

The Initiation of Dating in Adolescence: The Effect of Parental Divorce. The TRAILS Study

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This study examined the effect of parental divorce on the time it took adolescents to initiate their first romantic relationships. Individual differences in temperament and pubertal development and the age of the adolescent at the time of divorce were also taken into account. Hypotheses were tested using event history analysis with a sample of 1,487 Dutch adolescents. Results indicated that divorce sped up the transition to first relationship only when experienced in early adolescence. Findings are discussed in light of research on the heightened sensitivity to stress during transition periods such as the entry into adolescence.

The establishment of romantic relationships in adolescence is one of the most important developmental tasks at that age (Furman & Shaffer, 2003). However, as Cavanagh, Crissey, and Raley (2008, p. 698) argued, “the antecedents of adolescent romance remain poorly understood.” Furthermore, existing research suffers from various shortcomings. Researchers have not differentiated between first and later relationships and have rather focused on the likelihood of dating in general. When familial effects on adolescent likelihood of dating have been considered, researchers have not controlled for relevant individual characteristics which correlate both with the parental likelihood of getting a divorce and with dating propensity. The analytical methods used have also not taken into account individuals who had not yet begun dating by the time of the interview, which can underestimate the effects of predictors.

We focused on factors affecting adolescent *initiation* of dating. Our conceptual framework was derived from a general life-course perspective of human development (Elder, 1998). We were particularly interested in the effect of parental divorce on the transition to adolescents’ first romantic relationships and whether the effect was moderated by the age of the adolescent at the time of marriage dissolution. We also accounted for adolescent individual characteristics. Using data from event-history calendars from participants in a prospective cohort study among Dutch adolescents and event history

techniques (Mills, 2011), we more accurately studied the timing of the first romantic relationship in relation to the covariates of interest.

THE DETERMINANTS OF ADOLESCENT ROMANTIC RELATIONSHIPS

Adolescent romantic relationships can have substantial and enduring effects on well-being (Collins, 2003). In adolescence, romantic relationships have been associated with both negative and positive outcomes (Carver, Joyner, & Udry, 2003; Overbeek, Vollebergh, Engels, & Meeus, 2003). Previous work has suggested that the mixed findings could be attributed to the diverse timing of dating (Neemann, Hubbard, & Masten, 1995) and that research into the determinants of adolescent romantic relationships is necessary (Zimmer-Gembeck, Siebenbruner, & Collins, 2004).

Most research into the factors influencing the likelihood of dating has examined either the peer group or individual characteristics associated with risk-prone behavior. Changes in the gender composition, behaviors, and one’s social status in the peer group have been associated with dating (Connolly, Furman, & Konarski, 2000; Miller et al., 2009). In terms of individual characteristics, many of the same factors which affect adolescent engagement in extroverted, low in inhibition behavior have been related to an increased likelihood of dating (pubertal maturation, Friedlander, Connolly, Pepler, & Craig, 2007; impulsivity, Zimmer-Gembeck et al., 2004; parental rejection, Ivanova, Veenstra, & Mills, 2011).

Existing literature has given an indication of the characteristics of dating adolescents and who their

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peers are. Yet, researchers have overlooked the effect which one's family can have on the propensity to date. In adolescence, peers become increasingly more influential for youth adjustment. However, the family remains of high importance for adolescent functioning and substantial transitions in the lives of adolescents are in part shaped by events in their parents' lives (Elder, 1998).

PARENTAL DIVORCE AND ADOLESCENT ROMANTIC RELATIONSHIPS

The importance of experiences within the family has been recognized in investigations of youth's dating relationships (Capaldi & Clark, 1998; Roisman, Booth-LaForce, Cauffman, & Spieker, 2009). Substantial research has also been performed into how stressful transitions in parents' lives affect youth's adjustment (Amato, 2000). Furthermore, growing up in a context of unstable parental relationships has been linked to children's own adult union formation and dissolution patterns (Wolfinger, 2005). Various mechanisms have been implicated for this relationship. Some suggest that the divorce affects children's experience of the home as a nurturing environment (Booth, Brinkerhoff, & White, 1984) and serves as a "push" to look elsewhere for emotional warmth (Glenn & Kramer, 1987). Others have focused on socialization. Single parents' engagement in romantic relationships could model children's openness to dating and sexuality (Whitbeck, Simons, & Kao, 1994). In addition, the transition to a single-parent family has been associated with lower levels of parental supervision (Demo & Acock, 1996), and low parental monitoring has been linked to an increased likelihood of dating (Friedlander, Connolly, Pepler, & Craig, 2007).

