

International Journal of Behavioral Development

<http://jbd.sagepub.com>

The specific mediating paths between economic hardship and the quality of parenting

Jenni A. Leinonen, Tytti S. Solantaus and Raija-Leena Punamäki

International Journal of Behavioral Development 2002; 26; 423

DOI: 10.1080/01650250143000364

The online version of this article can be found at:
<http://jbd.sagepub.com/cgi/content/abstract/26/5/423>

Published by:



<http://www.sagepublications.com>

On behalf of:



[International Society for the Study of Behavioral Development](http://www.sagepub.com)

Additional services and information for *International Journal of Behavioral Development* can be found at:

Email Alerts: <http://jbd.sagepub.com/cgi/alerts>

Subscriptions: <http://jbd.sagepub.com/subscriptions>

Reprints: <http://www.sagepub.com/journalsReprints.nav>

Permissions: <http://www.sagepub.co.uk/journalsPermissions.nav>

Citations <http://jbd.sagepub.com/cgi/content/refs/26/5/423>

The specific mediating paths between economic hardship and the quality of parenting*

Jenni A. Leinonen and Tytti S. Solantaus
Hospital for Children and Adolescents,
Helsinki University, Finland

Raija-Leena Punamäki
Tampere University, Finland

Finland, one of the welfare states of northern Europe, faced an exceptionally deep economic recession at the beginning of the 1990s. Based on the Family Stress Model (Conger & Elder, 1994) we studied specific mediating paths between economic hardship and the different domains of parenting in 527 mother-father-child triads. The results show that economic hardship created economic pressures for both parents. For fathers, both the general and specific pressures were further associated with symptoms of anxiety and social dysfunction, whereas for mothers, only the specific economic pressures were negatively reflected in mental health by increasing depressing mood and anxiety symptoms. Paternal anxiety was then associated with hostile marital interaction, perceived by the wife, and maternal anxiety with low marital support, perceived by the husband. The negative marital interaction finally was associated with poor parenting, especially among the fathers. Fathers' anxiety was also directly related to their punitive and noninvolved fathering, and social dysfunction to noninvolved fathering. Depressive symptoms in mothers were negatively reflected in authoritative mothering. Finally, the results revealed that supportive and nonhostile marital interaction was able to moderate the negative impact of economic hardship on parenting. The findings suggest that mothers and fathers fulfil gendered roles in dealing with the family economy and relationships.

Introduction

There is a long-standing research tradition exploring how living conditions and work life affect the health and wellbeing of adults (Dohrenwend & Dohrenwend, 1974; Valkonen, Martelin, & Rimpelä, 1990). More recently it was realised that these adults might also be parents and that the difficulties they confront often have implications for their children. Scientific interest then extended to how economic difficulties affect family relationships and parenting (Belsky, 1984). Parenting is of special importance in understanding how social phenomena influence child development and wellbeing (Baumrind, 1980; Dodge, Pettit, & Bates, 1994). The interest in this study is on family economic hardship and its implications for parenting in times of national recession.

Finland faced an exceptionally deep economic recession at the beginning of the 1990s, when the growth of the national income turned into a steep decline (Heikkilä, Hänninen, & Kosunen, 1993). National unemployment figures started to rise rapidly from 3% in 1990 to over 18% in 1994. Families were plagued by unemployment and debt (Salmi, Huttenen, & Yli-Pietilä, 1996). State budget cuts directly influenced families with children: several different kinds of benefit and support systems were affected, such as housing support and home-care allowance (Heikkilä & Uusitalo, 1997).

On the other hand, Finland is a welfare state and has an effective unemployment programme capable of buffering financial crises in families. According to the state statistics, the extent of poverty did not increase during 1990–1994.

However, a steep decline in household income was documented across all social classes (Heikkilä & Uusitalo, 1997). This means that even the more affluent families suffered from a fall in disposable income. This epidemiological study was carried out in winter 1994, when the economic recession in Finland was having its worst effect on family income (Heikkilä & Uusitalo, 1997).

We took the Family Stress Model by Conger and Elder (1994) as our point of departure to examine the mediating paths between family economic hardships and the quality of parenting. The model explains the family mediation between economic hardship and child adjustment, singling out four nodal points: economic pressures, parental mental health, marital interaction, and parenting. A great deal of evidence is available to substantiate the model: economic hardship creates pressures on parents, which compromise parental mental health. The marital relationship deteriorates and parenting suffers, and problems in parenting are then reflected in child adjustment (Brody et al., 1994; Conger et al., 1991, 1992, 1993; Sampson & Laub, 1994; Whitbeck et al., 1991).

Most studies applying the Family Stress Model have used aggregated constructs indicating mental health, marital relationship, and parenting. There is, however, little knowledge about the underlying dynamics in this mediating process. Some evidence suggests specific antecedents for different domains of parenting, e.g., for punitive or authoritative fathering and mothering (Chilcoat, Breslau, & Anthony, 1996; Kaslow, Gray Deering, & Racusin, 1994). Therefore our aim is to contribute to the understanding of the family process in more detail by

Correspondence should be addressed to Jenni A. Leinonen, Department of Clinical Medicine, Hospital for Children and Adolescents, Helsinki University, PO Box 280, 00029 HUS, Finland.

*This paper was accepted during the editorial term of Rainer K. Silbereisen.

focusing on specific paths between economic hardship and the quality of parenting. Mothers and fathers may respond in role-specific ways when the family is struggling in the grip of an economic recession (Reuna, 1998). This is why we study separate paths through which family economy finds its way to the mothers' and the fathers' mental health, marital experience, and parenting.

From economic hardship to economic pressure . . .

In times of economic recession, insecurity in life is created by changed realities concerning work and economy. Job instability, income level, and income change are the major objective indicators of economic hardship when the state economy fails (Conger & Elder, 1994). These, then, are the exogenous indicators of economic hardship that we have used in our study.

Conger, Rueter, and Elder (1999) have eloquently suggested that economic hardship has consequences for individuals at a point when they are required to adapt to the changed circumstances and everyday life is affected. Conger and Elder (1994) conceptualised these everyday adjustments as economic pressures. *General pressures* refer to worries concerning the overall family economic situation, including worries about making ends meet. *Specific economic pressures* refer to the practical measures to cut down family and child expenditure. Shopping habits for clothing and food may have to be changed, important purchases postponed, holiday plans cancelled, and visits to a doctor or dentist might even be called off.

The burden of everyday adjustments is likely to fall unequally on mothers and fathers. Even in Finland, where both parents in most families are in full-time gainful employment (Central Statistical Office of Finland, 1998b), the traditional division of domestic chores is still present in many families (Reuna, 1998). This means that specific economic pressures are likely to fall more within the responsibility of mothers than fathers. Fathers, on the other hand, are still the ones bringing in most of the family income (Central Statistical Office of Finland, 1998a) and they are traditionally regarded as the cornerstones of the family economy (Reuna, 1998). Therefore, they may face more worries about how to make ends meet, that is, general economic pressures (Viinamäki, Koskela, Niskanen, Arnkill, & Tikkanen, 1993). This is supported by Bolger, DeLongis, Kessler and Schilling (1989), who found men to be more distressed than women by financial problems per se.

. . . to parental mental health . . .

Economic pressures build a bridge from the objective economic circumstances to the subjective experiences of parents. There is strong empirical evidence suggesting that parents struggling with financial difficulties suffer from mental-health problems, especially depression (Conger, McCarty, Yang, Lahey, & Kropp, 1984; Conger, Patterson, & Ge, 1995; Ge, Conger, Lorenz, & Simons, 1994; McLoyd, 1989; McLoyd, Jayaratne, Ceballo, & Borquez, 1994). Depression has, indeed, been documented as a major consequence of economic hardship in Finland, where a rise in depression was detected in the general population during the recession years (Lehtinen et al., 1995).

There are reasons to believe, however, that a depressive response is not the only aspect of mental functioning that will be compromised. The data for this study was collected at the height of the recession. It was a time of very high unemployment, taxation, and mortgage rates, and the state was falling rapidly into debt (Heikkilä & Uusitalo, 1997). Nobody knew how long the extensive unemployment programme could continue to support families, or how long state and family economies could survive. The unemployment figures were still rising at the time of the data collection. It was a time of deep insecurity and uncertainty about the future, and therefore it is plausible that parents were experiencing anxiety. This is supported by Eales (1988), who found that men respond to unemployment with both depression and anxiety, especially if there is preceding work insecurity.

In the face of work instability and economic difficulties, parents might also lose their capacity to function efficiently in their social tasks. This is in accordance with Elder (1974) and Conger and Elder (1994), who found that men suffered from a loss of functional capacity and difficulties in making decisions. This kind of social dysfunction might, indeed, be more a male than a female response, reflecting men's sense of failure when facing difficulties in providing for the family (Bolger et al., 1989).

