

## **Parental separation/divorce in childhood and partnership outcomes at age 30**

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## **Abstract**

**Background:** Previous research has found that children exposed to separation/divorce may also experience relationship problems in adulthood. The aim of this investigation was to examine this issue in a birth cohort of over 900 New Zealand children studied to age 30.

**Methods:** Data were gathered over the course of the Christchurch Health and Development Study (CHDS). The CHDS is a 30 year longitudinal study of a birth cohort of 1265 children born in Christchurch (NZ) in 1977. The data collected included: a) timing and number of parental separations and divorces from birth to 15 years; b) partnership outcomes (16-30 years) of the number of cohabiting/marriage partnerships; positive partner relations; negative partner relations; partner adjustment/conduct problems; and interpartner violence victimization and perpetration; and c) potential covariate factors.

**Results:** Study findings showed the presence of significant associations between childhood parental separations/divorces and: number of cohabiting/marriage partnerships (16-30 years) ( $p < .001$ ), negative partner relations ( $p = .021$ ), extent of partner adjustment/conduct problems ( $p < .001$ ), and perpetration of interpartner violence ( $p = .018$ ). Childhood parental separation/divorce explained less than 2.5% of the variance in partnership outcomes. These associations were explained statistically by a series of covariate factors associated with childhood parental separation/divorce including: parental history of illicit drug use, childhood sexual abuse, childhood conduct problems (7-9 years), interparental conflict and violence, childhood physical punishment/maltreatment, family socio-economic status at the child's birth, and parental history of criminality. Tests of gender interaction showed that the effect of childhood parental separations/divorces may be the same for males and females.

Analysis of the number of childhood parental separations/divorces experienced into three age groups (birth to 5, 5 to 10 years and 10 to 15 years) yielded similar results.

**Conclusions:** These findings suggest that the general associations between childhood parental separation/divorce and partner relationships in adulthood reflect the consequences of various contextual factors that are associated with childhood parental separation.

**Keywords:** Adulthood; Child development; Family factors; Marital relationships; Longitudinal studies

There has been on-going research into the short-term and long-term consequences of parental separation and divorce in childhood (Amato, 2010; Lansford, 2009), which has found that children of separated/divorced parents are at greater risk of a number of adverse outcomes including: reduced socio-economic well-being (Gadalla, 2008), reduced academic achievement (Evans, Kelley, & Wanner, 2001; Fomby & Cherlin, 2007; Guttman & Rosenberg, 2003), early intercourse (Aseltine, Doucet, & Schilling, 2010), physical health problems (Bzostek & Beck, 2011; Langton & Berger, 2011), and behavioral problems (Fomby & Cherlin, 2007; Guttman & Rosenberg, 2003; Hetherington, 1993).

In addition, research into the long-term consequences of childhood parental separation/divorce suggests that these events may have enduring effects in adulthood including: mental health problems (Amato & Sobolewski, 2001; Wadsworth & Kuh, 1997), emotional problems (Cherlin, Chase-Lansdale, & McRae, 1998; Christensen & Brooks, 2001), reduced physical health (Wadsworth & Kuh, 1997), and lower socio-economic status (Sigal, Wolchik, Tein, & Sandler, 2012).

Other factors found to be associated with childhood parental separation/divorce are the individual's partnership outcomes in adulthood. It has been suggested that parental separation/divorce may act as a life experience that influences the individual's future partnership behaviors (Amato, 2001, 2010; Christensen & Brooks, 2001). Previous research has shown that those reared in childhood environments subject to parental separation/divorce have: more partner changes in adulthood (Amato, 1996; Kiernan & Cherlin, 1999; Mustonen, Huurre, Kiviruusu, & Haukkala, 2011), less stable or satisfying partner relationships (Amato, 1996; Amato & Booth, 2001; Riggio, 2004; Sassler,

Cunningham, & Lichter, 2009; Wadsworth & Kuh, 1997), and more perpetration of interpartner violence (Roberts, McLaughlin, Conron, & Koenen, 2011).

