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Long-term Psychosocial effects of parental divorce

A follow-up study from adolescence to adulthood

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Abstract *Objective* The purpose of this 16-year follow-up study was to investigate whether 32-year-old adults who had experienced parental divorce before 16 years of age ($n=317$) differed in psychosocial well-being or life trajectories from those from non-divorced two-parent families ($n=1069$). *Method* The data were obtained from a follow-up survey of a Finnish urban age cohort from the age of 16 till 32 years ($n=1471$). The long-term impact of parental divorce on a variety of outcomes in adulthood, including psychological well-being, life situation, health behaviour, social networks and support, negative life events and interpersonal problems, was assessed. *Results* Females from divorced compared to non-divorced families reported more psychological problems (higher scores in the Beck Depression Inventory, General Health Questionnaire and Psychosomatic Symptoms Score) and more problems in their interpersonal relationships. These differences were not found among males. Shorter education, unemployment, divorce, negative life events and more risky health behaviour were more common among subjects of both genders with a background of parental divorce. *Conclusions* The study revealed that parental divorce is an indicator of sufficient stress in childhood for its influences to persist well into adulthood, possibly with wider scope among females. It is important to recognise specific needs of children in the divorce process in order to pre-

vent or minimize negative consequences and chain reactions during their subsequent life.

Keywords parental divorce · long-term effects · psychosocial well-being · health behaviour · longitudinal study

Introduction

The proportion of single-parent families has increased world-wide in the last few decades, mostly due to high divorce rates. In Finland as elsewhere, growing numbers of children endure parental divorce and the severe upheaval of normal family life that results. This may lead to further stressful experiences such as disruption in parent-child relationships, loss of emotional support, economic hardship, as well as numerous other stressful life events such as moving, changing school, losing contact with grandparents and paternal remarriage (Amato 2000). The combined cumulative toll may complicate the child's psychological maturation process and their adjustment in divorced families.

Detrimental impacts of parental divorce on the life course of offspring may persist into adulthood. It has been suggested that the long-term consequences of parental divorce for adult attainment and quality of life may prove to be more serious than the short-term emotional and social problems noted in childhood (Amato and Keith 1991a). Although a substantial literature exists on the effects of divorce on children and young adults, relatively little is known about the continuing effects of parental divorce in the adult life course. The rare prospective studies of the psychosocial functioning of adults have shown that parental divorce during childhood has a long-term negative impact on adult psychological health, behaviour, socio-economic and marital status, and marital quality (Cherlin et al. 1998; Gilman et al. 2003; Hope et al. 1998; Rogers et al. 1997; Wallerstein and Lewis 2004). However, there is great variability in individual responses to divorce.

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Evidence of gender variation in the effects of parental divorce is inconsistent. Many studies have suggested that boys may be more vulnerable than girls to family disruptions in childhood (Guidubaldi and Perry 1985; Hetherington et al. 1997). There is also some suggestion that the reactions of girls to parental divorce in adolescence may be stronger (Cooney et al. 1986), and that the delayed effects in girls of divorce may emerge in adolescence or young adulthood (Rogers 1994; Wallerstein and Corbin 1989; Zill et al. 1993). Some studies on the long-term effects of parental divorce on adult offsprings' well-being have found parental divorce to be a greater risk for adult females (Glenn and Kramer 1985; McLeod 1991; Rogers 1994), while others have found only minimal or no gender differences (Amato and Keith 1991b; Jónsson et al. 2000; Rogers et al. 1997). There is also some suggestion that males may have more problems in some domains of life situation and well-being, and females in other domains (Amato and Keith 1991a; Zaslow 1989).

