55$ ,  $t(407) = -3.07$ ,  $p = 0.002$ ). Single widowed women as well as single never married women are also found to intend to retire later than continuously married women. As expected in Hypothesis 4, the results generally show that not living with a partner is associated with intentions to retire relatively late. Among women who do not live with a partner, having children does not seem to play an important role for explaining differences in retirement intentions. Additional analyses (not reported in Table) show that the retirement intentions of single mothers do not differ significantly from the retirement intentions of single women without children.

The pre-retirement financial, health, and work situations are related to retirement intentions in the expected way (see Model 1c). Women who have a better financial situation—wealthier women and those without a pension shortage—are more inclined to retire early than women whose financial situation is poorer. A better health situation, a more challenging job, and a larger number of weekly work hours are related to the intention to retire relatively late. The more years women have been engaged in paid work over the life course, the earlier they intend to retire. The effect of educational level is not statistically significant. Most coefficients of the child-rearing and marital career variables hardly change when the measures of the preretirement situation are added to the models.

The retirement intentions of women who live with a partner are associated with the characteristics of the partner (see Model 1d). Especially, the retirement intentions of the partner seem to be of importance. Women whose partner intends to retire relatively late are more likely to intend to retire late themselves. The coefficients for the age difference between partners and the income of the partner are strictly not statistically significant, but in the expected direction. The subjective health of the partner does not seem to play a role in the retirement intentions of the studied women. When controlling for partner characteristics, the contrast of the 'late first birth—child at home' group remains statistically significant.

## 4.2 Retirement Behavior

The results of the discrete-time event history analyses for explaining retirement behavior are presented in Table 3. As expected, age is a clear predictor of retirement. The older a woman is, the higher her retirement chances. The effects of family histories are less pronounced. For childbearing histories none of the group

differences are statistically significant (see Model 2a). When taking the preretirement family situation into account (see Model 2b), child-rearing careers still are not related to retirement timing. Consequently, no support was found for Hypotheses 1 and 2.

With respect to marital histories, the results of Model 2a show that ever divorced and continuously married women do not differ significantly in terms of their retirement behavior, so no support is found for Hypothesis 3. Nevertheless, when the group of divorced women is studied in more detail (see Model 2b), we see that those who remained single after the experience of a divorce retire later than continuously married women. The effect for women who repartnered after a divorce is not statistically significant. As expected in Hypothesis 4, when comparing all women who do not live with a partner with women living with a partner (not shown in Table), the results show that single women generally retire later than women living with a partner. Retirement behavior does not differ significantly between single women who have and single women who do not have children.

In Model 2c, measures of the preretirement financial, health, and work situation are added to the model. Women who perceive to have a pension shortage retire later than those who perceive to have no pension shortage. A good health situation is found to be associated with lower chances to retire. Having a challenging job is related to retirement behavior as well: The more challenging women's jobs are, the later they retire. The effects of wealth, education, years in the labor force, and preretirement work hours are not statistically significant. When the measures of the preretirement financial, health, and work situation are added to the model the coefficient of the 'divorced—no partner' group is no longer significant, suggesting that the effect is mediated by these variables. Among women who live with a partner, none of the studied partner characteristics has a statistically significant effect on retirement behavior (see Model 2d).

## 5 Discussion

While in studies on women's employment during early- and mid-careers the role of childbearing and marital transitions has received considerable attention, we know relatively little about the role of family histories for explaining variation in women's retirement transitions during late careers. Insights into these relationships are highly relevant, however, both in light of the policy aims for prolonged employment of older workers (OECD 2006) and in view of the changes in family life courses that have been observed during the twentieth century, such as the postponement of childbearing and the rise of divorce rates (Liefbroer and Dykstra 2000). To improve our understanding of the role of family histories in women's retirement transitions, panel data collected between 2001 and 2011 among older working women in the Netherlands were analyzed. The findings show that early retirement was common practice during the last decade among Dutch female employees. Both the median intended retirement age reported in 2001 and the median actual retirement age of those who retired during the observation period was 60, which is considerably lower than the public pension age (i.e., age 65 during these years). Both child-rearing and

marital careers appeared to play a role for explaining differences in retirement processes among women.

Regarding childbearing histories, the research findings suggest that especially women who made the transition into parenthood late (i.e., after age 27) and still have children living at home during preretirement years intend to retire relatively late. Interestingly, women's educational level, years in the labor force, work challenge, and work hours—all potential indicators of career orientations—did not explain these differences in retirement intentions between the groups of mothers. The general effect of the timing of first birth was in the same direction as in the study of Hank (2004), but neither statistically significant for retirement intentions nor behavior. Even though childless women generally fare better than mothers in terms of pension building (Ginn 2003; Ginn and Arber 2002), they did not differ from mothers in terms of their intended and actual retirement timing in this study. While childless women may have acquired more pension benefits over the life course, they might also be more career oriented (Szinovacz et al. 2001). Probably, due to these opposing mechanisms, no overall effect is found.