Parental separation/divorce is also known to be associated with other childhood adversities. These include: parental educational underachievement (Amato, 2010; Lyngstad & Jalovaara, 2010; Ono, 2009), lower family socio-economic status (Feijten & van Ham, 2008; Gadalla, 2008; South, Crowder, & Trent, 1998), impaired mental health (Baker, Procter, & Gibbons, 2009; Butterworth & Rodgers, 2008), parental substance use problems (Amato & Previti, 2003), and childhood physical and sexual abuse (Turner, Finkelhor, & Ormrod, 2007). These associations between childhood adversity and parental separation/divorce suggest the need for studies of the longer term consequences of parental separation/divorce to take into account the social context in which separation/divorce occurs. The best approach to addressing this issue is through the use of a longitudinal research design in which prospectively gathered information on separation/divorce in childhood and the social context within which separation/divorce occurs, is related to later partnership outcomes.

In this paper, we report such a study using data from the Christchurch Health and Development Study (CHDS) – a 30 year longitudinal study of a birth cohort of 1265 children born in Christchurch (New Zealand). The broad aims of this analysis are: to document the associations between the number of parental separations/divorces and subsequent partnership outcomes; and to examine the extent to which the effects of parental separations/divorces could be statistically explained by social, family and contextual factors.

A further issue that has arisen in the literature on the long term consequences of separation/divorce, concerns the extent to which these associations may be modified by factors such as gender or the age at which separation/divorce occurs.

Regarding gender, Christensen and Brooks (2001) suggested that males and females react differently to the separation/divorce of their parents and that these differences may be repeated in their future partner relationships. The research evidence in this area is inconclusive (Lansford, 2009). Some studies of adult psychological adjustment and marital quality following parental separation/divorce found no gender differences (Amato & Sobolewski, 2001; Reczek, Liu, & Umberson, 2010); however, other studies found that compared to males, adult daughters of separated/divorced parents report reduced intimate relationship quality (Christensen & Brooks, 2001; Mullett & Stolberg, 2002; Mustonen, et al., 2011).

Regarding age, early exposure to parental separations/divorces may have greater adverse effects on partnership outcomes than separations/divorces that occur later (Amato, 1996, 2001, 2010). The evidence on the effects of age at separation/divorce is limited at present and is largely confined to studies of the experience of divorce before and after adolescence (Kiernan & Cherlin, 1999; Mustonen, et al., 2011).

To address the issues raised by the possible effects of gender and age in modifying the associations between separation/divorce and later partnership outcomes, it is proposed to use data from the CHDS to examine the extent to which the partnership outcomes of children exposed to parental separation/divorce vary with gender and the age at which the separation/divorce occurred.

In summary, the present paper uses data gathered over the course of a 30-year longitudinal study to examine a number of issues relating to exposure to parental separation/divorce during childhood (0-15 years). These issues include:

a) The associations between extent of separations/divorces and later partnership outcomes including: the number of cohabiting/marriage partnerships (16 to 30 years), positive partner relations, negative partner relations, partner adjustment/conduct problems and interpartner conflict and violence victimization and perpetration.

b) The associations between extent of separations/divorces and later partnership outcomes after adjustment for childhood factors known to be associated with separation/divorce.

c) Examination of the roles of gender and age at separation as factors that may modify the association with childhood parental separation/divorce.

## **Methods**

### *Participants*

Participants were members of a birth cohort of 1265 children (630 females) studied as part of the Christchurch Health and Development Study (CHDS). This cohort has been studied on 22 occasions from birth to the age of 30 years. Descriptions of the general design of the study may be found in Fergusson and Horwood (2001) . All phases of the study have been subject to ethical approval by the Canterbury Regional Health and Disabilities Ethics Committee. The data collection was conducted with the signed consent of the study participants.

### *Childhood parental separations/divorces (0-15 years)*

At each year to the age of 15, parents were questioned about their experiences of divorce and separation in the preceding year. This information was used to construct a count of the number of times that the participant had experienced a parent leaving home as a result of parental separation or divorce. A separation was defined as a period of at least 6 months in which the parents lived apart with the intention of dissolving the union. The measure included both legal and non-legal parental separation.

### *Partnership outcomes to age 30*

At the 30 year assessment, cohort members were interviewed about the following aspects of their romantic partner relationships.