Due to the societal repercussions of early onset of sexual activity, researchers have focused on how changes in the parental household affect it. There is less research into the impact of marital transitions on adolescent involvement in *romantic* relationships. An exception is a study by Cavanagh et al. (2008), which demonstrated that instability in the composition of the parental household was associated with higher likelihood of being involved in a romantic relationship. However, the researchers did not control for the adolescents' earlier dating status, and a substantial part of behavioral variability is predicted by past behavior (Bentler & Speckart, 1979). In the cases when the focus is not on the first relationship, controlling for past dating episodes is essential to understand the impact of the factors of interest.

Additionally, Cavanagh and colleagues did not control for individual factors, correlated both with the parental likelihood of getting a divorce and with the adolescents' higher propensity to initiate dating. Tapping into this issue is a work by Mendle et al. (2009) on the established relationship between father absence and earlier initiation of sexual activity. The researchers showed that this association could be the result of confounded risks. The same genetic factors that affect earlier sexual activity could be related to heightened impulsivity and lack of self-control, which increase the likelihood of father absence. Thus, families with fathers who are more likely to leave might also rear children with the genetic propensity of early sexual activity. A similar association could hold for earlier initiation of dating. In a study by Cramer (1993) it was found that divorced and separated women are more extroverted than their still married counterparts. The developmental precursors of extraversion in childhood have been found to be higher impulsivity and lower inhibitory control (Rothbart, Ahadi, & Evans, 2000), which have been associated with higher propensity to date (Zimmer-Gembeck et al., 2004). Given the strong evidence of genetic influences on temperament and personality (Saudino, 2005), it could be that divorce-prone parents have offspring that are more likely to date.

THE PRESENT STUDY

In line with previous work, we hypothesized that the time to first romantic relationship would be shorter for adolescents who experienced a parental divorce than for those from intact families. We extended previous research by using event history calendars (EHC) and analysis, which enabled us to include the information of adolescents who had not yet started dating. Furthermore, in line with the temperament model developed by Rothbart et al. (2000), we controlled for adolescents' orientation to novelty, negative affectivity, the ability to regulate behavior, and the desire for closeness with others. We also accounted for the pubertal development of the adolescent.

Finally, we considered whether the effect of divorce was moderated by the adolescent's age at the event. Stressors experienced during transitional periods, such as the entry into adolescence, have stronger effects on adjustment than if they are experienced at another time (Graber & Brooks-Gunn, 1996). Therefore, we hypothesized that adolescent initiation of dating would be most affected by a parental divorce in early adolescence.

METHOD

Participants and Procedure

Data were gathered from participants in the TRacking Adolescents' Individual Lives Survey (TRAILS), a prospective cohort study among adolescents in the general Dutch population. Of all children and parents approached for participation in the TRAILS study, 76.0% gave consent, which resulted in an initial sample of 2,230 participants. Three data collection waves have been completed: T1, when the adolescents were at the mean age of 11.09 years ($SD = 0.55$); T2, with participants' mean age of 13.55 ($SD = 0.54$); and T3, with adolescents' mean age of 16.30 ($SD = 0.73$). A more detailed description of the TRAILS' design, sampling procedures, data collection, measures, and attrition analyses can be found in Huisman et al. (2008).

We used data collected during the EHC interviews, which took place during T3. A total of 1,513 adolescents filled out the EHC (67.9% of the T1 sample; 82.3% of the T3 sample). Compared with participants, nonparticipants were more likely to be boys, $\chi^2(2,230) = 31.58$, $p < .05$, Cramer's $\phi^2 = 0.12$, came from families with a lower socioeconomic status (SES), $t(2,186) = -9.39$, $p < .05$, Cohen's $d = .43$, and were older, $t(2,228) = 2.40$, $p < .05$, Cohen's $d = .11$. This selective nature of the sample should be kept in mind when considering the generalizability of the findings.

During the EHC interviews, the adolescents were asked to report important life events (parental divorce, start and end of romantic relationships) on a detailed monthly calendar going back to the beginning of the TRAILS data collection (5 years). If an event happened before the start of the EHC, the interviewer also noted that down.

We excluded 26 adolescents whose first relationship began before the start of observations or who could not remember the starting month. Thus, the final sample was 1,487 (44.9% boys). The average age at the interview was 16.25 ($SD = 0.67$) and at the start of observation it was 11.30 ($SD = 0.65$). The sample consisted of 1,363 (91.7%) Dutch and 124 (8.3%) adolescents from non-Western immigrant families.