Because divorce is becoming an increasingly common experience among children and adolescents of Western countries and seems to result in negative effects on their life chances and health as an adult, we set out to investigate whether parental divorce in childhood had increased long-term mental health vulnerability or led to stressful paths among adults from divorced families. In the previous follow-up phase of this same study cohort at 22 years, depression in young adulthood was found to be slightly more common among children from divorced families. Moreover, the life trajectories of these children revealed more stressful paths and more distress in both adolescence and young adulthood. No marked gender differences were found in relation to parental divorce at that age (Aro and Palosaari 1992). In this paper we present results for the same cohort at 32 years of age. The study questions were as follows: Does parental divorce during childhood have long-term consequences on adult psychological well-being, life situation, health behaviour, social networks and support, negative life events and interpersonal problems? Are there gender differences in this long-term adaptation?

Material and methods

■ Participants

The original study population included all ninth-grade pupils attending secondary schools in the spring of 1983 in Tampere, an industrial and university city in southern Finland with 166,000 inhabitants ($n = 2269$). These subjects were studied at 16 and 32 years. In the first phase of the study, 2194 pupils (96.7%) aged 16 years (mean 15.9, S.D. 0.3) completed a self-administered questionnaire during school hours. In 1999, postal questionnaires were mailed to the same study population when they were 32 years old. The follow-up cohort totalled 2091 persons (92%), and the response rate was 70.3% ($n = 1471$). Of the original respondents, 22 had died, five were institutionalised, 14 were unidentifiable because of incomplete or missing identification numbers, and the addresses of 62 were unobtainable. The study protocol was approved by the Ethics Committee of the National Public Health Institute.

The information on parental divorce was obtained via structured

questions. Among the 1471 participants in the follow-up phase, 23% had experienced parental divorce prior to the first phase of the study ($n = 340$). All subjects were divided into two groups for comparison: 1) those who had experienced parental divorce prior to the first phase of the study (before about 16 years of age), and 2) those who had lived their childhood in non-divorced two-parent families. Participants who had experienced parental death in childhood were excluded from the present analyses ($n = 80$), as were five cases with no information on parental death or divorce. Thus, the final data in the follow-up phase consisted of 317 subjects (178 females, 139 males) from divorced families and 1069 subjects (585 females, 484 males) from non-divorced families. A participant flow chart is presented in Fig. 1. About 44% of the boys and girls experienced parental divorce before school age (under 7 years), 38% at 7–12 years and about a fifth at 13–16 years. In adolescence, more than half of the children from divorced homes lived either with mother alone (in most cases) or with father alone. A third lived with mother and stepfather, and only a few lived with father and stepmother or had other custodial arrangements. About half the children (47%) came from manual class families. The prevalence of parental divorce among subjects from manual class families was 25%, and from non-manual-labour class families 20%.

Comparison of participants ($n = 1471$) with non-participants ($n = 723$) in characteristics and responses at baseline showed that the dropout group included more boys than girls (63% vs 37%). Furthermore, pupils who dropped out from the follow-up were more often characterised by poor school performance (range 4–10, mean 7.3, S.D. 0.9 vs mean 7.7, S.D. 0.9), frequent alcohol use (11% vs 6%) and smoking (27% vs 20%). In addition, the non-participant group of females included more from divorced families (non-participants 32% vs participants 24%), although among males there was no such difference (22% vs 23%). Nor were differences found between non-participants and participants of either gender in terms of parental socio-economic status, psychosomatic distress and health status. The predictive effect of gender, family background and SES factors, health and health behaviour on non-response and on the estimation of depression prevalence in this longitudinal survey was studied in detail by Eerola et al. (2005).