Whereas earlier research has mostly focused on *depressive* symptoms, we extended our investigation to include *anxiety* and *social dysfunction*. We hypothesise that economic pressures will increase risk for parental depression and anxiety, and social dysfunction especially among the fathers. We also expect the associations to be stronger concerning general pressures for fathers and specific pressures for mothers.

. . . to marital interaction . . .

The marital relationship is under high strain in times of economic hardship. Discussions centred around money and disagreements ensue (Conger, Ge, Elder, Lorenz, & Simons, 1994). Economic hardship both arouses inter-spousal hostility and diminishes warm and supportive interaction between the parents (Brody et al., 1994; Conger et al., 1990; Liker & Elder, 1983). The crucial qualities of marital interaction that are affected by economic hardship are thus *support* and *hostility*.

The ways in which economic hardship affects marital interaction seem to differ, to some extent, between men and women. Although increased marital hostility has been found in both mothers and fathers when encountering economic hardship (Conger et al., 1993, 1994), there is also evidence that fathers in particular are then prone to project their anger and frustration onto their wives (Conger et al., 1990; Skinner, Elder, & Conger, 1992). Similarly, although economic hardship has been reported to affect both parents' marital support (Simons, Lorenz, Conger, & Wu, 1992), there is also evidence that it particularly affects the mothers' capacity to give warmth and harmony to the marital relationship (Brody et al., 1994).

It is important to study marital support and hostility separately since they are likely to have different roles in the mediation for mothers and fathers. Accordingly, we hypothesise that in times of economic hardship, parental mental-health problems are related to the men's *hostility* and to the women's *lack of supportiveness* in marital interaction.

... from parental mental health to parenting

Past research has concentrated mostly on maternal depressive symptoms and their relation to the quality of parenting. Depressed mothers face more difficulties in interacting with their children than psychologically well mothers (Downey & Coyne, 1990). They are often more punitive and less authoritative, as they try to control their children by coercion rather than negotiation (Kaslow et al., 1994). Also mothers with a history of anxiety disorder are more likely to exhibit low levels of monitoring of their school-aged children than well mothers (Chilcoat et al., 1996), indicating noninvolved parenting.

Several researchers have shown how the deterioration of mental resources drains parenting abilities when families are under economic strain (Conger et al., 1984, 1995; Ge et al., 1994; McLoyd, 1989; McLoyd et al., 1994). According to these studies, parents' irritability and depressive symptoms caused by adverse financial circumstances are reflected in the relationship with their children in the form of decreased positive interaction and increased harsh disciplinary actions.

Elder, Nguyen, and Caspi (1985) found that economic hardship was only associated with the fathers' erratic and hostile parenting behaviour during the Great Depression in the 1930s. However, in more recent studies no major gender differences have been found in parenting in times of economic hardship. Both mothers and fathers are reported to have less authoritative and involved, and more hostile interactions with their children (Conger et al., 1992, 1994; Simons et al., 1992; Whitbeck et al., 1991). The lack of gender differences may be due to the fact that parenting has been treated as a latent construct, not distinguishing between different parenting styles. All in all, we hypothesise that parental mental health is related to the quality of parenting in the domains of parental *involvement*, *warmth*, and *discipline*. We are interested in the specific associations between the different dimensions of mental-health problems and those of parenting in the context of family economic hardship.

... from marital interaction to parenting

A good marital relationship provides a support system for parenting, improving parenting abilities, whereas interspousal disagreements and hostility are major stressors negatively influencing the quality of parenting (Belsky, 1984; Cowan, Cohn, & Pape Cowan, 1996; Cox, Owen, Lewis, & Henderson, 1989; Erel & Burman, 1995; Howes & Markman, 1989; Kerig, Cowan, & Pape Cowan, 1993; Patterson, 1982). If parents receive warmth and support from each other, they are more able to interact warmly with their children, but if they experience hostility, their resources for optimal interaction are diminished. There is some evidence of specific paths between poor marital interaction and parenting.

Negative marital interaction is related to harsh and punitive mothering and fathering of school-aged children (Brody, Arias, & Fincham, 1996). A conflict-ridden spousal relationship has been associated with parental rejection and with controlling the child by guilt induction rather than by encouraging autonomy (Fauber, Forehand, McCombs Thomas, & Wierson, 1990). It also seems that marital satisfaction is especially important to the quality of fathering (Deater-Deckard & Scarr, 1996).

In times of economic hardship, interspousal hostility and a

decrease in support come into play. Simons et al. (1992) stated that economic pressures influence parenting explicitly through decreased interspousal support, which is related to parents' capacity to give support to their children. According to Conger (Conger et al., 1991, 1992, 1993), economic hardship and subsequent depression are related to interspousal hostility and inadequate parenting.

As stated earlier, we expect the mothers to withdraw their support and the fathers to show overt hostility in marital interaction when the family is under economic strain. This may imply differential outcomes of parenting (Brody et al., 1996; Simons et al., 1992). Accordingly, we hypothesise that the fathers' hostility towards their wives is related to the wives' hostile behaviour towards their children in forms of punitive mothering. The lack of support experienced by the fathers is hypothesised to decrease constructive and supportive interactions with the children, in forms of less authoritative fathering.

The role of marital interaction as a moderator

Past research has shown that a good marital relationship can buffer mental health from outside adversities (Cohen & Wills, 1985; Conger et al., 1999; Coyne & Downey, 1991; Greenberg, Speltz, & DeKlyen, 1993; Ladewig, McGee, & Newell, 1990). However, there has been very little research on whether marital interaction has a moderating effect, shielding *the quality of parenting* from negative influences. Parents' ways of interacting with the child are not a separate set of capabilities, but part of the functional entirety of the person, which is affected by his/her psychological resources. Therefore, the impact of economic hardship on parenting might be expected to be dependent on the marital relationship, the primary support system.

We are interested to see whether marital interaction is also powerful enough to moderate the association between economic hardship and parenting, in addition to its mediating role. In a study conducted by Simons et al. (1992), spousal support moderated the impact of economic strain on supportive parenting for mothers, but not for fathers. These results suggest that the moderating role of marital interactions in times of economic hardship may differ for men and women.

This study includes mutual influences between the mothers and fathers, since the fathers' mental-health problems are expected to reflect on marital problems perceived by the mothers, which in turn should affect the quality of mothering (and vice versa). We examine the role of favourable marital interaction, perceived by the spouse, in buffering the quality of mothering and fathering from the negative effects of economic hardship.

Method

Sample and procedures

Data for the present study were collected as part of a longitudinal project concerned with children's mental disorders in Finland. The project started in 1989/90, when a sample of 1320 children was recruited from a cohort of all second-grade students living in four adjacent municipalities in South Finland. The municipalities and districts were chosen according to population density and migration so that they

corresponded to the rural, semi-rural and urban areas of Finland. The information gathered at that point concerned only the mental health of the children. For background information, the families' socioeconomic status was measured by the level of parental education.

The second data collection, which constitutes the data for the present study, was done during the winter of 1994 when the children were 12 years old. Of the original sample, 1149 (89%) children were reached. They answered a questionnaire during a school class. The average age of the target sixth-graders was 12.6 years, with a standard deviation of 0.3 years. There were 563 girls and 586 boys, and family size ranged from 2 to 14 with an average of 4.1 members.

The children delivered parental questionnaires and pre-paid return envelopes to their mothers and fathers (or their parents' new spouses). The parents were instructed to fill in their questionnaires by themselves before possible discussion with each other. From the sample, 843 (75%) mothers and 573 (57%) fathers took part in the study. (The number of single-parent families is taken into account in the percentages.) The analysed data in this study includes the full triads of 527 mothers, fathers, and children.

Most of the parents in the study were living in a permanent relationship, but there were also 139 single-mother and 21 single-father families. The mothers ranged in age from 30 to 59 with a median of 40 years; the fathers' ages ranged from 28 to 66 with a median of 41 years. All of the parents had completed comprehensive school, and only 13% of them had no further education. Fifteen per cent of the parents had vocational schooling, and 52% of them had college and/or senior-high education. Nineteen per cent of the mothers and 25% of the fathers had received a university degree. These figures are comparable to the statistics for this age group living in this area (Central Statistical Office of Finland, 1996), and hold also for the target sample of the triads.

The figures for unemployment or an unstable work situation were 14% for the mothers and 15% for the fathers, which is a little less than the expected 16% in southern Finland in 1994 (The Ministry of Labour of Finland, 1995). One fifth of the families had no economic difficulties, and about two thirds could manage with their financial situation. Almost one fifth of them faced severe economic difficulties. Altogether, the sample describes well the general situation in Finnish families during 1994.