Measures

Adolescent initiation of dating. We used the adolescents' report of starting month of first relationship (reported at the mean age of 16.25) as the definition of initiation of dating.

Parental divorce. Experiencing a parental divorce and its date were reported by the adolescent during

the interviews. Three dummy variables were created with 0 = *no parental divorce before first relationship* and 1 = *divorce happened during childhood, before the age of 11, or in early adolescence, from age 11 until 13, or in mid- or late adolescence, from age 13 onwards*. Because of the focus on how a parental divorce influences the initiation of dating, we studied only the divorces that happened before the first reported relationship. If a divorce happened after it, we coded it as part of the 0 category.

Adolescent pubertal development. Parents reported the stage of pubertal development at T1 by using schematic drawings of secondary sex characteristics corresponding to the five standard Tanner stages (Marshall & Tanner, 1969, 1970). Tanner stages are a widely accepted standard for assessing physical development and have demonstrated good reliability, validity, and parent-child agreement (Oldehinkel, Verhulst, & Ormel, 2011). The participants were classified into five stages of puberty, where 1 = *infantile* and 5 = *complete puberty*.

Adolescent temperament. Temperament was assessed by the parent and the child version of the short form of the Early Adolescent Temperament Questionnaire—Revised (EATQ-R). We used the parent version, because its factor structure was superior to that of the child version in our sample. The EATQ-R is a 62-item questionnaire based on the temperament model developed by Rothbart et al. (2000). We utilized six subscales: high-intensity pleasure, shyness, fear, frustration, effortful control, and affiliation. More information about the composition, validity and parent-child agreement on the EATQ-R with the TRAILS sample can be found in Oldehinkel, Hartman, De Winter, Veenstra, and Ormel (2004).

Socioeconomic status. The family's SES was assessed at T1, based on the educational and occupational levels of both parents and the family income level. SES was measured as the average of the five items, which were standardized to $M = 0$ and $SD = 1$. The measurement captured 61.2% of the variance in the five items and had a Cronbach's α of .84.

Analytical Approach

We analyzed the data using event history analysis (EHA; Mills, 2011) which allowed us to examine the timing of an event and how it is affected by the explanatory variables. EHA also includes the information of individuals who have not experienced the

event by the interview date. Outcome variable is the hazard rate, or the conditional probability that an event occurs at a particular time (t).

We first estimated nonparametric survival curves (Kaplan & Meier, 1958) followed by a Cox (1972) semiparametric regression model, a highly robust and flexible model that makes no assumption about the hazard's shape. When interpreting the results, we focused on the hazard ratios or the exponent of the β coefficient. If the hazard ratio is >1 , there is an increased hazard of the event occurring, and if it is <1 , there is a decreased hazard. For dummy variables, hazard ratios <1 suggest that adolescents in that category have a lower hazard rate than the baseline category. The hazard ratio for a continuous covariate is the amount of change in the hazard of the event occurring with a unit increase in the covariate (Mills, 2011).

All independent continuous variables were standardized. Missing values were imputed using ICE in Stata 10.0 (Royston, 2007). We controlled for the family's SES and the participants' gender and age at the time of first observation.

RESULTS

Nine hundred thirty-four adolescents (62.8% of the EHC sample) reported at least one romantic relationship. Girls were more likely than boys to report first relationship, $\chi^2(1, N = 1,487) = 18.58, p < .001$. The mean age at first relationship was 14.34 years ($SD = 1.31$, range 10.80–17.86). No differences were found for the adolescents from immigrant families in the propensity to date, age at first relationship, or number of parental divorces.

The number of divorces before first romantic relationship was 322 (21.7% of the EHC sample; 262 before the age of 11, 30 between the ages of 11 and 13, and 30 after the age of 13). No gender differences were found in the likelihood of experiencing a parental divorce. Because no divorces took place in early adolescence and only three happened in mid/late adolescence for the adolescents from immigrant families, no interactions between divorce and ethnicity were considered.