■ Measures

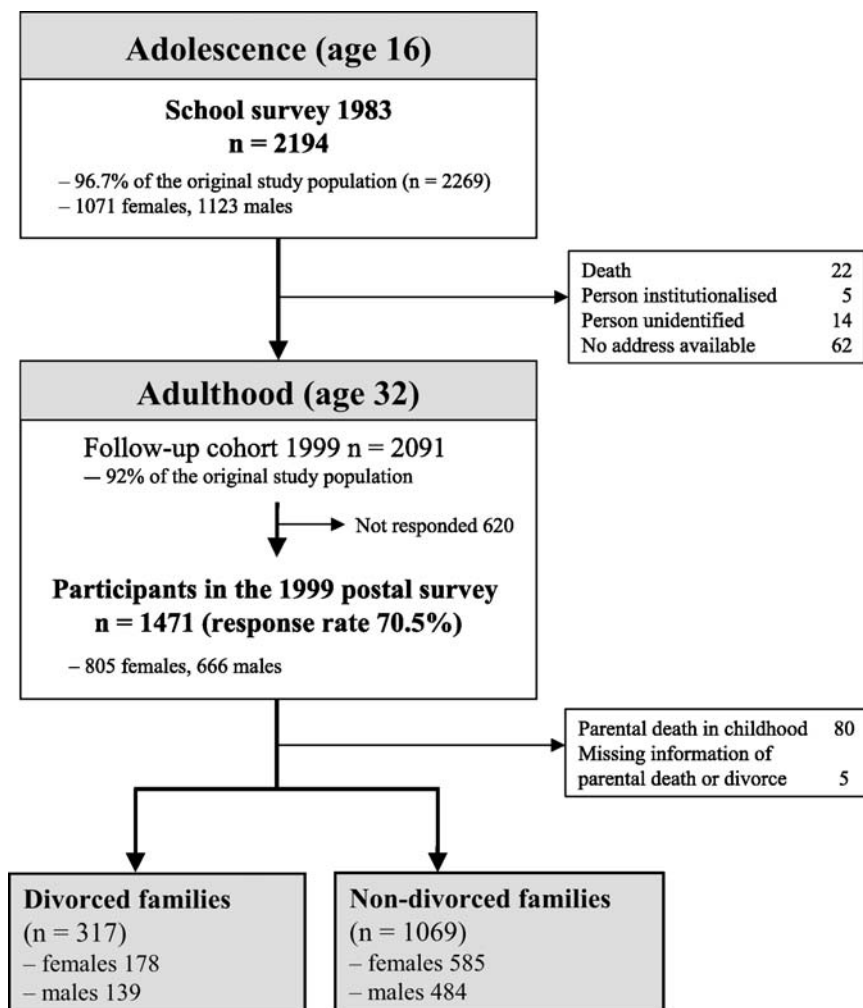
The questionnaire at 16 years included questions about psychological and somatic health, health behaviour, family background, personal characteristics, social relationships and life events. In the follow-up at 32 years the questions and scales were presented in similar or age-appropriate versions, and some scales on psychological well-being were added.

■ Family background at 16 years

Family background was assessed with questions related to parental divorce, death and socio-economic status. The information on parental divorce and death was obtained via structured questions. Parental socio-economic status at 16 years was based on the adolescents' open-ended description of their father's occupation, or, if this was inappropriate, on the mother's. In a few cases in which neither's occupation was available, the assignment of socio-economic status was based on the parents' education. The categorisation of parental SES as 'non-manual' or 'manual' was based on the standard classification of occupations (Central Statistical Office of Finland 1975). The 'non-manual group' included, for example, teachers, physicians, bank officers and nurses, and the 'manual group' included cleaners, industrial workers, drivers and waitresses.

■ Psychological well-being at 32 years

Psychosomatic symptoms were measured using the Psychosomatic Symptoms Score (Aro 1988). The list covered 17 somatic and psychic complaints frequently used in symptom checklists to reflect stress or

Fig. 1 A chart of the participant flow

malaise. Depression was measured using the short 13-item Beck Depression Inventory (Beck and Beck 1972). The Finnish version of the instrument, used in epidemiological surveys, also includes introductory questions and an additional positive choice of answer for each item; these do not affect the rating of depression (Kaltiala-Heino et al. 1999; Mattlar et al. 1987). The theoretical range of scores for depressive symptoms is 0–39. An S-BDI score of 5 or more was classified as depressed (Beck and Beck 1972). The 12-item General Health Questionnaire (GHQ-12) was used as a measure of psychological distress (Goldberg 1972). The range of GHQ-12 scores is 0–12; scores of 2 or more were classified as minor psychiatric disturbance.

