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Children's emotional and behavioural well-being and the family environment: findings from the Health Survey for England

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Abstract

Recent trends towards diversity in family structure have posed important challenges for traditional social theories on the family. This critical debate has not, however, had much influence on policy discussions of the impact of diverse family structures on children's psychological health, where two-parent families are presumed ideal. In 1997, the annual Health Survey for England focussed on the health of children and young people. The Strengths and Difficulties Questionnaire (SDQ), used to assess children's psychological health, was administered to the parents of 5705 children aged 4–15 using a self-completion booklet. The effect of family structure, socio-economic indicators, parental working status and parental psychological status on children's psychological health was explored using multi-variate logistic regression models.

Findings indicated that the high prevalence of psychological morbidity among children of lone-mothers was a consequence of socio-economic effects, disappearing when benefits receipt, housing tenure and maternal education were taken into account. Socio-economic factors did not, however, explain the higher proportion of psychological morbidity among children with stepparents, or the strong relationship between parents' and children's psychological morbidity. © 2001 Elsevier Science Ltd. All rights reserved.

Keywords: Children's psychological health; Family structure; Socio-economic status; Poverty; Maternal education

Introduction

Family theorists have long debated the place of the 20th century nuclear family. Some sociologists and family historians have argued that the nuclear family is an unchanging and central ideal family type (Mount, 1982), while others maintain that the nuclear family is socially constructed and may mean different things to different people (Morgan, 1985; Trost 1990). Many

family historians present evidence that the family as we know it did not exist until comparatively recently (Flandrin, 1979; Mitterauer & Sieder, 1982). It is thought that the nuclear family is descended from extended, patriarchal families which developed from tribal organisation as a result of changing economic conditions, especially the inheritance of property and the development of agriculture (Engels, 1942/1970). Extended, agriculture-based families seem to have been the most common family form throughout most of recorded European and early American history. The Industrial Revolution dramatically changed the structure of the typical family throughout the latter half of the nineteenth and the first half of the twentieth centuries,

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perhaps because labour demands were fulfilled more effectively by the smaller nuclear family, with its specialised breadwinner and caretaker roles (Hernandez, 1993).

Recent changes in family structure in the UK

Recent demographic diversification in the family in most industrialised countries has continued this historical shrinkage in family size. For instance, every European country, with the exception of the Netherlands, has experienced an increase in lone parent families over the past several decades (Keilman, 1987). Although the rates of divorce and lone parenthood are higher in the United States, Britain appears to be closer to the United States than to its European neighbours in terms of these demographic trends. After the countries of northern Europe (Denmark, Finland, Norway and Sweden), the UK has the highest rates of both lone parent families and divorce (Hess, 1995). Recent estimates project that nearly half of those marrying in the late 1990s will eventually divorce (Allan, 1999), while an estimated 28 per cent of British children born to married parents will have faced their parents' divorce before they are 16 (Haskey, 1997). In addition to divorce, childbearing outside of marriage has also become more common. It is estimated that, in the UK, there were 577,980 never-married lone mothers (38 per cent of lone mothers) in 1995/6 compared with 82,080 (16 per cent of lone mothers) in 1971 (Haskey, 1998).

Haskey (1998) has estimated that in 1995 there were 1.56 million lone parent families in Britain, comprising 22 per cent of British families, containing 2.7 million children, representing 20 per cent of British children. The number of lone parent families has grown continuously since the 1970s, with accelerated growth in the 1990s and some tentative evidence of a slowing in the increase in the most recent period (Haskey, 1998). Most of this growth has been in lone mother households. Although the absolute number of lone father families has risen slightly, the proportion of lone parent families headed by fathers has remained in the range of 10% from the 1960s to the present in both Britain (Haskey, 1998) and the United States (Emery, 1999).