The attrition between the 1989/90 and 1994 data collection was not dependent on the children's mental health, $\chi^2(3, N = 1128) = 1.56, p < .669$. It was, however, dependent on both the mothers' and the fathers' socioeconomic status, $\chi^2(4, N = 1102) = 29.94, p < .001$, for the mothers; $\chi^2(3, N = 995) = 25.45, p < .001$, for the fathers, so that those also participating in 1994 had a higher socioeconomic status in 1989/90. Similarly, all families in 1994 data and those analysed here did not differ in terms of the children's mental health, $\chi^2(413, N = 1073) = 440.92, p < .165$. The families did, however, differ according to families' economic situation, $\chi^2(30, N = 836) = 61.29, p = .001$, so that the families analysed here (the triads) were financially better off. The analysed data is, thus, biased against our hypothesis.

Measures

The analysis used in this study (path analysis) is based on the variance-covariance matrix for the variables, which means that

in effect, each indicator is recoded as a deviation from its mean. It is thus "mean-independent", and allows the use of variable means (Thomson & Williams, 1984). The missing values were replaced by the variable mean for the parents and children who had answered at least 80% of the questions concerning each indicator or scale.

Three constructs were used to describe *family economic hardship*. Each parent independently reported their income level, recent changes in income, and the stability of their work situation.

Income level is viewed in relation to necessary expenses. The parents assessed the monthly amount of money the family had left over after taxes, loan repayments, rent, and possible alimonies. They answered on a 7-point scale ranging from "less than 3,000 Finnish marks (FIM)" to "over 20,000 FIM". The values were then recoded so that the lowest value (1) reflected a high and the highest value (7) a low income level. Income level is considered to be a highly personal matter in Finland. To get people to reveal this information we had to pose more general questions. This took away the possibility of adjusting income to family size, but still enabled us to obtain a reliable indicator for family income level. Also, taxation is progressive and related to family size in Finland, and the child subsidy paid by the government is adjusted to the number of children in the family. The vast majority (91%) of the two-parent families analysed had from one to three children.

To assess *income change*, the parents were asked if the family income had changed in the course of the previous year. They chose one of six categories ranging from "income gain of over 30%" (1) to "we don't have any income any more" (6). The category "no change in income" received the value 3.

To assess *the instability of the work situation*, the parents were asked if they had a permanent job (1), were free entrepreneurs (1), were not involved in working life (e.g. pensioner) (2), had a temporary job (3), or were currently unemployed (3). They were also asked if they had been unemployed during the previous 6 months (2 = yes, 1 = no). The answers were summed and coded so that the lowest value (2) reflected a stable and the highest value (6) an unstable work situation.

Two constructs were used to assess *family economic pressure*. The first reflects the realisation of economic hardship on a general level, and the second the specific everyday adjustments the families had to make in response to financial difficulties during the previous year.

General economic pressures. Three indicators were used to assess whether the parents felt that they could not make ends meet. Each parent independently reported whether they had had difficulties in paying monthly bills (1 = no difficulties at all, 5 = great difficulties), making loan repayments (1 = we don't have any loans, 8 = we are in debt restructuring¹), and whether they had money left over at the end of the month (1 = more than enough money, 4 = not enough money to make ends meet). The values were summed to create a summed scale (Cronbach's $\alpha = .77$ for the mothers and $.81$ for the fathers) for general economic pressures. These indicators were drawn from the Iowa Youth and Families Project.

¹ A state programme especially designed to help families with extreme indebtedness during the recession.

Specific economic pressures. Three indicators were used to assess the economic adjustments the families had made. The parents reported independently (2 = yes, 1 = no) whether they (1) had used new ways of getting spending money, such as using savings, buying on credit, borrowing money from the bank or relatives, or resorting to the social services. They also indicated whether they (2) had made any of the 17 possible cutbacks in expenditures concerning the family as a whole, such as changing food-shopping habits or postponing important purchases, or (3) had made any of the nine possible cutbacks concerning the target child, ranging from basic food to hobbies and entertainment. The values then were summed to create a summed scale ($\alpha = .92$ for the mothers and $.93$ for the fathers) for specific economic pressures. The first two indicators were drawn from the Iowa Youth and Families Project and the third was developed by the second author for the purposes of this study (Appendix 1).

Parents' mental health. This was assessed by using the General Health Questionnaire-28 (Goldberg, 1972; Goldberg & Hiller, 1979), which is designed to detect psychiatric disorders among respondents in community settings. Several studies have shown the GHQ-28 to be an effective measure of psychiatric morbidity in general populations (Ferdinand & Verhulst, 1994; Williams, Wilkinson, & Rawnsley, 1989). We applied the anxiety, depression, and social-dysfunction scales of the questionnaire.

The anxiety scale deals with questions such as "Have you recently stayed up late because of your worries?" or "Have you felt as if you were being under constant pressure?" The depression scale is directed towards feelings of hopelessness and suicidal thoughts, with four items out of seven measuring the latter. The social-dysfunction scale describes feelings related to efficiency in everyday performance and social tasks, with questions such as "Have you recently been satisfied with the manner in which you have conducted your affairs?"

The parents independently assessed how the symptom descriptions fit their current state (0 = not at all, 3 = much more than usual). The values were summed and averaged to create summed scales for *anxiety* ($\alpha = .86$ for the mothers and $.87$ for the fathers), *social dysfunction* ($\alpha = .85$ for the mothers and $.86$ for the fathers), and *depressiveness* ($\alpha = .86$ for the mothers and $.89$ for the fathers).

We decided to keep the different scales of GHQ separate since we were interested in which dimensions of parental psychological functioning are the most crucial for the quality of mothering and fathering. The statistical method used in our study, path analysis, allows us to partial out the effects of correlation between the variables, allowing us to study the independent role of these symptoms in the mediation. The different types of mental-health problems are studied here as dimensional qualities, not as clinical entities.

The quality of marital interaction. The scale used to assess the quality of marital interaction was developed by Conger (Conger, 1989a). Using a seven-point scale (1 = never, 7 = always), the mothers and the fathers each independently rated one another on 12 items describing how often the partner engaged in hostile behaviours (e.g., criticising, getting angry, making threats), and eight items describing how often the partner engaged in supportive behaviours (e.g., asking for

opinions, acting in a loving way, showing understanding) toward the respondent.

Principal factor analyses were run to make sure that the items measured different dimensions of the quality of marital interaction. The procedure resulted in two factors with eigenvalues greater than one, which were rotated according to varimax criteria, and inspected to identify the items that loaded distinctively on a factor (i.e., $.49$ or higher). Eight items were then summed and averaged to create summed scales for *supportive* ($\alpha = .92$ for the mothers and the fathers) and 12 items for *hostile* ($\alpha = .92$ for the mothers and $.91$ for the fathers) marital interaction. The two factors accounted for 59.5% for the mothers and 58.3% for the fathers of the total variance of marital interaction.

The quality of parenting. To assess the quality of parenting, we used separate scales for the children and the parents. The scales were modified from the ones used in the Iowa Youth and Families Project (Conger, 1989b,c). The parental scale was considered to be too long for the multifaceted questionnaire. It was cut from 27 to 20 items and the culturally inappropriate items were left out. The mothers and the fathers indicated how often they expressed different feelings towards and discussed different things with the target child, how well they knew his/her whereabouts, and how they disciplined the child. The children answered two identical scales on how they perceived their mother's and father's parenting. These scales had 20 items describing how often they felt their mother/father listened to their opinion, acted in a loving way, and became angry with them, or indicated that they make him/her unhappy. Both parents and children answered the questions on a 5-point scale (1 = extremely often, 5 = never).

Principal factor analyses were run to determine whether the items measured different dimensions of the quality of parenting. This procedure resulted in three factors with eigenvalues greater than one for both parent-reported and child-reported mothering and fathering. These factors were rotated according to varimax criteria, and inspected to identify items that loaded distinctively on a factor (i.e., $.34$ or higher, except for one with $.28$). The items were chosen using the factor loading to create summed scales for the different dimensions. The factor analyses resulted in different factorial structures than the original Iowa study by Conger et al. However, they are in accordance with the parenting theories of Erikson (1963) and Baumrind (1980).

From the parent-reported scale, nine items constituted *authoritative* ($\alpha = .85$ for the mothers and fathers), eight items *punitive* ($\alpha = .63$ for the mothers and $.61$ for the fathers), and three items *noninvolved* ($\alpha = .58$ for the mothers and $.52$ for the fathers) parenting. For the fathers, the item "How often do you give in to the child's demands?" loaded more strongly on the noninvolved factor, but it was maintained in the punitive and inconsistent factor. Of the total variance of parent-reported parenting, the three factors accounted for 42.5% for the mothers and 41.6% for the fathers.

For the child-reported parenting scale, eight items constituted *authoritative* ($\alpha = .88$ for mothering and $.90$ for fathering), five items *punitive* ($\alpha = .80$ for mothering and $.83$ for fathering), and seven items *guilt inductive* ($\alpha = .76$ for mothering and $.79$ for fathering) parenting. The three factors accounted for 52.3% for mothering and 56.6% for fathering of the total variance of child-reported parenting.