■ Life situation, health behaviour, social networks and support at 32 years

Socio-economic status at 32 years was measured by reported occupational type and classified as 'non-manual' or 'manual' according to the standard classification of occupations (Central Statistical Office of Finland 1989).

The Alcohol Use Disorders Identification Test (AUDIT) was used as a screening instrument for alcohol use. An AUDIT score of 8 or more was classified as hazardous alcohol consumption (Babour et al. 1989).

The size of social networks was studied by asking the respondent to list the number of very important persons in three categories: family and relatives, friends, and other important persons. The total size of the social network was constructed as the sum of these categories.

The measurement of satisfaction with social support was based on a modified version of the Social Support Resources (SSR) measure (Vaux and Harrison 1985), which includes five modes of social support: emotional, practical, financial, advice and socialising. Satisfaction with each of the five modes of social support was assessed using a 5-point scale (from 1 = not at all satisfied to 5 = very satisfied). An overall satisfaction with social support score was calculated as the sum of the five specific satisfaction scores.

■ Negative life events and interpersonal problems at 32 years

The subjects were asked whether they had experienced life events (0 = no, 1 = yes) during the past 12 months using a list of events resembling those asked when they were 16 (Aro 1987), but modified to correspond with adult life by referring to events commonly included in life event checklists. In the analyses we constructed a score for 'negative life events' and a separate score for 'interpersonal problems' referring to interpersonal events which were not all 'events' in the strict sense of the word and which may have been affected by the subject's own behaviour. The total score of negative life events was constructed as the sum of 21 negative life events (losing own job, threat of unemployment, spouse/partner losing job, financial difficulties, severe illness of close friend, severe illness of family member, own severe illness, own or partner's spontaneous abortion, own or partner's induced abortion, parental divorce, breakup with boy- or girlfriend, own separation or divorce, death of mother, death of father, death of family member, death of close friend, severe problems concerning

own child, experience of physical aggression, experience of mental violence, experience of serious accident, and problems with the law). The sum score for interpersonal problems covered five items (increased conflict in intimate relationship, and increased conflict with mother, father, friends and colleagues).

■ Statistical analyses

Statistical analyses were performed using SPSS 11.5 for Windows. All analyses were conducted separately for females and males. First, the distribution of variables in females and males by parental divorce (divorced and non-divorced families) was represented as means and standard deviations (SD) for continuous variables and as percentages (%) for categorical variables. Differences between groups were assessed by the independent samples t-test for continuous variables and the Chi-square test for categorical variables. Two-tailed statistical tests were used throughout. Because there were differences in the prevalence of parental divorce between social class groups and parental social class was related to many outcome variables in this study (e.g. educational and working status), all analyses were also done by controlling for parental socio-economic status. In these analyses differences between groups were tested with logistic regression models for dichotomous outcomes (expressed in odds ratios (OR) with 95% confidence intervals (CI)) and two-way analysis of variance (GLM Univariate) for continuous outcomes. Finally, to test gender differences, the two-way interactions by gender (gender \times parental divorce) for each outcome measure were calculated. The α -level was set at 0.05.

Results

■ Psychological well-being

At the age of 32 years, females from divorced families reported significantly higher Psychosomatic Symptoms Scores than females from non-divorced families. They also had higher prevalences of depression and minor psychiatric disturbance. Male subjects from divorced or non-divorced families did not differ in terms of their psychological well-being (Table 1). Psychosomatic symptoms ($F(1,757) = 11.63, p = 0.001$), depression ($OR = 1.87, 95\% CI = 1.23-2.84, p < 0.01$) and minor psychiatric disturbance ($OR = 2.13, 95\% CI = 1.50-3.04, p < 0.001$) remained significantly higher among females from divorced families than among females from non-divorced families after controlling for parental socio-economic status.