*Number of cohabiting/marriage partnerships 16-30 years.* Participants were questioned about their history of both marriage and cohabiting relationships. The definition of cohabitation was based on the respondent's assessment of their relationship history. This information was used to construct a count of the number of cohabiting/marriage partners reported from age 16 to 30.

*Partner relationships 29-30 years.* Participants who reported having been in a romantic relationship lasting a month or longer at any time in the past 12 months (29-30 years), were questioned about the following aspects of that relationship:

(a) Relationship quality. Reported relationship quality was assessed using the 25-item Scale of Intimate Relationships by Braiker and Kelley (1979). This measure was divided into two sub-scales: i) Positive partner relations: this scale was based on 15 items which assessed the extent of the participant's reported positive relations with their partner

(sample items included: I have (had) a sense of “belonging” with my partner; I tell (told) my partner intimate things about myself). Scale scores were constructed from an unweighted sum of test items and had good internal consistency ( $\alpha=.89$ ); ii) Negative partner relations: this scale was based on 10 items which assessed negative aspects of partner relationships (sample items included: I often feel (felt) angry and resentful of my partner; We have (had) serious problems and arguments). Scale scores were constructed from an unweighted sum of test items and had good internal consistency ( $\alpha=.84$ ).

b) Partner adjustment/conduct problems score. Cohort members were questioned about their romantic partner’s adjustment/conduct on a 9-item scale reflecting the extent to which the partner was reported to engage in substance use/abuse, anti-social behavior or have other adjustment problems (sample items included: My partner has a lot of personal problems; My partner has problems due to the use of alcohol). A scale representing the extent of the partner adjustment/conduct problems was created by summing the 9 items. The internal consistency of this scale was modest but acceptable ( $\alpha=.70$ ). Preliminary factor analysis suggested that these items loaded on a single factor reflecting the extent of partner adjustment/conduct problems (Woodward, Fergusson, & Horwood, 2002).

c) Interpartner conflict and violence. Interpartner conflict and violence were assessed with the Revised Conflict Tactics Scale (CTS2: Straus, Hamby, Boney-McCoy, & Sugarman, 1996). Using this measure, scale scores of interpartner physical violence victimization ( $\alpha=.85$ ) and interpartner physical violence perpetration ( $\alpha=.79$ ) were constructed.

### *Covariate factors*

To assess the extent to which associations between childhood parental separations/divorces and later partnership outcomes at age 30 could be explained by covariate factors, a wide range of factors from the CHDS database were examined: socio-demographic background at birth (maternal age, family type, family socio-economic status, maternal education and paternal education), family functioning (parental history of illicit drug use, depression/anxiety, alcohol problems and criminality; interparental conflict and violence (child report)), childhood history of abuse (sexual abuse and physical punishment/maltreatment), and child behavior (childhood conduct problems). These covariates were selected because they were known to be associated with a wide range of adverse life-course outcomes, as well as with childhood parental separation/divorce (see Table 2). The covariates are described in detail in the online supplement S1.

### *Statistical analyses*

Cohort members were classified into three categories: 0 (no exposure, 70.3% of the sample); 1 (one parental separation/divorce, 20.9% of the sample); and 2+ (two or more parental separations/divorces, 8.7% of the sample).

Table 1 shows the associations between the categorized childhood parental separation/divorce measure and the outcome measures. These associations were tested for statistical significance by fitting the following regression models: Poisson regression for the mean number of cohabiting/marriage partnerships; ordinary least squares regression for positive partner relations, negative partner relations and partner adjustment/conduct problems; and negative binomial regression was used to correct for over-dispersion for

measures of interpartner violence (victimization/perpetration). A correlation coefficient ( $r$ ) was calculated for the associations between the categorized number of parental separations/divorces measure and the partnership outcomes.

The analysis was extended to take into account socio-demographic background at birth, family functioning and child factors (0-16 years). Table 2 shows the associations between each of these factors and the number of parental separations/divorces. For simplicity of presentation, these factors were dichotomized (see Online supplement S1) and the associations with the number of childhood parental separations/divorces were tested for statistical significance using the Mantel-Haenszel chi-square test for linearity.