Table 1

Ranges, means, and standard deviations for economic hardship, economic pressures, parental mental health, marital interaction, and parenting

Variables	Range		Mean		SD	
	Mother	Father	Mother	Father	Mother	Father
Work situation	2.0–6.0	2.0–6.0	2.75	2.87	1.24	1.39
Income level	1.0–7.0	1.0–7.0	4.54	4.51	1.41	1.44
Changes in income	1.0–6.0	1.0–6.0	3.77	3.77	0.78	0.75
General pressures	1.0–14.0	1.0–14.0	4.20	4.23	2.23	2.26
Specific pressures	1.0–30.0	1.0–29.0	9.27	8.13	7.13	7.20
Depressive symptoms	0.0–2.86	0.0–2.86	0.30	0.31	0.43	0.48
Anxiety symptoms	0.0–3.0	0.0–2.71	0.82	0.75	0.57	0.55
Social dysfunction	0.0–3.0	0.0–2.86	1.10	1.10	0.36	0.37
Supportive marital int. ^a	1.13–7.0	1.0–7.0	4.96	4.86	1.16	1.14
Hostile marital int. ^a	1.0–6.08	1.0–6.17	2.27	2.43	0.94	0.96
Authoritative (parent)	1.67–5.0	1.89–5.0	4.13	3.76	0.51	0.57
Punitive (parent)	1.0–3.63	1.0–3.75	2.12	2.06	0.40	0.39
Noninvolved (parent)	1.0–3.67	1.0–4.0	1.90	2.06	0.45	0.55
Authoritative (child)	1.0–5.0	1.0–5.0	4.18	4.00	0.61	0.70
Punitive (child)	1.0–4.60	1.0–4.40	1.96	1.85	0.62	0.63
Guilt inductive (child)	1.0–4.29	1.0–4.43	1.77	1.61	0.56	0.52

^aPerceptions of the spouse's behaviour.

Results

Descriptive statistics

Descriptive statistics (ranges, means, and standard deviations) for the measures of economic hardship, economic pressures, parental mental health, marital relations, and parenting are presented in Table 1. The zero-order correlation matrix between all the variables is presented in Appendix 2.

Path analysis for the mediating model

The Family Stress Model has mostly been studied using structural equation modelling, where the different dimensions of economic pressure, mental health, marital interaction, and parenting contribute to the corresponding latent constructs. Our intention was to take a closer look to see whether the separate dimensions of these constructs were differentially affected by economic hardship, and if they then made a meaningful contribution to parental dynamics and parenting. We therefore performed path analysis. This permits estimations of models that include multiple mediators and allowed us to maintain the different dimensions of the constructs (Hoyle & Smith, 1994).

We performed the path analysis using standard model-fitting procedures with maximum-likelihood estimation (Amos/SPSS) (Arbuckle, 1997). Although the variables were not quite normally distributed, maximum-likelihood estimates have been shown to be robust over normality violation (Newcomb & Bentler, 1988). The variables of each mediator were added to the model one at a time: first economic pressures, then parental mental health, marital interaction, and finally the quality of parenting. The initial analysis at each step allowed for all paths between the variables, and the non-significant paths were then dropped from the model (Newcomb & Bentler, 1988). Only the path coefficients with *t*-values greater than 2 were judged to be different from 0 (Jöreskog &

Sörbom, 1981). Accordingly, in the final model 11 variables were dropped due to the nonsignificant paths leading to the variable.

Correlated error terms² were allowed across the constructs on the basis of modification indices to partial out response bias in modelling family data, as suggested by others (Lavee, McCubbin, & Olson, 1987; Thomson & Williams, 1984). Correlated error terms were also allowed on the basis of modification indices between some mothers' and fathers' constructs, since the model includes paths from mother to father and vice versa: for example, the mother's mental health is tested to be associated with the father's perception of her as a wife, and further with the quality of fathering. When a family model includes these kinds of cross-respondent paths, the bias from the family context may also result in too optimal statistical relations between the respondents. The correlated error terms are, thus, used to partial out the bias from the family context. Furthermore, the different dimensions of economic pressure, mental health, marital interaction, and parenting have some shared variance which is partialled out by error-term correlations. This way the paths represent the relations between the variables, as independent of the correlations as possible.

² Correlated error terms were as follows in the final model (roman font is used for mother-reported, underlined for father-reported, and italic for child-reported variables): general pressures-specific pressures, general pressures-specific pressures, general pressures-general pressures, specific pressures-general pressures, specific pressures-specific pressures, general pressures-specific pressures, anxiety-social dysfunction, anxiety-anxiety, social dysfunction-anxiety, anxiety-depression, anxiety-supportive marital interaction, anxiety-hostile marital interaction, depression-hostile marital interaction, hostile marital interaction-punitive parenting, supportive marital interaction-authoritative parenting, authoritative parenting-noninvolved parenting, authoritative parenting-punitive parenting, authoritative parenting-authoritative parenting, authoritative parenting-noninvolved parenting, punitive parenting-noninvolved parenting, punitive parenting-punitive parenting, punitive parenting-punitive parenting, noninvolved parenting-noninvolved parenting, noninvolved parenting-punitive parenting, authoritative parenting-noninvolved parenting, authoritative parenting-punitive parenting, punitive parenting-noninvolved parenting.

The final model for the mediation of economic hardship to the quality of parenting through economic pressures, parental mental health, and marital interaction is represented in Figure 1. The correlated error terms are omitted from the figure for the sake of visual clarity. The model provided a good fit to the data. The chi-square test was significant, $\chi^2(179, N=527) = 304.83, p < .001$, as typically occurs in large samples, but the χ^2/df ratio of 1.70 was less than 2, and thus regarded as a good fit for large data sets (Aikel & West, 1991). The *goodness-of-fit index (GFI)* of .95, the *adjusted GFI* of .93, the *comparative-fit index (CFI)* of .97, and the *root-mean-square error of approximation estimate (RMSEA)* of .04 were all indicative of a good fit.

The results (Table 2) confirm that family economic hardship is mediated to the quality of parenting through economic pressures, parental mental health, and marital interaction. The results also indicate that the mediating model differs between the mothers and the fathers in the dimensions of these constructs.

For the fathers, a low income level, the instability of the work situation, and recent changes in family income created both general and specific economic pressures. Both of these types of pressure were positively related to anxiety and general pressures were also related to social dysfunction. Paternal anxiety was then positively related to self-reported punitive and noninvolved fathering, and to the spouses' report of hostile marital interaction. The fathers' social dysfunction, in turn, was further positively related to self-reported noninvolved fathering. The fathers' perceptions of a low level of received spousal support was positively related to self-reported noninvolved and to both self-reported and child-perceived punitive fathering. The fathers' lack of spousal support was

also negatively related to authoritative fathering. Economic hardship was not significantly related to paternal depressive-ness, nor to the children's perceptions of authoritative and guilt-inductive fathering, and the variables were removed from the model.

To conclude, the fathers responded to both general and specific economic pressures by showing anxiety and social dysfunction, which were further reflected in their ways of interacting with the family members. They were more hostile towards their wives, and more punitive and noninvolved and less authoritative with their children. Their perceptions of their spouses' low support were related to punitive, noninvolved, and less authoritative fathering.

Similarly, a low income level, the instability of the work situation, and recent changes in family income created both general and specific economic pressures for the mothers. However, only the specific pressures were associated with the mental-health variables, i.e., they were positively related to symptoms of anxiety and depression. Maternal anxiety was further negatively related to their spouses' reports of received marital support and positively related to self-reported noninvolved mothering. Maternal depression was negatively associated with self-reported authoritative mothering. The mothers' perceptions of high received spousal hostility was positively related to self-reports of punitive mothering. Their symptoms of social dysfunction were not significantly affected by economic pressures, and child-reported mothering was not affected by the mediators. These variables were thus omitted from the model.