■ Life situation and health behaviour

Respondents from divorced compared to non-divorced families had lower rates of university education and higher rates of unemployment. In addition, fewer females from divorced families worked in non-manual jobs. Subjects with a family background of parental divorce were less often married or cohabiting and had more frequent personal experience of divorce or separation. Differences in health behaviour also emerged: daily smoking and hazardous alcohol consumption were more common among both females and males from divorced families (Table 2).

After controlling the results for parental socio-economic status, all the reported family group differences in life situation and health behaviour remained essentially the same. Among females, unemployment was more common ($OR = 2.38, 95\% CI = 1.43-3.98, p = 0.001$), and university education ($OR = 2.83, 95\% CI = 1.60-5.03, p < 0.001$) and working in non-manual jobs ($OR = 1.66, 95\% CI = 1.14-2.42, p < 0.01$) less common among those from divorced compared to non-divorced families. Males from divorced families were at increased risk of being unemployed ($OR = 2.46, 95\% CI = 1.31-4.63, p < 0.01$). Subjects with a family background of parental divorce compared to non-divorce were less likely to be married or cohabiting ($OR = 1.68, 95\% CI = 1.28-2.22, p < 0.001$) and more likely to be divorced or separated ($OR = 2.20, 95\% CI = 1.46-3.32, p < 0.001$). In addition, subjects from divorced families had increased risk of being daily smokers ($OR = 1.98, 95\% CI = 1.49-2.63, p < 0.001$) and heavy drinkers ($OR = 1.73, 95\% CI = 1.30-2.29, p < 0.001$).

■ Social networks and support

Scores for total network size and total satisfaction with social support were lower among females from divorced compared to non-divorced families. They reported fewer very important family members and relatives, friends and other important persons, and were less satisfied with practical support, financial assistance and socialising. Males from divorced families were less satisfied with financial assistance from other people than males from non-divorced backgrounds (Table 3).

All the reported family group differences in social

Table 1 Psychological well-being at 32 years of age among females and males by parental divorce

	Females				Males			
	Non-divorced (N = 585)	Divorced (N = 178)	t or χ^2	p	Non-divorced (N = 484)	Divorced (N = 139)	t or χ^2	p
Psychosomatic symptoms PSS, mean (SD)	9.7 (5.2)	11.2 (6.2)	-3.0	< 0.01	7.9 (5.6)	8.6 (6.4)	-1.3	n. s.
Depression S-BDI, %	14.5	23.6	8.1	< 0.01	12.6	13.7	0.1	n. s.
Minor psychiatric disturbance GHQ-12, %	26.4	42.1	16.1	< 0.001	20.9	21.0	0.0	n. s.

SD standard deviation; n. s. not significant

Table 2 Life situation and health behaviour at 32 years of age among females and males by parental divorce

	Females				Males			
	Non-divorced (N = 585) %	Divorced (N = 178) %	χ^2	p	Non-divorced (N = 484) %	Divorced (N = 139) %	χ^2	p
Non-manual socio-economic status	74.5	65.0	6.1	< 0.05	57.4	48.9	3.1	n. s.
University education	21.6	9.0	14.0	< 0.001	21.1	12.9	4.6	< 0.05
Working status								
Working	61.5	57.1	1.1	n. s.	85.1	79.9	2.2	n. s.
Unemployed	7.4	15.8	11.5	< 0.001	5.6	13.7	10.3	< 0.001
Marital status								
Married or cohabiting	78.9	67.8	9.3	< 0.01	73.8	62.6	6.6	< 0.05
Divorced or separated	7.0	14.7	9.9	< 0.01	5.8	11.5	5.3	< 0.05
Having children	63.0	58.9	1.0	n. s.	54.2	55.4	0.1	n. s.
Health behaviour								
Daily smoking	16.4	31.6	19.7	< 0.001	22.1	34.5	8.9	< 0.01
Hazardous alcohol consumption	11.1	17.4	4.9	< 0.05	32.5	49.6	13.7	< 0.001

n. s. not significant

Table 3 Social networks and social support at 32 years of age among females and males by parental divorce