In the Table 3 regression models, the number of childhood parental separations/divorces was used as a continuous measure. Using methods of forward and backward variable elimination, regression models were fitted to model each outcome as a function of the number of childhood parental separations/divorces and covariate factors (the parameter estimates for full fitted models including all covariates are presented in Online supplement table 1). To test for gender differences in the strength of the associations between the number of childhood parental separations/divorces and the outcome measures, a multiplicative interaction term (gender x number of childhood parental separations/divorces) was included in each model.

The analysis in Table 3 was extended to include age-specific analyses for the periods: birth to 5, 5 to 10 years and 10 to 15 years. These analyses are reported in the Online supplement tables 2-4. The 5 to 10 year analysis (see Online supplement table 3) included the birth to 5 year separation/divorce history as a covariate; the 10 to 15 year analysis (see Online supplement table 4) included both the birth to 5 year and 5 to 10 year

separation/divorce histories as covariates. These covariates were included in the analysis to take into account the effects of previous history of separation/divorce on partnership outcomes.

#### *Sample size and sample bias*

The analysis in Table 1 was based on all respondents with data on the number of childhood parental separations/divorces (0-15 years) and cohabitation history (16-30 years) (n=913). For measures of partner relations and interpartner violence the analysis was based on all those in partner relationships at ages 29-30 (n=806).

For analyses in Table 3, the number of cohabiting/marriage partners was based on 887 participants. For other outcomes, the regression models were based on all those in partner relationships at age 30 with data on the number of separations/divorces and covariates (partner relations n=784; interpartner violence n=786).

Comparison of the analysis samples with remaining cohort members on socio-demographic factors assessed at birth, showed significant ( $p < .05$ ) tendencies for the analysis samples to under-represent children from socially disadvantaged families characterized by low maternal education, low socio-economic status and single parenthood.

To examine the effects of sample attrition on the study findings, two methods of sample selection correction were used: the data-weighting method described by Carlin, Wolfe, Coffey, and Patton (1999) and the full information maximum likelihood (FIML) approach (Johnson & Young, 2011). Both analyses showed that the findings before and after correction for missing data were essentially the same, suggesting that systematic sample loss did not pose a threat to study validity.

## Results

### *Associations between the number of childhood parental separations/divorces experienced (0-15 years) and partnership outcomes*

Table 1 shows statistically significant linear associations for increases in the number of childhood parental separations/divorces and increases in: the number of cohabitating partnerships (16-30 years) ( $p < .001$ ), negative partner relations ( $p = .021$ ), partner adjustment/conduct problems ( $p < .001$ ), and perpetration of interpartner violence ( $p = .018$ ) at age 30. No associations were found between the number of childhood parental separations/divorces and reported positive partner relations ( $p = .896$ ) or partnership victimization ( $p = .116$ ). Estimates of the variability in partnership outcomes explained by exposure to parental separation/divorce ranged from 0.0% to 2.3%.

ADD TABLE 1. HERE

### *Associations between the number of childhood parental separations/divorces (0-15 years) and covariate factors*

Table 2 shows the associations between the number of childhood parental separations/divorces and potential covariate factors.

a) Socio-demographic background at birth. Increasing numbers of childhood parental separations/divorces were associated with increasing socio-demographic disadvantage at birth including: younger maternal age ( $p < .001$ ), being born into a single parent family ( $p < .001$ ), lower socio-economic status ( $p < .001$ ), and limited parental education ( $p < .001$ ).

b) Family functioning. Increasing numbers of childhood parental separations/divorces were associated with increasing family difficulties and problems such

as: a parental history of depression/anxiety ( $p < .001$ ), alcohol problems ( $p < .001$ ), criminality ( $p < .001$ ), illicit drug use ( $p < .001$ ), and greater exposure to interparental conflict and violence (child reported) ( $p = .003$ ).

c) Childhood history of abuse. Increasing numbers of childhood parental separations/divorces were associated with increasing reported severity of childhood physical punishment/maltreatment ( $p < .001$ ) and any sexual abuse ( $p = .018$ ).

d) Child behavior. Increasing numbers of childhood parental separations/divorces were associated with increasing conduct problems among the cohort members when aged 7-9 ( $p < .001$ ).