To conclude, the mothers reacted to specific pressures only by showing symptoms of anxiety and depression. These

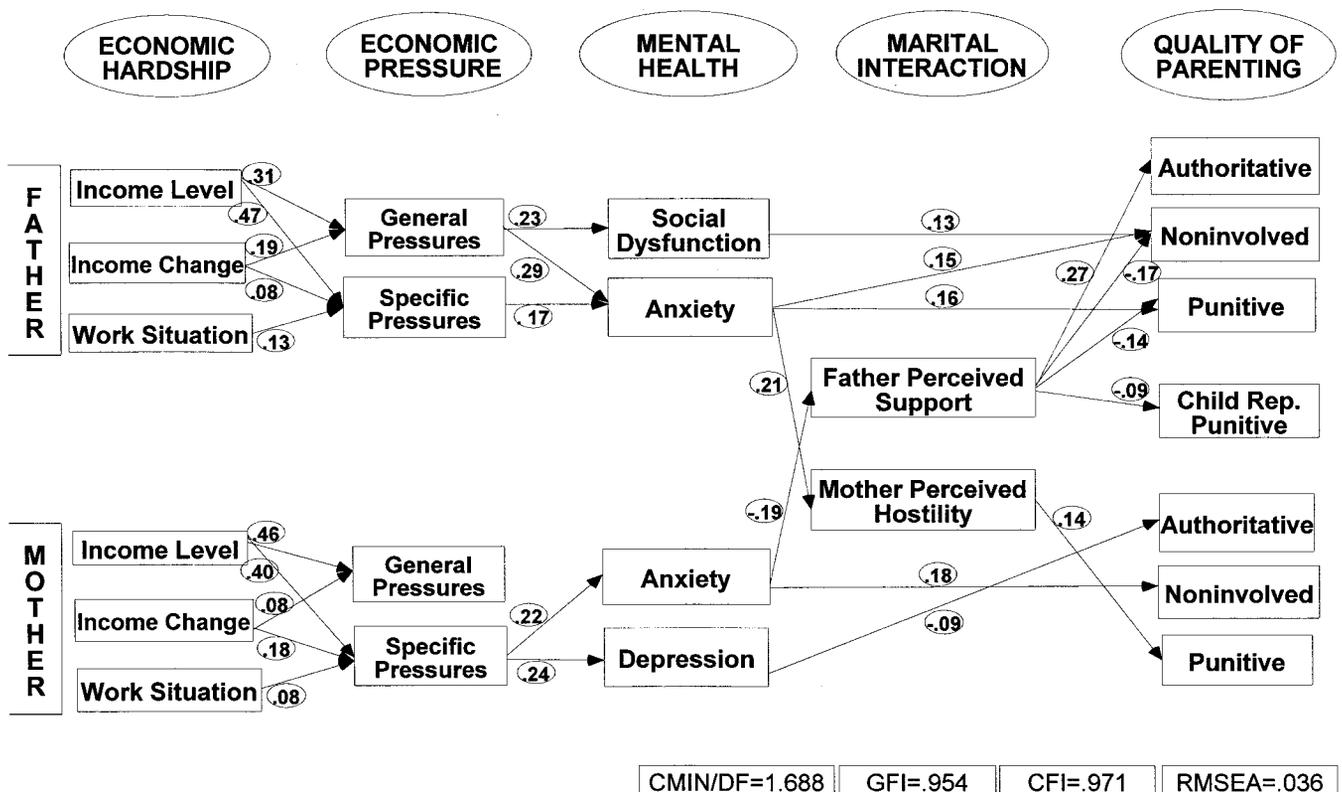


Figure 1. The mediation of economic hardship to the quality of parenting through economic pressure, parental mental health, and marital interaction. The numbers signify standardised regression coefficients for each path.

Table 2
The significant regression paths from economic hardship to the quality of parenting

Paths	Mothers		Fathers	
	β	t	β	t
Low income level → General pressures	.46	12.02***	.47	12.77***
Low income level → Specific pressures	.40	10.82***	.31	8.33***
Instability of work situation → Specific pressures	.08	2.96**	.13	4.23***
Changes in income level → General pressures	.08	2.68**	.08	2.76**
Changes in income level → Specific pressures	.18	5.43***	.19	5.39***
General pressures → Anxiety symptoms			.29	6.05***
General pressures → Social dysfunction			.23	5.49***
Specific pressures → Anxiety symptoms	.22	5.40***	.17	3.90***
Specific pressures → Depressive symptoms	.24	5.69***		
Anxiety symptoms → Supportive marital interaction ^a	-.19	-4.57***		
Anxiety symptoms → Hostile marital interaction ^a			.21	5.22***
Anxiety symptoms → Noninvolved parenting (parent)	.18	4.40***	.15	3.13**
Social dysfunction → Noninvolved parenting (parent)			.13	2.87**
Depressive symptoms → Authoritative parenting (par.)	-.09	-2.19*		
Supportive marital int. ^a → Authoritative parenting (par.)			.27	6.40***
Supportive marital int. ^a → Noninvolved parenting (par.)			-.17	-4.11***
Supportive marital int. ^a → Punitive parenting (parent)			-.14	-3.35***
Supportive marital int. ^a → Punitive parenting (child)			-.09	-2.07*
Hostile marital int. ^a → Punitive parenting (parent)	.14	3.39***		

^aPerceptions of the spouses' behaviour.

* $p < .05$, ** $p < .01$, *** $p < .001$.

symptoms were further reflected in less authoritative and involved parenting, and in less support received by the husband. The mothers' perceptions of their spouses' hostility were related to punitive mothering.

Regression analyses for the moderating model

To test whether warm and supportive marital interaction buffers the quality of parenting from the adverse influences of economic hardship, we followed the advice of Baron and Kenny (1986). We created the interaction variables in which we used the total score for economic hardship (income level + income change + the instability of work situation) as the predictor, and the total score for parents' marital interaction (perceived marital support and lack of hostility) as the moderator separately for mothers and fathers. In other words, we created total economic hardship × total perceived marital interaction variables. The interaction terms were based on centred sum scores to ensure that multicollinearity between the main effects and that corresponding interaction effects did not

distort the analyses (Hayduk, 1987). Since the variables were measured on continuous scales, we used multiple regression analyses to test the interaction effects (Cohen & Wills, 1985). Separate hierarchical regressions were performed for each of the six parenting dimensions. The main-effect terms for the economic hardship and marital interaction variables were entered in the first step of the equation, and the interaction variables were entered in the second step.

There were three significant interaction effects between economic hardship and marital interaction when predicting the quality of parenting (Table 3). They show that economic hardship was associated relatively less with punitive mothering and fathering (self-reported) if the parents perceived their marital interaction as warm and supportive. Also, economic hardship was associated relatively less with nonauthoritative fathering (child-reported) if the fathers perceived their marital relationship as warm and supportive. As an example of the moderating effect, the economic hardship × marital interaction effects on punitive fathering is presented graphically in Figure 2.

Table 3
The effects of the significant interactions between economic hardship and marital interaction on the quality of parenting

Predictor ^a	Quality of parenting														
	Punitive self-reported mothering					Punitive self-reported fathering					Authoritative child-reported fathering				
	R ²	F	df	b	β	R ²	F	df	b	β	R ²	F	df	b	β
Economic hardship	.04	12.15***	2	.04	.08	.06	17.77***	2	.02	.04	.02	5.64**	2	-.02	-.03
Marital interaction ^b				-.04	-.17***				-.05	-.24***				.05	.14***
Economic × Mar. Int.	.05	9.69***	3	.03	.09*	.08	14.86***	3	.03	.12**	.03	5.09**	3	-.04	-.09*

^aSeparate variables for mothers and fathers.

^bPerceptions of the spouse's behaviour.

* $p < .05$, ** $p < .01$, *** $p < .001$.

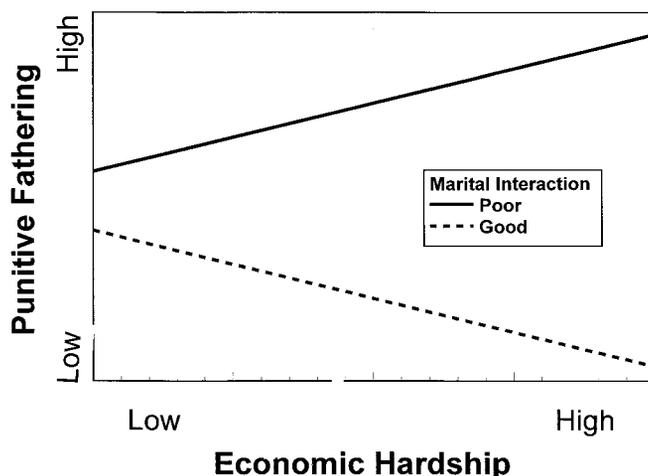


Figure 2. An observed model of marital interaction moderating between economic hardship and punitive fathering. Warm and supportive marital interaction refers to +2SD of the mean and distant and hostile marital interaction to -2SD of the mean. The moderation (interaction) effect is plotted according to following regression formula: $\text{punitive fathering} = \text{constant} + (a1 * \text{economic hardship}) + (a2 * \text{marital interaction}) + (a3 * \text{economic hardship} * \text{marital interaction})$.

Discussion

Our study highlights the vulnerability of parenting to exogenous stress. It joins other studies in showing that parenting is at risk in times of family economic hardship (Brody et al., 1994; Conger et al., 1991, 1992, 1993, 1994; Conger & Elder, 1994). Parenting is not a technique that can or cannot be mastered, but is rather deeply dependent on parental and family resources and circumstances. We found that mothers and fathers fulfil gendered roles when facing economic hardship. Our results concern two-parent families and, naturally, the mediating dynamics may differ distinctively in single-parent families.