Figures 1a and b display the Kaplan–Meier survival estimates for time to first and second romantic relationship, respectively. The y -axis displays the proportion of adolescents who did not start dating at any given time (displayed on the x -axis). As can be seen, adolescents took much longer to initiate their first compared with their second romantic relationship. The transition to first dating episode appeared

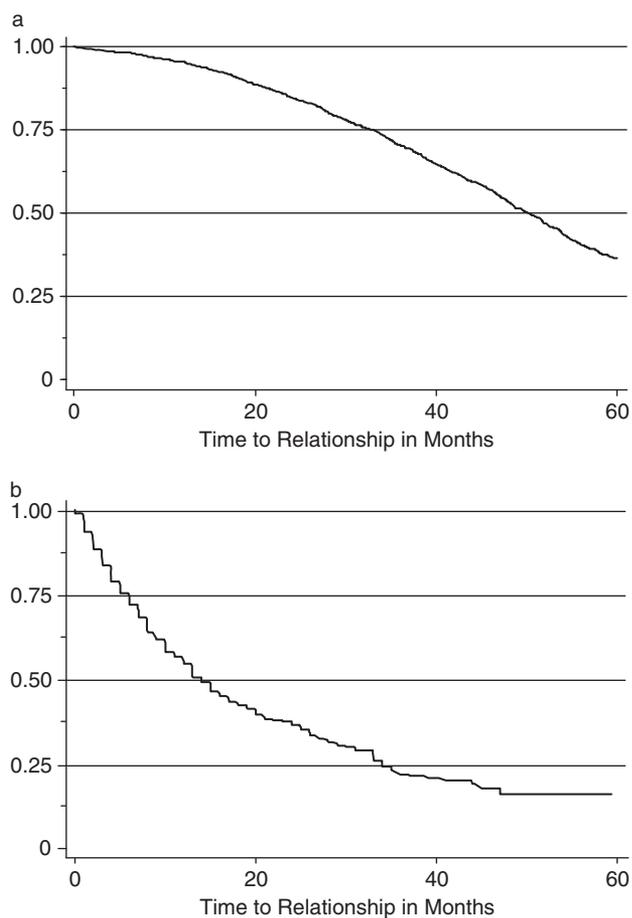


FIGURE 1 (a) Survival estimates for time to first romantic relationship. (b) Survival estimates for time to second romantic relationship.

to be a distinct process compared with the transition to subsequent relationships.

Table 1 displays the hazard ratios for the three Cox models. In the first model, we included the control variables and the dummy variables for parental divorce. This model demonstrated the effect of divorce when we did not account for individual level characteristics. The second model included the control variables and individual level characteristics and demonstrated the effects of temperament and pubertal development on the initiation of dating. The final model included all independent variables. No differences between boys and girls were found for the effect of divorce.

Our final model indicated that adolescents who were older at first observation had shorter time to first romantic relationship. Girls had a significantly faster transition by 26.2% than boys (calculated as $(\exp(-.30) - 1) \times 100 = -26.2\%$). An increase in the SES of the parental household was associated with a decrease in the time by 10.4%. In terms of individual

TABLE 1
Hazard Ratio Estimates From the Cox Regression Model of the Time to First Romantic Relationship in Adolescence ($N = 1,487$)

	Hazard ratio (95% CI)		
	Model 1	Model 2	Model 3
Socioeconomic status	0.89 (0.83–0.95)**	0.89 (0.83–0.95)**	0.90 (0.84–0.96)**
Age at start of obs	1.24 (1.16–1.32)**	1.22 (1.14–1.30)**	1.22 (1.14–1.30)**
Gender (ref = female)	0.77 (0.68–0.88)**	0.73 (0.64–0.84)**	0.74 (0.64–0.85)**
Individual characteristics			
Tanner stage		1.09 (1.02–1.16)**	1.09 (1.02–1.16)*
Affiliation		1.00 (0.93–1.07)	1.00 (0.93–1.07)
Effortful control		0.93 (0.86–1.00)*	0.93 (0.87–1.00)
Fear		1.03 (0.96–1.11)	1.03 (0.96–1.11)
Frustration		0.98 (0.92–1.06)	0.98 (0.92–1.06)
Shyness		0.86 (0.80–0.92)**	0.86 (0.80–0.93)**
High-intensity pleasure		1.12 (1.05–1.20)**	1.12 (1.04–1.20)**
Divorce (ref = no div)			
Divorce before age 11	1.21 (1.02–1.43)*		1.12 (0.94–1.32)
Divorce age 11–13	2.02 (1.36–2.99)**		1.83 (1.23–2.71)**
Divorce age >13	0.95 (0.62–1.47)		0.89 (0.58–1.38)
Number of events	934	934	934
–2 log likelihood	–6379.53	–6362.93	–6358.34
LR χ^2 (df)	91.78 (6)	124.98 (10)	134.15 (13)
Significance	<.001	<.001	<.001

Note. CI, confidence interval.

* $p < .05$; ** $p < .01$.

characteristics, our final model demonstrated that when adolescents scored 1 *SD* above the means for pubertal development and need for high-intensity pleasure, their transition to dating was sped up by 8.5% and 11.7%, respectively. In contrast, scoring 1 *SD* above the mean for shyness decreased the speed by 13.8%.