With regard to marital histories, women who have ever been divorced were found to intend to retire later than continuously married women. Especially, women who experienced a divorce later in mid-life (i.e., after age 40) intended to retire relatively late, which might reflect the fact that these women have had less time to recover from or adapt to the divorce experience. In line with prior studies showing that repartnering may function as a strategy to compensate the negative financial consequences of a divorce (e.g., Dewilde and Uunk 2008; Jansen et al. 2009; Wilmoth and Koso 2002), our study results suggest that also in terms of retirement timing, re-partnering may be perceived as a strategy to offset the negative divorce effects. Retirement timing intentions and behavior of women who repartnered after a divorce did not differ from continuously married women. For women who remained single after the divorce, continued work seems to be the general strategy to deal with the losses associated with divorce: they both intend to and actually retire later than continuously married women. Generally, the findings highlight the importance of having a partner for understanding differences in women's retirement intentions and behavior. Next to delaying retirement, another way in which women might extend their working lives—which is not included in this study—is by re-entering paid work after making use of an (early) retirement arrangement. Examining the relationships between women's family histories and engagement in "bridge employment" might be a fruitful research area for future studies.

Studying retirement intentions in addition to retirement behavior has proven to be highly relevant. As expected most of the hypothesized predictors were found to explain differences in retirement intentions, whereas for retirement behavior the effects often were less pronounced. Earlier studies suggest that retirement intentions are not always reflected in actual behavior (Henkens and Tazelaar 1997; Raymo et al. 2010). Relationships between family histories and retirement may be thwarted during late careers. Most likely, the Dutch retirement context during the last decade plays an important role here. In the beginning of the 21st century, there still was a strong "early exit culture" in the Netherlands (De Vroom 2004, p. 120). Dutch employers offered few opportunities for later retirement, and early retirement

programs were designed in such a way that leaving the workforce at early retirement age was an offer that older workers could not refuse (Van Solinge and Henkens 2010). During this period, many workers retired earlier than they intended. In the last years, the Dutch government has implemented several policy changes to reverse the early exit culture and to make continued work financially more attractive for older workers. For example, in 2006 a new law was introduced, in which all tax facilities to stop working before age 65 are abolished for cohorts born after 1949. As a result, especially among the younger cohorts studied, many workers retired later than the intended retirement age they reported a decade ago. Contextual forces seem to have limited the possibilities for Dutch women to realize their retirement intentions during the last decade.

In this study, the relationships between family histories and women's retirement were examined with and without taking established correlates of retirement timing into account, to examine whether and how the effects of family histories can be explained by the preretirement financial, health, and work opportunity structure. These pre-retirement factors are central in previous studies among men, and emerge from the underlying assumption that men—at least more than women—have a strong work identity (Pienta 2003). Interestingly, among the studied women, the financial, health, and work opportunity structure did play a role for explaining differences in terms of their retirement intentions and behavior. Women who have a less beneficial preretirement financial situation, a better health situation, and challenging work, intend to and actually retire relatively late. The family sphere appears to be an independent force affecting women's intended retirement timing though. Even when established correlates of retirement are taken into account, child-rearing and marital careers are still associated with women's retirement intentions. The “established modes of retirement” model and the “new modes of retirement” model therefore seem to be complementary for understanding women's retirement decisions.

When interpreting the research results some limitations of this study should be kept in mind. First, it should be noted that the studied workers belong to a specific birth cohort and were observed within a specific time period. At the first wave of data collection, the net labor participation rate of female older workers was still rather low. The women who worked during their late careers might therefore have formed a relatively highly motivated and job-focused group. Second, although the study sample has substantial variation in terms of life histories, work characteristics, and health, the employees in the sample are not representative of all female older workers in the Netherlands. Furthermore, the specific character of the Dutch pension system might limit the generalizability of the findings to other countries (see for discussions on gender and pension systems Frericks et al. 2006; Ginn et al. 2001; Jefferson 2009). Third, the marital and work history variables were based on rather broad retrospective questions. Even though duration in particular marital states and interactions between work and family histories might be of importance for explaining retirement timing, the data do not allow further specifying the measures used. Moreover, the sample size is too small to study multiple disruptions or to study the effects of family experiences that are rather uncommon, such as repartnering after widowhood. Finally, it should be noted that recall or memory bias

effects may play a role when using data collected retrospectively. Nevertheless, the salience and low incidence of the studied life events—timing of first birth and divorce—might have influenced recall accuracy positively (Eisenhower et al. 1991).

Despite these limitations, this study clearly shows that women's retirement processes are associated with family experiences earlier in life. Moreover, the findings provide insights into the way in which earlier family events are related to later outcomes, which is an important question in the life course literature (Hendricks 2012). Although the preretirement family situation seems to be of overriding importance for explaining women's retirement processes, experiences earlier in life already “set the stage” (Settersten 2003, p. 29) for retirement decision-making. Whether the relationships between the studied family history experiences and retirement timing will be similar among cohorts approaching retirement in the near future is an important question for further research. Women's work and family life courses are changing and becoming less standardized. The Dutch work and retirement context is changing rapidly as well. While the women examined in this study grew older in a context in which older workers retired early and could make use of fairly generous retirement arrangements, this context is being replaced by policies focused on extended employment, more individual responsibility, and increasing financial uncertainty. As a result of these developments, late-career transitions and experiences might become increasingly heterogeneous, complex, and possibly more strongly associated with experiences earlier in the life course.

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