A special contribution of our study is that it comes from a reasonably well-to-do population buffered by social security. It could be argued that parenting fails only when the social and economic circumstances fall below a certain point (Duncan, Brooks-Gunn, & Klebanov, 1994; Kalil & Eccles, 1998). Our study does not confirm this. Family relationships and parenting are sensitive and vulnerable to economic decline, even if the economic level remains fairly reasonable. Higher income and social class do not in themselves inoculate the parents against parenting difficulties under economic decline. However, it might still be possible that if the family income falls more drastically and the family ends up in poverty, there is also a threshold effect, resulting in more pronounced mental-health problems and parenting failures.

As stated in the Family Stress Model (Brody et al., 1994; Conger et al., 1991, 1992, 1993, 1994; Conger & Elder, 1994), our results suggest that a fall in the family economy strains the parents' abilities to fully realise their parenting resources. Economic pressures challenged parental mental health and marital interactions and the impairments were reflected in the quality of parenting. The results also suggest that the family process is to some extent gendered.

We anticipated that mothers and fathers in two-parent families might contribute differently to the family process under economic strain. Earlier research has provoked discussion as to whether unemployment and economic hardship are equally

devastating to men and women, and the results are contradictory (Bolger et al., 1989; Ensminger & Celentano, 1990; Hall & Johnson, 1988). Our study contributes to this discussion by putting the *nature* of economic strain on the table. Economic hardship created general and specific pressures for both men and women. However, these pressures had different implications for the mothers' and fathers' mental health.

In accordance with our hypothesis, the mothers' mental health suffered especially from the grass-root adjustments that needed to be made in everyday life, whereas the fathers also suffered from general economic concerns. It seems that mothers are troubled with questions such as "What can I do to feed my family and clothe my children more cheaply?", while fathers also ask: "How do we manage?". This may say something about persistent sex roles in families. However, against our hypothesis, the fathers were also stressed by the grass-root adjustments made in the family. Does this possibly reflect a shift in Finnish fathers' involvement in the running of the household?

Earlier literature has focused on depressive symptoms as a response to economic hardship (Conger & Elder, 1994; Pearlin, 1989). Our findings indicate that a wider range of parental mental-health symptoms is affected when the family economy declines. It is to be noted that in our study the different mental-health dimensions were intercorrelated. If we would have studied the mediation with only depression, for example, the results would probably have been significant for both the mothers and fathers. However, our aim was to get information on which of the mental-health dimensions were the most crucial ones in the mediation. To our knowledge, this was the first time that depressive symptoms were made to compete with other symptoms for a place as the dominant mediator between economic hardship and parenting, and the results suggest a gender difference.

Only the mothers reacted with feelings of hopelessness and suicide ideation, and only the fathers with social dysfunction, such as having difficulties carrying out their social responsibilities. Our findings add to the earlier findings that the mental-health dimensions mediating between economic hardship and parenting are gender specific, the mothers showing emotional and the fathers functional responses. These kind of responses can both be seen as part of a larger depression picture.

Both parents responded with anxiety, which was expected considering the insecurity of the times at hand (Eales, 1988). Our families were living in the middle of a decline in the national economy, at a time when nobody could assure them of a better future (Heikkilä & Uusitalo, 1997). If the family economic hardship had stabilised in chronic adversity, the parental responses might have moved towards depression, reflecting feelings of hopelessness and loss.

Parental anxiety turned out to have a crucial role in the family process. It was symptoms of anxiety rather than of depression that interfered with marital interaction. Anxiety increased the husbands' hostility towards their wives, and decreased the amount of support the wives were able to give to their husbands. It also had implications for parenting. The fathers' anxiety burst out in the use of coercive and hostile disciplinary actions, and both the mothers and the fathers paid less attention to their children's whereabouts due to their own anxiety. It seems that parental anxiety is especially important to the quality of family interactions, and essential to the family dynamics as a whole.

The results suggest further that the nature of parental mental-health problems in times of economic hardship has implications for different parenting styles. The fathers' social dysfunction was related to noninvolved parenting: they did not know where or with whom their child was. They showed similar difficulties in carrying out their responsibilities to their child as they did concerning other issues. The mothers' depressive symptoms decreased their capacity to guide, talk to, and support their child on important issues, as also described by earlier research (Conger et al., 1992, 1993; Downey & Coyne, 1990; Whitbeck et al., 1991). The magnitude of the latter relation was, however, relatively low. The respective gender differences should thus be interpreted with caution.

Marital satisfaction is crucial to the quality of parenting in stressful times (Belsky, 1984; Brody et al., 1994; Conger et al., 1991, 1992, 1993, 1994, 1999; Simons et al., 1992). In our study, the mothers' perception of their spouses' hostile behaviour was reflected in their own hostility towards their children in the form of punitive parenting. This kind of coercive circle is well documented in earlier literature (Erel & Burman, 1995; Patterson, 1982). Here, its origins were in the family economy.

The fathers' perceptions of low spousal support, in turn, were associated with extensive parenting problems, including both noninvolved and punitive, and less guiding and supportive interaction with the child. It seems that men are more dependent on their wife's support in fulfilling their tasks as fathers, at least when encountering economic hardship. This dependency on their wives' support might be a consequence of the work and financial failure that these fathers have experienced. The sense of failure might have shaken the fathers' sense of self so deeply that they could not trust themselves even with regard to their fatherhood any more.

Economic hardship was also mediated via lack of spousal support to fathers' punitive parenting according to children's own reports. However, this relation was relatively small in magnitude and the other child-perceived fathering and mothering domains were not affected. This kind of discrepancy between child- and parent-reported parenting is not a new phenomenon (e.g., Ge et al., 1994; Scherer, Melloh, Buyck, Anderson, & Foster, 1996). Children may have an inner need to perceive their parents as good and loving in order to sustain their sense of security. They might also be unwilling to report negative things about their parents due to family loyalty. In addition, 12-year-olds are able to comprehend, at least to some extent, what economic hardship means to their parents and thereby better understand their parents not being available. Fathers' hostile and inconsistent behaviour is apparently concrete and devastating enough to break these patterns. However, it is evident that these explanations fall short, and we need more innovative research about children's own experiences and active partnership in family dynamics.

There is also a methodological weakness to consider. It is possible that part of the results on self-reported parenting dimensions are due to the single-reporter bias. Although marital interaction was reported as perceived by the spouse, the parents themselves reported on their economic and mental-health status. Therefore, the significantly correlated measurement-error terms were allowed to covary to partial out this bias. The results should be verified by later studies using all family members as informants.

In accordance with our hypothesis, the results show that

warm and supportive marital interaction can protect to some extent the quality of parenting from economic strain. This was true to punitive parenting behaviour, which did not increase due to economic strain, especially in the families in which spousal love and support were available. Considering how devastating the effects of parental hostility and inconsistent discipline can be for a child's development and wellbeing (Conger et al., 1991, 1994; McLoyd et al., 1994; Sampson & Laub, 1994; Skinner et al., 1992), it is very important to find specific foci for intervention. Our results suggest that parents' mutual relationships can serve as such a focus for families under economic stress.

Authoritative parenting, on the other hand, seems to involve different family dynamics from punitive parenting. Good marital interaction was able to help fathers but not mothers to sustain their supportive behaviour towards their children. Here our results differ from those of Simons et al. (1992), who reported that a supportive marital relationship buffers mothers' but not fathers' authoritative parenting. More studies are needed to clarify these discrepant findings. All in all, the findings on the moderation highlight how important it is to study the different dimensions of parenting as they seem to involve different dynamics.

In summary, our findings confirm that economic hardships find their ways to parenting through specific mediating paths. Mothers and fathers fulfil gendered roles in dealing with the family relationships and economy. Parents' mutual interactions need to be considered in order to better understand how economic difficulties impinge upon the family process. The different dimensions in mental health that we analysed brought out important new information as well. Anxiety came out as an important response in both men and women, in contrast to earlier studies that have focused on depressive responses.