ADD TABLE 2. HERE

*Adjusted associations between childhood parental separations/divorces and partnership outcomes*

Table 3 shows the associations between childhood parental separations/divorces and partnership outcomes at age 30, before and after adjustment for the covariate factors shown in Table 2. The table shows the adjusted regression coefficients (B), standard errors (SE), tests of significance for the adjusted regression coefficients (p) and the covariates that were significant ( $p < .05$ ), or marginally significant ( $p < .10$ ) for each outcome. The Online supplement table 1 shows the regression parameters of the full models for each outcome including all covariates.

Before adjustment, there were significant ( $p < .05$ ) associations between the number of childhood parental separations/divorces and all partnership outcomes. Following adjustment, all associations between parental separations/divorces and partnership

outcomes became statistically non-significant ( $p > .05$ ). Statistically significant ( $p < .05$ ) and marginally significant ( $p < .10$ ) covariates included: parental history of illicit drug use, childhood sexual abuse, childhood conduct problems (7-9 years), interparental conflict and violence (child reported), childhood physical punishment/maltreatment, lower family socioeconomic status, and parental history of criminality. After adjustment for covariates, the correlations between childhood parental separation/divorce and partnership outcomes ranged from .01 (negative partner relations) to .06 (number of cohabiting/marriage partnerships) implying that after statistical adjustment childhood parental separation/divorce explained less than 0.4% of the variance in partnership outcomes.

ADD TABLE 3 HERE

#### *Tests of gender by childhood parental separations/divorces interactions*

Tests of gender interactions were conducted by including a multiplicative gender by number of childhood parental separations/divorces interaction term in the models. No statistically significant gender interactions were found, suggesting that the associations in Table 3 held for both males and females.

#### *Adjusted associations between the number of childhood parental separations/divorces from birth to 5; 5 to 10 years; and 10 to 15 years and partnership outcomes*

The analyses described above were extended to estimate the associations between the age at which the separations/divorces occurred (birth to 5, 5 to 10 years and 10 to 15 years) and partnership outcomes (see Online supplement tables 2 to 4). When due allowance was made for multiple significance testing, this analysis showed the same

conclusions as above: a) for each age group parental separation/divorce was not related to later partnership outcomes; b) this finding held for both gender groups.

## **Discussion**

In this paper, we have used data gathered over the course of a 30-year longitudinal study to examine the linkages between the number of parental separations/divorces in childhood and subsequent partner relationships in adulthood. The key findings of the study and the implications are discussed below.

Consistent with previous research (Amato, 2001, 2010; Amato & Booth, 2001; Castillo Mezzich et al., 1999; Christensen & Brooks, 2001; Hicks, Iacono, & McGue, 2010; Kiernan & Cherlin, 1999; Mustonen, et al., 2011; Roberts, et al., 2011; Sassler, et al., 2009; Wadsworth & Kuh, 1997), there were generally linear associations between the number of parental separations/divorces in childhood and subsequent: increasing numbers of cohabiting/marriage relationships, negative partner relations, partner adjustment/conduct problems, and perpetration of interpartner violence. These findings suggest that increasing exposure to parental separation/divorce in childhood was associated with more changeable, more unsatisfactory and more violent partnerships in adolescence and adulthood. At the same time, the associations between the number of parental separations/divorces and later partnership outcomes were modest, with exposure to parental separation/divorce explaining less than 2.5% of the variance in partnership outcomes.

Further investigation revealed that the number of childhood parental separations/divorces was associated with a wide range of adverse socio-demographic background, family functioning, childhood history of abuse and child behavior factors. These findings clearly suggest that increasing exposure to parental separation/divorce was

associated with increasing childhood adversity. Therefore, any association between childhood parental separation/divorce and later partnership measures may be explained by the social, family and childhood context in which parental separation/divorce occurs.

After statistical adjustment, all associations between parental separation/divorce and partnership outcomes were explained by the effects of social and contextual factors that were correlated with parental separation. These factors included: parental history of illicit drug use; childhood sexual abuse; childhood conduct problems (7-9 years); the interparental conflict and violence (child report); childhood physical punishment/maltreatment; family socio-economic status at the child's birth; and parental history of criminality. After adjustment for these covariates, exposure to parental separation/divorce accounted for less than 0.4% of the variance in partnership outcomes.