When the individual level characteristics were not taken into account, the experience of a divorce in both childhood and early adolescence sped up the transition to first relationship (divorce in mid/late adolescence had no effect in any of our models). However, when those characteristics were taken into account, experiencing a divorce in childhood no longer had an effect on the transition to dating. According to our final model, if adolescents went through the parental marital dissolution during early adolescence, their hazard rate of beginning to date increased by 82.5%. Those findings were in line with our expectations.

DISCUSSION

In this study, we aimed at extending our knowledge of the determinants of adolescent romantic relationships by focusing on the effect of family transitions on the initiation of dating. We were guided by the assertion of

life-course researchers (Elder, 1998) that substantial changes in the parents' lives are bound to affect the transitions in adolescents' lives. Previous work has shown that cumulative family instability is the strongest predictor of current dating status when considering the effect of family make up on dating (Cavanagh et al., 2008). We focused on the effect of marital dissolution on time to first relationship while controlling for who the potentially dating adolescents were with respect to individual level characteristics. Additionally, we also considered the importance of the timing of the divorce. We found that once adolescent characteristics were accounted for, parental divorce sped up the transition to first romantic relationship only when experienced in early adolescence.

Three central findings emerged from our analyses. First, the transition to first romantic relationship was indeed quite different from the transition to subsequent ones. It is possible that when adolescents, who have already initiated dating, experience a parental divorce, they will be more likely than nondaters to search for romantic partners as an escape from the unpleasant situation. As Bentler and Speckart (1979) elaborate, past behavior is the best predictor of future behavior. Once an adolescent has experienced a romantic relationship, initiating a new one is much more likely, as demonstrated by researchers who

have accounted for earlier dating status (Furman, Low, & Ho, 2009). Previous investigations, which did not control for earlier dating behavior or looked specifically at the first relationship, might be producing a distorted picture of the covariates' effects on adolescent propensity to date.

Second, adolescents who experienced a parental divorce progressed to first dating episode faster than adolescent from intact families. Furthermore, this effect was highly time-specific. Numerous mechanisms have been implicated for the effects of parental divorce on youth's well-being (Amato, 2000). Though we did not clarify the mechanism behind the described effect, we demonstrated that once individual characteristics were taken into account, only the divorces in early adolescence sped up the transition to dating. This finding is in line with the work on heightened sensitivity to stress during transition periods (Graber & Brooks-Gunn, 1996). During early adolescence, youth go through multiple changes with the onset of puberty and the transition to a new school environment. Therefore, this could be the time when adolescents are most affected by the disturbance of a parental marital dissolution.

Finally, we demonstrated that not controlling for who the potentially dating adolescents were could lead to misrepresenting the impact of changes within the family. When we did not include adolescent characteristics in the model, we found that both divorces in childhood and in early adolescence sped up the transition to dating. However, when we accounted for those individual factors, we found that the marital dissolution affected the rate of initiating dating only if it took place during early adolescence. It appears that if the parental divorce occurred too long ago, the adolescent characteristics were more important for the beginning of dating than what happened in the family context. Therefore, in order to properly assess the impact of family events, researchers should also account for who the individuals of interest are.

Despite its contributions, this study has certain limitations. We focused specifically on the *date* of parental divorce. However, it is possible that the date of marital dissolution is not the factor that affects adolescents *per se* but rather, the stressful events surrounding it (moving to a new house, parental dating). However, it should be noted that we used *adolescent-* and not parent-reported date of divorce and, thus, it is likely that we actually captured the effect of parental move out of the house rather than actual legal divorce (because the parental move is much more obvious to the adolescent than the signing of legal documents). This issue, however,

needs to be more adequately worked out in subsequent studies, and researchers should attempt to study divorce as a dynamic process.

We purposefully focused on how changes in the parental household affected adolescent dating status. However, adolescents' romantic relationships can be affected by much more than just changes in the parental household. How the adolescent reacts to the event of a parental divorce could depend on, for example, the peer network and its gender composition in particular. For adolescents that do not have enough opportunities to meet potential dating partners, parental divorce may not affect their dating behaviors the same way as it may the behaviors of adolescents with ample dating opportunities.

Despite certain limitations, we were able to demonstrate the substantial effect, which the event of parental divorce had on the initiation of dating even when adolescent temperament and pubertal development were accounted for. It remains to be seen whether the fact that the initiation of those romantic bonds was affected by parental divorce will also have consequences for the way adolescents experience those relationships.

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