Manuscript received December 1998
Revised manuscript received October 2001

References

- Aikel, L.S., & West, S.G. (1991). *Multiple regression: Testing and interpreting interactions*. New Burg Park, CA: Sage Publications.
- Arbuckle, J.L. (1997). *Amos users' guide. Version 3.6*. Chicago: Small Waters Corporation.
- Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 5, 1173-1182.
- Baumrind, D. (1980). New directions in socialization research. *American Psychologist*, 35, 639-652.
- Belsky, J. (1984). The determinants of parenting: A process model. *Child Development*, 55, 83-96.
- Bolger, N., DeLongis, A., Kessler, R.C., & Schilling, E.A. (1989). Effects of daily stress on negative mood. *Journal of Personality and Social Psychology*, 57, 808-818.
- Brody, G.H., Arias, I., & Fincham, F.D. (1996). Linking marital and child attributions to family processes and parent-child relationships. *Journal of Family Psychology*, 10, 408-421.
- Brody, G.H., Stoneman, Z., Flor, D., McCrary, C., Hastings, L., & Conyers, O. (1994). Financial resources, parent psychological functioning, parent caregiving, and early adolescent competence in rural two-parent African-American families. *Child Development*, 65, 590-605.
- Central Statistical Office of Finland. (1998a). *Index for the level of income [Ansiotasoindeksi]*. Vol. 2. Helsinki: Author.
- Central Statistical Office of Finland. (1996). *The level of education in different municipalities 31.12.1994 [Väestön koulutus rakenne kunnittain 31.12.1994]*. Vol. 1. Helsinki: Author.
- Central Statistical Office of Finland. (1998b). *Statistics of Labour [Työvoimatilasto]*. Vol. 3. Helsinki: Author.
- Chilcoat, H.D., Breslau, N., & Anthony, J.C. (1996). Potential barriers to parent monitoring: Social disadvantage, marital status, and maternal psychiatric

- disorder. *Journal of the American Academy of Child And Adolescent Psychiatry*, 35, 1673-1682.
- Cohen, S., & Wills, T.A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98, 310-357.
- Conger, R.D. (1989a). *Behavioral Affect Rating Scale (BARS): Spousal rating of hostility and warmth: Iowa Youth and Families Project*. Ames, IA: Iowa State University.
- Conger, R.D. (1989b). *Behavioral Affect Rating Scale (BARS): Young adult perception of parents' hostility and warmth: Iowa Youth and Families Project*. Ames, IA: Iowa State University.
- Conger, R.D. (1989c). *Child Rearing Practices Scale: A measure developed for the Iowa Youth and Families Project*. Unpublished document: Iowa State University, Ames, IA.
- Conger, R.D., Conger, K.J., Elder, G.H.J., Lorenz, F.O., Simons, R.L., & Whitbeck, L.B. (1992). A family process model of economic hardship and adjustment of early adolescent boys. *Child Development*, 63, 526-541.
- Conger, R.D., Conger, K.J., Elder, G.H.J., Lorenz, F.O., Simons, R.L., & Whitbeck, L.B. (1993). Family economic stress and adjustment of early adolescent girls. *Developmental Psychology*, 29, 206-219.
- Conger, R.D., & Elder, G.H.J. (1994). *Families in troubled times: Adapting to change in rural America* (1st ed.). New York: Aldine De Gruyter.
- Conger, R.D., Elder, G.H.J., Lorenz, F.O., Conger, K.J., Simons, R.L., Whitbeck, L.B., Huck, S., & Melby, J.N. (1990). Linking economic hardship to marital quality and instability. *Journal of Marriage and the Family*, 52, 643-656.
- Conger, R.D., Ge, X., Elder, G.H.J., Lorenz, F.O., & Simons, R.L. (1994). Economic stress, coercive family process, and developmental problems of adolescents. *Child Development*, 65, 541-561.
- Conger R.D., Lorenz, F.O., Elder, G.H.J., Melby, J., Simons, R.L., & Conger, K.J. (1991). A process model of family economic pressure and early adolescent alcohol use. *Journal of Early Adolescence*, 11, 430-449.
- Conger, R.D., McCarthy, J.A., Yang, R.K., Lahey, B.B., & Kropp, J.P. (1984). Perception of child, child-rearing values, and emotional distress as mediating links between environmental stressors and observed maternal behavior. *Child Development*, 55, 2234-2247.
- Conger, R.D., Patterson, G.R., & Ge, X. (1995). It takes two to replicate: A mediational model for the impact of parents' stress on adolescent adjustment. *Child Development*, 66, 80-97.
- Conger, R.D., Rueter, M.A., & Elder, G.H.J. (1999). Couple resilience to economic pressure. *Journal of Personality and Social Psychology*, 76, 54-71.
- Cowan, P.A., Cohn, D.A., & Pape Cowan, C. (1996). Parents' attachment histories and children's externalizing and internalizing behaviors: Exploring family systems models of linkage. *Journal of Consulting and Clinical Psychology*, 64, 53-63.
- Cox, M.J., Owen, M.T., Lewis, J.M., & Henderson, V.K. (1989). Marriage, adult adjustment, and early parenting. *Child Development*, 60, 1015-1024.
- Coyne, J.C., & Downey, G. (1991). Social factors and psychopathology: Stress, social support, and coping processes. *Annual Review of Psychology*, 42, 401-425.
- Deater-Deckard, K., & Scarr, S. (1996). Parenting stress among dual-earner mothers and fathers: Are there gender differences? *Journal of Family Psychology*, 10, 45-59.
- Dodge, K.A., Pettit, G.S., & Bates, J.E. (1994). Socialization mediators of the relation between socioeconomic status and child conduct problems. *Child Development*, 65, 649-665.
- Dohrenwend, B.P., & Dohrenwend, B.S. (1974). Social and cultural influences in psychopathology. *Annual Review of Psychology*, 25, 417-452.
- Downey, G., & Coyne, J.C. (1990). Children of depressed parents: An integrative review. *Psychological Bulletin*, 108, 50-76.
- Duncan, G.J., Brooks-Gunn, J., & Klebanov, P.K. (1994). Economic deprivation and early childhood development. *Child Development*, 65, 296-318.
- Eales, M.J. (1988). Depression and anxiety in unemployed men. *Psychological Medicine*, 18, 935-945.
- Elder, G.H. (1974). *Children of the Great Depression. Social change in life experience*. Chicago: University of Chicago Press.
- Elder, G.H.J., Nguyen, T.V., & Caspi, A. (1985). Linking family hardship to children's lives. *Child Development*, 56, 361-375.
- Ensminger, M.E., & Celentano, D.D. (1990). Gender differences in the effect of unemployment on psychological distress. *Social Science of Medicine*, 30, 469-477.
- Erel, O., & Burman, B. (1995). Interrelatedness of marital relations and parent-child relations: A meta-analytic review. *Psychological Bulletin*, 118, 108-132.
- Erikson, E.H. (1963). *Childhood and society* (2nd ed.). New York: Norton.
- Fauber, R., Forehand, R., McCombs Thomas, A., & Wierson, M. (1990). A mediational model of the impact of marital conflict on adolescent adjustment in intact and divorced families: The role of disrupted parenting. *Child Development*, 61, 1112-1123.
- Ferdinand, R.F., & Verhulst, F.C. (1994). The prediction of poor outcome in young adults: Comparison of the Young Adult Self Report, the General Health Questionnaire and the Symptom Checklist. *Acta Psychiatrica Scandinavica*, 89, 405-410.
- Ge, X., Conger, R.D., Lorenz, F.O., & Simons, R.L. (1994). Parents' stressful life events and adolescent depressed mood. *Journal of Health and Social Behavior*, 35, 28-44.
- Goldberg, D.P. (1972). *The detection of psychiatric illness by questionnaire: A technique for the identification and assessment of non-psychotic psychiatric illness*. London: Oxford University Press.
- Goldberg, D.P., & Hillier, V.F. (1979). A scaled version of the General Health Questionnaire. *Psychological Medicine*, 9, 139-145.
- Greenberg, M.T., Speltz, M.L., & DeKlyen, M. (1993). The role of attachment in the early development of disruptive behavior problems. *Development and Psychopathology*, 5, 191-213.
- Hall, E.M., & Johnson, J.V. (1988). Depression in unemployed Swedish women. *Social Science of Medicine*, 27, 1349-1355.
- Hayduk, L.A. (1987). *Structural Equation Modelling with LISREL* (1st ed.). Baltimore, MD: Johns Hopkins University Press.
- Heikkilä, M., Hänninen, S., & Kosunen, V. (1993). *Hyvinvoinnin päätöspysäkillä?* (1st ed.). Helsinki: STAKES (National Research and Development Centre for Welfare and Health in Finland).
- Heikkilä, M., & Uusitalo, H. (1997). *The costs of cuts: Studies on cutbacks in social security and their effects on the Finland of the 1990s* (1st ed.). Helsinki: STAKES (National Research and Development Centre for Welfare and Health in Finland).
- Howes, P., & Markman, H.J. (1989). Marital quality and child functioning: A longitudinal investigation. *Child Development*, 60, 1044-1051.
- Hoyle, R.H., & Smith, G.T. (1994). Formulating clinical research hypotheses as structural equation models: A conceptual overview. *Journal of Consulting and Clinical Psychology*, 62, 429-440.
- Jöreskog, K.G., & Sörbom, D. (1981). *LISREL. Analysis of linear structural relationships by the method of maximum likelihood* (1st ed.). Uppsala, Sweden: Department of Statistics, University of Uppsala.
- Kalil, A., & Eccles, J.S. (1998). Does welfare affect family processes and adolescent adjustment? *Child Development*, 69, 1597-1613.
- Kaslow, N.J., Gray Deering, C., & Racusin, G.R. (1994). Depressed children and their families. *Clinical Psychology Review*, 14, 39-59.
- Kerig, P.K., Cowan, P.A., & Pape Cowan, C. (1993). Marital quality and gender differences in parent-child interaction. *Developmental Psychology*, 29, 931-939.
- Ladewig, B.H., McGee, G.W., & Newell, W. (1990). Life strains and depressive affect among women: Moderating effects of social support. *Journal of Family Issues*, 11, 36-47.
- Lavee, Y., McCubbin, H.I., & Olsen, D.H. (1987). The effect of stressful life events and transitions on family functioning and well-being. *Journal of Marriage and the Family*, 49, 857-873.
- Lehtinen, V., Lindholm, T., Puukka, P., Moring, J., Veijola, J., & Väisänen, E. (1995). Onko lama lisännyt mielensterveystä? *Duodecim*, 111, 323-329.
- Liker, J.K., & Elder, G.H.J. (1983). Economic hardship and marital relations in the 1930s. *American Sociological Review*, 48, 343-359.
- McLoyd, V.C. (1989). Socialization and development in a changing economy: The effects of paternal job and income loss on children. *American Psychologist*, 44, 293-302.
- McLoyd, V.C., Jayaratne, T.E., Ceballo, R., & Borquez, J. (1994). Unemployment and work interruption among African-American single mothers: Effects on parenting and adolescent socioemotional functioning. *Child Development*, 65, 562-589.
- The Ministry of Labour of Finland. (1995). *The unemployed and their part of the labour market in different municipalities in 1994. [Työttömät työnhakijat ja niiden osuus työvoimasta kunnittain vuonna 1994.]* (Vol. 1). Helsinki: Author.
- Newcomb, M.D., & Bentler, P.M. (1988). The impact of adolescent drug use and social support problems of young adults. *Journal of Abnormal Psychology*, 96, 64-75.
- Patterson, G.R. (1982). *Coercive family process*. Eugene, OR: Castilia.
- Pearlin, L.I. (1989). The sociological study of stress. *Journal of Health and Social Behavior*, 30, 241-256.
- Reuna, V. (1998). *Family barometer 1998: Responsibility in family life, (Vol. 4). [Perhebarometri 1998: Vastuu perheen arjesta.]* (1st ed.). Helsinki: The Family Federation of Finland, The Population Research Institute.
- Salmi, M., Huttunen, J., & Yli-Pietilä, P. (1996). *Children and the Recession [Lapsset ja lama]*. Helsinki: STAKES (National Research and Development Centre for Welfare and Health in Finland).
- Sampson, R.J., & Laub, J.H. (1994). Urban poverty and the family context of delinquency: A new look at structure and process in a classic study. *Child Development*, 65, 523-540.
- Scherer, D.G., Melloh, T., Buyck, D., Anderson, C., & Foster, A. (1996). Relation between children's perceptions of maternal mental illness and children's psychological adjustment. *Journal of Clinical Child Psychology*, 25, 156-169.
- Simons, R.L., Lorenz, F.O., Conger, R.D., & Wu, C.-I. (1992). Support from spouse as mediator and moderator of the disruptive influence of economic strain on parenting. *Child Development*, 63, 1282-1301.
- Skinner, M.L., Elder, G.H.J., & Conger, R.D. (1992). Linking economic hardship to adolescent aggression. *Journal of Youth and Adolescence*, 21, 259-276.