	Females				Males			
	Non-divorced (N = 585) Mean (SD)	Divorced (N = 178) Mean (SD)	t	p	Non-divorced (N = 484) Mean (SD)	Divorced (N = 139) Mean (SD)	t	p
Social networks								
Very important family members and relatives	7.0 (4.7)	5.1 (3.8)	5.5	< 0.001	7.0 (6.1)	6.1 (5.2)	1.5	n. s.
Very important friends	5.1 (4.5)	4.2 (3.0)	3.2	< 0.001	6.3 (8.7)	6.9 (8.2)	-0.7	n. s.
Other important persons	5.3 (8.7)	3.7 (5.6)	2.8	< 0.01	6.3 (14.8)	4.6 (7.7)	1.4	n. s.
Total size of social networks	17.4 (13.5)	13.0 (8.7)	5.0	< 0.001	19.6 (23.2)	17.4 (16.4)	1.0	n. s.
Satisfaction with social support								
Satisfaction with emotional support	4.4 (0.8)	4.3 (0.8)	0.3	n. s.	4.1 (0.8)	4.1 (0.9)	0.1	n. s.
Satisfaction with practical assistance	4.4 (0.9)	4.2 (0.9)	2.5	< 0.05	4.3 (0.8)	4.1 (0.9)	1.6	n. s.
Satisfaction with financial assistance	4.4 (0.8)	4.2 (0.9)	3.4	0.001	4.3 (0.8)	4.1 (0.8)	2.5	< 0.05
Satisfaction with advice	4.5 (0.7)	4.4 (0.7)	1.9	n. s.	4.2 (0.8)	4.2 (0.8)	0.4	n. s.
Satisfaction with socialising	4.2 (0.9)	4.1 (0.9)	1.9	0.05	4.1 (1.0)	4.0 (0.9)	0.4	n. s.
Total satisfaction with support	21.8 (3.1)	21.1 (3.4)	2.7	< 0.01	21.0 (3.3)	20.6 (3.4)	1.4	n. s.

n. s. not significant

networks and support remained essentially the same when parental socio-economic status was taken into account. The total size of the social network ($F(1,736) = 14.48$, $p < 0.001$), total satisfaction with social support scores ($F(1,725) = 7.38$, $p < 0.01$), and mean number of important family members ($F(1,746) = 23.28$, $p < 0.001$), friends ($F(1,746) = 6.15$, $p < 0.05$) and other important persons ($F(1,737) = 3.98$, $p < 0.05$) were significantly lower among females from divorced compared to non-divorced families. In addition, satisfaction with practical assistance ($F(1,751) = 6.60$, $p = 0.01$) and socialising ($F(1,753) = 4.52$, $p < 0.05$) among females and satisfaction with financial assistance in both genders with a family background of parental divorce (females: $F(1,736) = 10.83$, $p = 0.001$; males: $F(1,595) = 5.90$, $p < 0.05$) remained lower.

■ Negative life events and interpersonal problems

The total negative life events score was higher among subjects from divorced families than in those from non-divorced families (females: mean 2.4 (SD = 2.4) vs mean 1.7 (SD = 1.8), $t = -3.5$, $p < 0.001$; males: mean 2.0 (SD = 2.4) vs mean 1.5 (SD = 1.8), $t = -2.2$, $p < 0.05$). In females, the total interpersonal problems score was significantly higher among those from divorced families (mean 1.3 (SD = 1.2) vs mean 0.8 (SD = 1.0), $t = -5.0$, $p < 0.001$). Among males of the two groups no differences in interpersonal problems were observed (divorced: mean 0.9 (SD = 0.9) vs. non-divorced: mean 0.9 (SD = 1.0), $t = -1.4$, $p = 0.154$). After adjusting for parental socio-economic status the differences between the family groups still remained significant in negative

life events among both genders (females: $F(1,756) = 18.00$, $p < 0.001$, males: $F(1,756) = 18.00$, $p < 0.001$) and in interpersonal relationships among females ($F(1,756) = 26.53$, $p < 0.001$).