While the study findings show that most of the associations between parental separations/divorces in childhood and later outcomes were explained statistically by the effects of social and contextual factors correlated with parental separation/divorce, the interpretation of this result is complex. It could be suggested that covariate factors included in the analyses acted as confounders, which reflected the family context in which parental separation/divorce was more likely to occur. Alternatively, these variables could have been intervening variables reflecting the consequences of separation/divorce on childhood circumstances. Even with longitudinal data it proves difficult to determine the extent to which these alternative explanations apply. Despite the uncertain interpretation of the covariate control, the findings have some important applied implications, since they indicate

that exposure to childhood parental separation/divorce does not have detrimental consequences unless it is accompanied by other adverse family features.

Previously, it has been suggested that the associations between childhood parental separations/divorces and later partnership outcomes may vary by gender; with females being more affected by this form of parental change (Christensen & Brooks, 2001). The present study does not support this conclusion; tests of gender interactions showed that the effects of childhood parental separation/divorce on future adult partnership outcomes were similar for males and females.

A further suggestion has been that the timing of parental separation may have differing effects on partnership outcomes (Amato, 2001; Kiernan & Cherlin, 1999; Mustonen, et al., 2011; Uphold-Carrier & Utz, 2012). This analysis showed that, as a general rule, the associations between separation/divorce and partnership outcomes did not vary with the ages at which separation/divorce occurred.

In comparison to previous research in this area, this study has a number of strengths. These strengths include: the prospective collection of parental change data at annual intervals during childhood; the availability of a wide range of prospectively assessed covariate factors; and the assessment of partner relationships during adolescence and adulthood. These features have made it possible to conduct a comprehensive analysis of the associations between parental separations/divorces and later partnership outcomes, taking into account the childhood context within which parental separation/divorce occurred.

However, the study has a number of limitations which center around the fact that the cohort was studied over a particular historical period (the 1970s, 1980s) in which social values regarding separation and divorce were undergoing rapid change (Amato, 2001). The

extent to which the study findings reflect this context is unknown. A further consideration is that the findings are limited to separation/divorce of the cohort member's custodial parent. The extent to which separation/divorce of the child's non-custodial parent had effects on later partnership outcomes is unknown.

## **Conclusion**

In general, these findings suggest that the associations between parental separations/divorces and later partnership outcomes were generally quite weak and were largely explained by covariate factors that were correlated with increased risk of parental separations/divorces (Amato & Booth, 2001; Ginter & Pollack, 2004; Lansford, 2009). These conclusions appeared to hold for males and females and did not vary with the age at which the separation/divorce occurred.

## **Key Points**

- Childhood parental separations/divorces were associated with reduced partnership quality at age 29-30.
- Following statistical control, associations between the number of childhood separations/divorces and later partnership outcomes were explained by the effects of social and contextual factors.
- Exposure to childhood parental separations/divorces was not a risk factor for partnership impairments, unless it was accompanied by other forms of childhood adversity including: parental history of illicit drug use, childhood sexual abuse, childhood conduct problems (7-9 years), interparental conflict and violence (child reported), childhood physical punishment/maltreatment, family socio-economic status at the child's birth, and parental history of criminality.

- The clinical implications of these findings are that amongst families undergoing separation/divorce, it is important to examine social and contextual factors that may be associated with later adverse outcomes.

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Table 1. Associations between the number of childhood parental separations/divorces (0-15 years) and partnership outcomes up to age 30

Outcome	Number of childhood parental separations/divorces			r	p
	0	1	2+		
<u>Relationship history</u>	n=642	n=191	n=80		
Mean (SD) number of cohabiting/marriage partnerships (16-30 years)	1.4 (1.0)	1.8 (1.1)	1.7 (1.2)	.15	<.001 <sup>a</sup>
<u>Partner relationships<sup>d</sup></u>	n=564	n=172	n=70		
Mean (SD) positive partner relations score	40.1 (5.7)	39.6 (5.6)	40.3 (5.7)	-.01	.896 <sup>b</sup>
Mean (SD) negative partner relations score	12.5 (3.2)	13.1 (4.0)	13.2 (3.6)	.08	.021 <sup>b</sup>
Mean (SD) partner adjustment/conduct problems score	10.3 (2.0)	11.2 (3.0)	11.1 (2.6)	.15	<.001 <sup>b</sup>