- Thomson, E., & Williams, R. (1984). A note on correlated measurement error in wife-husband data. *Journal of Marriage and the Family*, 46, 643–649.
- Valkonen, T., Martelin, T., & Rimpelä, A. (1990). *Eriarvoisuus kuoleman edessä. Sosioekonomiset Kuolleisuuserot suomessa 1971–1985* (1st ed.). Helsinki: Central Statistical Office of Finland.
- Viinämäki, H., Koskela, K., Niskanen, L., Arnkill, R., & Tikkanen, J. (1993). Unemployment and mental wellbeing: A factory closure study in Finland. *Acta Psychiatrica Scandinavica*, 88, 429–433.
- Whitbeck, L.B., Simons, R.L., Conger, R.D., Lorenz, F.O., Huck, S., & Elder, G.H.J. (1991). Family economic hardship, parental support, and adolescent self-esteem. *Social Psychology Quarterly*, 54, 353–363.
- Williams, D.P., Wilkinson, G., & Rawnsley, K. (Eds.). (1989). *The scope of epidemiological psychiatry*. London: Routledge.

Appendix 1

A measure for economic adjustments in child expenditure developed by Tytti Solantaus

Have you had to cut down expenditure on the target child during the past year? Yes/no.

1. Clothes
2. Basic food
3. Extra pizzas, hamburgers, etc.
4. Hobbies
5. Trips and journeys
6. Pocket money
7. Amusements (movies, concerts, etc.)
8. Video rentals
9. Gifts (e.g., birthday, Christmas)

Appendix 2

The zero-order correlation (Pearson's r) between the study variables

Variables	I		II		III		IV		V		VI		VII	
	Mother	Father	Mother	Father	Mother	Father								
I Work situation														
Mother														
Father	.171***													
II Income level														
Mother	.195***	.287***												
Father	.191***	.294***	.797***											
III Changes in income														
Mother	.032	.248***	.304***	.264***										
Father	.107*	.213***	.231***	.296***	.583***									
IV General pressures														
Mother	.201***	.245***	.505***	.500***	.250***	.225***								
Father	.161***	.270***	.462***	.531***	.216***	.272***	.829***							
V Specific pressures														
Mother	.213***	.315***	.499***	.464***	.332***	.265***	.690***	.631***						
Father	.117**	.356***	.396***	.447***	.275***	.338***	.574***	.690***	.685***					
VI Social dysfunction														
Mother	.011	-.014	.009	-.008	.109*	.136**	.113*	.039	.234***	.107*				
Father	.121**	.098*	.103*	.117*	.137**	.197***	.226***	.243***	.175***	.243***	.172***			
VII Anxiety symptoms														
Mother	.031	.048	.024	.019	.132*	.107*	.193***	.143**	.256***	.186***	.544***	.192***		
Father	.059	.163***	.175***	.209***	.207***	.209***	.362***	.429***	.322***	.417***	.176***	.549***	.249***	
VIII Depressive symptoms														
Mother	.072	.053	.034	.031	.128**	.117**	.173***	.110**	.264***	.185***	.559***	.137**	.662***	.198***
Father	.022	.220***	.153***	.188***	.257***	.215***	.295***	.308***	.289***	.284***	.171***	.618***	.265***	.615***
IX Supportive marital int. ^a														
Mother	.057	-.041	.026	.025	-.053	-.063	-.059	-.041	-.129**	-.082	-.199***	-.140**	-.324***	-.229***
Father	.032	-.012	.083	.048	-.009	-.002	-.061	-.063	-.022	-.037	-.156***	-.111*	-.206***	-.219***
X Hostile marital int. ^a														
Mother	-.121**	.045	-.047	-.051	.061	.045	.111*	.108*	.161***	.126**	.666***	.125**	.381***	.254***
Father	-.026	.057	.034	.066	.079	.065	.129**	.193***	.117**	.195***	.120**	.158***	.250***	.341***
XI Authoritative (parent)														
Mother	.019	-.025	-.042	-.072	.005	.001	-.038	.003	-.012	-.005	-.096*	-.055	-.022	-.034
Father	.035	.004	-.009	-.055	-.019	-.020	.013	.038	-.009	.062	-.080	-.111*	-.066	-.042
XII Punitive (parent)														
Mother	-.003	.016	.078	.056	.094*	.100*	.070	.042	.110*	.055	.070	.089*	.119**	.106*
Father	-.002	-.021	.025	.058	.062	.071	.028	.060	.069	.084	.052	.108*	.096*	.197***
XIII Noninvolved (parent)														
Mother	-.056	-.038	-.075	-.078	-.000	-.011	.020	.025	.058	.103*	.093*	.084	.154***	.130**
Father	-.044	-.112*	-.033	-.067	-.035	-.070	.007	.028	.007	.003	.032	.006	.007	.131**
XIV Authoritative (child)														
Mother	-.044	-.028	-.033	-.021	-.044	-.015	-.061	-.089*	-.097*	-.087*	-.070	-.034	-.044	-.064
Father	-.015	-.037	-.010	.016	-.020	-.059	.000	-.043	-.079	-.077	-.065	-.057	-.045	-.092*
XV Punitive (child)														
Mother	-.007	.042	.041	.010	.083	.071	.076	.076	.058	.067	.019	-.053	.043	.049
Father	-.026	.070	.030	.010	.025	.079	.050	.056	.047	.055	-.040	-.009	-.020	.091*
XVI Guilt inductive (child)														
Mother	-.018	.032	.033	.060	.056	.095*	.079	.089*	.031	.061	.058	.028	.042	.103*
Father	-.003	.079	.027	.037	-.006	.079	.046	.072	.048	.081	.007	.028	.031	.113**

^a Perceptions of the spouse's behaviour.

* $p < .05$, ** $p < .01$, *** $p < .001$.