■ Gender differences

To test gender differences, the two-way interaction models by gender (gender \times parental divorce) for each outcome measures were calculated. The interaction models showed statistically significant gender \times parental divorce interactions on the Beck Depression Inventory ($F(1,376) = 3.76$, $p = 0.05$), General Health Questionnaire ($F(1,1374) = 8.08$, $p < 0.01$), mean number of very important friends ($F(1,1354) = 3.25$, $p = 0.07$) and interpersonal problems ($F(1,1375) = 6.63$, $p = 0.01$), indicating that the effect of parental divorce on these outcomes was much stronger among females than males.

Discussion

The purpose of this follow-up study was to determine whether persons who had experienced parental divorce before 16 years of age differed in psychosocial well-being or life trajectories as 32-year-old adults from those from non-divorced two-parent families. In agreement with earlier studies (Cherlin et al. 1998; Gilman et al. 2003; Hope et al. 1998; Rogers et al. 1997; Wallerstein and Lewis 2004), our findings revealed that parental divorce is an indicator of such stress in childhood that its influences persist well into adulthood. In the present study, the influences seemed to be more extensive among females.

Evidence of gender disparities in the various impacts of parental divorce is inconsistent. Some studies on the long-term effects of parental divorce on adult offspring's well-being have found only minimal or no gender differences in psychological adjustment (Amato and Keith 1991b; Jónsson et al. 2000; Rogers et al. 1997), while others have found parental divorce to be a greater risk of psychological problems for adult females (Glenn and Kramer 1985; McLeod 1991; Rogers 1994). In the present study we found differences in adult psychological well-being and social relationships in following parental divorce only in females. The conditions engendering a worse psychological health outcome for females are unclear. It is possible that marital status and (lower) quality of intimate relationship may mediate some of the long-term negative effects of parental divorce among females. Glenn and Kramer (1985) found that for females a moderate proportion of the effects of parental divorce on psychological well-being was mediated through current marital status, i. e. the greater propensity to divorce among the children of divorcees. The study of McLeod (1991) indicated that current poor marital quality was an important determinant of the higher level of depression among females from divorced families. In the lon-

gitudinal study of Rogers (1994), parental divorce was a risk factor for adult depression in the women who were single, divorced or remarried. Within the married group of women there was no difference in symptoms between those from intact and divorced families of origin. Women with divorced parents may be disadvantaged in their intimate relationship competence (Rogers 1994). In our previous follow-up of this same study cohort, at the age of 22 (Aro and Palosaari 1992), we found higher rates of conflict in intimate relationships among females from divorced families, but not among young males. It is possible that those females who are most disadvantaged in intimate relationships either fail to establish relationships leading to marriage or, when they do, encounter severe problems which result in their own divorce (Rogers 1994) and more psychological problems. Parental divorce, or conflict preceding and following divorce, may also establish a vulnerable set which is invoked in the event of the child's own divorce or breakdown of an intimate relationship in later life. Once this vulnerable set is triggered the resultant depression may be long lasting (Rogers 1994). Furthermore, depression in turn may influence social support perceptions, depressed individuals with poorer mental health experiencing and reporting less satisfaction with their social relationships and support. This dissatisfaction can, in addition to various psychological problems, create even greater disruptions in relationships with members of social networks (Robinson and Garber 1995).