<u>Interpartner violence</u> <sup>d</sup>	n=565	n=173	n=70		
Mean (SD) victimization score	0.2 (1.1)	0.4 (1.5)	0.4 (1.5)	.06	.116 <sup>c</sup>
Mean (SD) perpetration score	0.2 (0.7)	0.2 (1.0)	0.5 (1.2)	.10	.018 <sup>c</sup>

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Note. <sup>a</sup> Poisson regression; <sup>b</sup> Least squares regression; <sup>c</sup> Negative binomial regression; <sup>d</sup> These results are based on reports by all cohort members in partnerships at ages 29-30 years.

Table 2. Associations between the number of childhood parental separations/divorces (0-15 years) and covariate factors

Measure	Number of parental separations			p
	0	1	2+	
Number of observations (n)	698	209	88	
<u>Socio-demographic background at birth</u>				
% Mother aged $\leq$ 25 years	40.5	59.3	78.4	<.001
% Child of single parent family	4.3	12.4	10.2	<.001
% Family of low SES (unskilled/semi-skilled occupational status)	18.2	34.9	48.9	<.001
% Mother lacked formal educational qualifications	43.0	60.8	75.0	<.001
% Father lacked formal educational qualifications	43.3	61.2	68.2	<.001
<u>Family functioning</u>				
% Parental history of depression/anxiety (15 years)	21.7	49.5	47.1	<.001
% Parental history of alcohol problem (15 years)	4.7	25.0	37.7	<.001
% Parental history of criminality (15 years)	4.9	29.0	38.8	<.001
% Parental history of illicit drug use (11 years)	18.1	33.7	53.4	<.001
% Interparental conflict and violence (child report)( $<$ 16 years)	40.4	53.0	51.1	.003
<u>Childhood history of abuse</u>				
% Any sexual abuse ( $<$ 16 years)	11.7	15.4	22.1	.018
% Regular/more severe physical punishment/maltreatment ( $<$ 16 years)	13.1	27.7	27.9	<.001
<u>Child behavior</u>				
% Highest quartile childhood conduct problems (7-9 years)	9.0	23.4	25.0	<.001

Table 3. Associations between the number of childhood parental separations/divorces (0-15 years) and partnership outcomes at age 30: (a) unadjusted and (b) adjusted for covariates

Outcome	(a) Unadjusted		(b) Adjusted for covariates		Significant covariates <sup>a,b</sup>
	B (SE)	p	B (SE)	p	
<u>Cohabiting partnerships</u>					
Number of cohabiting/marriage partnerships (16-30 years)	0.159 (0.039)	<.001	0.063 (0.044)	.158	1 <sup>a</sup> , 2 <sup>a</sup> , 3 <sup>a</sup>
<u>Partner relationships</u>					
Negative partner relations score	0.435 (0.189)	.021	0.075 (0.197)	.703	3 <sup>a</sup> , 4 <sup>a</sup> , 5 <sup>a</sup>
Partner adjustment/conduct problems score	0.547 (0.127)	<.001	0.205 (0.134)	.125	3 <sup>a</sup> , 5 <sup>a</sup> , 6 <sup>a</sup> , 7 <sup>a</sup>
<u>Interpartner conflict and violence</u>					
Perpetration score	0.509 (0.215)	.017	0.232 (0.214)	.279	2 <sup>b</sup> , 3 <sup>a</sup> , 5 <sup>a</sup>

Note. <sup>a</sup> Denotes a statistically significant ( $p < .05$ ) covariate for each outcome; <sup>b</sup> Denotes a marginally statistically significant ( $p < .10$ ) covariate for each outcome.

Covariates: 1= Parental history of illicit drug use; 2= Childhood sexual abuse; 3= Childhood conduct problems (7-9 years); 4= Interparental conflict and violence (child reported); 5= Childhood physical punishment/ maltreatment; 6= Family socio-economic status at child's birth; 7= Parental history of criminality.