It is possible that parental divorce can set in motion a chain of indirect stressful reactions and circumstances that affect an individual in their later life (Cherlin et al. 1998; Rutter 1987; Rutter and Maughan 1997). Our present and previous study (Aro and Palosaari 1992) of this same age cohort demonstrated that life trajectories of children from divorced families frequently differ from those of children from non-divorced families. Educational disadvantage among children from divorced families continued throughout adolescence into adulthood. As education fundamentally shapes an individual's occupational and social status in Finland, differences were highly evident in these factors, too. Earlier transition to working life, unemployment, lower socio-economic status and life events were all more common among subjects with a family background of parental divorce. These may indicate a more stressful life situation as a whole, which then increases the risk of individual and relational maladjustment. The same disadvantage as in education and occupation was seen also in health behaviour from adolescence to adulthood among subjects with a family background of parental divorce.

Divorce is not a single event but a multi-stage process which radically changes family relationships. It is possible and even probable that parental divorce is mainly an indicator of other problems that may be more prevalent in these families. Divorce often involves a lengthy sequence of pre-divorce experiences, such as continual parental discord, the effects of which may be even more important for children's welfare than the separation as

such (Aro 1988). Divorce is far more likely to occur among couples with personal, social and economic problems and to be preceded by troubled family relationships and parenting processes (Furstenberg and Teitler 1994). Characteristics of the children or their parents may also influence the parents' marriages and the children's lives. For example, a shared genetic tendency in a family, such as a history of depression, could contribute both to parents' marital distress and divorce, and to children's psychiatric disorder in later life (Cherlin et al. 1998; Bandelow et al. 2004). Further, several post-divorce factors have been reported to affect the long-term outcome of children, among them parent-child relationships, continuing discord between former spouses, loss of emotional support, economic hardship, and losing contact with grandparents and paternal remarriage (Amato 2000; Amato and Keith 1991b).

Although parental divorce may have a detrimental impact on the life course of the offspring up to adulthood there is wide individual diversity in responses to a stressful environment in childhood (Amato 2000; Isohanni et al. 2000; Rutter 1985). The majority of children from divorced families in this study showed good psychosocial adaptation as adults. The impact of stressful childhood experiences on further development may be modified by many protective factors or processes in the child, family and community, and their interactions, which then affect further development and life course. Resources that lessen the negative impact of parental divorce may reside within the individual (self-efficacy, coping skills, social skills), in interpersonal relationships (social support), and in structural roles and settings (employment, community services) (Amato 2000).

This study has several strengths and limitations. The original study population comprised a total age cohort of 16-year-olds in one city, and the same children were followed up for a variety of outcomes up to 32 years. All data were collected using self-report questionnaires in a classroom survey at 16 years of age, resulting in a minimal dropout rate at baseline. When the same study population is followed over several years there is a possibility that sample attrition may cause bias in the results. Analysis of the drop-outs here showed that the non-participant group included more females (but not males) from divorced families. If the non-participant group of females from divorced families was over-represented by those from the most disadvantaged backgrounds, the real differences between females from divorced and non-divorced families may be even greater than those found in this study. On the other hand, if females whose parents divorced and who fared well were less likely than other female children of divorced parents to take part in the study, the real differences would be smaller than those found. The latter alternative seems unlikely, but cannot be dismissed. Although the data of this study enabled us to study the long-term impact of parental divorce on a variety of outcomes in adulthood, the study had only limited scope for tracking various important

factors underlying the divorce process. Information on some important possible confounding factors, such as the impact of early childhood trauma (e.g. sexual or physical abuse and neglect) and parental psychopathology was not available.

In summary, our study showed that parental divorce is an indicator of sufficient stress in childhood for its influences to persist well into adulthood. The effects of parental divorce on adult offsprings' psychosocial well-being and life situation differed somewhat between males and females. In terms of psychological well-being and social relationships differences were seen only in females, suggesting that the long-term consequences among them may affect a wider range of well-being. The explanations for these gender disparities and the roles of adverse and protective influences as mediating factors between parental divorce and children's subsequent psychological outcomes need closer examination in future studies. It is important to see specific needs of children in the divorce process to prevent or minimize negative consequences and chain reactions during life course.

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