The UK policy response

This trend toward demographic diversity has coincided with a shift in academia away from a view of the nuclear family as the normative family structure (Scanzoni, 1987), and also a shift in investigation from the institution of the family to the construction of the institution itself (Morgan, 1985). However, the idea of the family as a changing, socially constructed institution

has not necessarily made a transition into the policy arena. Ford and Millar (1998) present seven ways in which lone parenthood is defined as a problem in the contemporary British debate:

- A problem of poverty with increasing numbers of lone parent families leading to increased national poverty.
- A problem regarding the propensity for such families to depend on state benefits for their income. Ford and Millar note that many recent policy initiatives have had the explicit or implicit aim of curbing public expenditure on lone parent families
- A problem because of the potential long-term impact of changing patterns of fertility. This argument contends that, because lone mothers have smaller completed family sizes, they will have fewer children to care for them in old age.
- A problem because of the effects on the children involved — the topic of this paper.
- A problem of gender inequality because it differentially affects women. Increasing numbers of lone mothers has contributed to the 'feminisation' of poverty. It has been argued that lone motherhood simply exposes the higher poverty risk of all women and that lone motherhood is symptomatic of wider gender differences in access to resources in society.
- A moral problem because such families transgress certain religious and moral values about the functions of marriage, family formation and divorce.
- A social problem leading to the breakdown of the family, the creation of an underclass and the alienation of young men.

Whether the government ought to remain neutral towards family structure or encourage particular family forms is, itself, a matter of debate. While the UK government has tended to officially take a 'hands-off' approach to family formation (Ford & Millar, 1998), it has not always remained neutral; both its rhetoric and policies have sometimes supported the problematisation of family forms that deviate from the two natural parent norm. Land and Lewis (1998) have tracked changes in attitudes toward sexual morality from the beginning of the 20th century when marriage was largely viewed as a social duty. In 1956, the Royal Commission on Divorce took a very conservative position, insisting on the importance of the public purposes of marriage. Then, in 1974 the Finer Report on lone parent families recognised that government could no longer seek to directly control marital or reproductive behaviour (Land & Lewis, 1998). Nevertheless, five years later, the report of a Working Party on Marriage Guidance, entitled *Marriage Matters* (1979), drew heavily from the work of the Rapoport reports which was influential in its medicalisation of alternative family forms. With the growth of family

therapy, marital disharmony came to be seen as a problem which could be 'cured' with the assistance of caring professionals and social policy (Morgan, 1985). The problematisation of alternative family forms re-appeared in government policy a decade later. Millar (1994) writes that the 1991 Child Support Act arose for ideological, as well as financial reasons. A 1992 Cabinet briefing paper on lone parents floated some ideas for policies directed towards discouraging lone parenthood, but these ideas proved controversial (Ford & Millar, 1998). The current New Labour government is also working to prevent 'family breakdown' as evidenced by its recent Green Paper *Supporting Families* (Home Office, 1998). It has abolished lone parent benefit and the lone parent premium on income support in response to arguments that taxation and social security disadvantage 'traditional' families (co-resident married couples with one breadwinner; Ford & Millar, 1998).

While the government has not officially taken an active role in promoting particular family structures, it necessarily engages in an active approach to the financial problems associated with lone parenthood. Welfare policy discussions focus around the potentially conflicting roles of social security to provide adequate levels of income replacement to those out of work on the one hand, while maintaining an incentive for parents to enter full-time paid work on the other (Ford & Millar, 1998). Land and Lewis (1998) show that social security policy has moved from an assumption that mothers should stay at home and care for their children, around the time of the Second World War, through a neutral position that mothers should themselves decide whether they wish to seek paid work, in the 1970s, to a failed attempt to enforce maintenance payments from non-resident fathers with the Child Support Act of 1991, and then to the current position that policy should encourage, but not compel, mothers into employment where possible. The New Deal for Lone Parents scheme, established in 1998, in which a caseworker aims to tailor help to families' individual needs, is part of this encouragement.

Family structure, divorce and child mental health

Although long-term adverse outcomes typically only apply to a minority of children experiencing divorce (Emery, 1999; Hetherington & Stanley-Hagan, 1999), a large body of evidence illustrates that these children are twice as likely to experience long-term ill effects as children of two parent families (Amato & Keith, 1991a, b; Emery, 1999; Hetherington & Clingempeel, 1992; Hetherington, Cox & Cox, 1985; McLanahan, 1997; Phares & Lum, 1997; Rodgers & Pryor, 1998; Shaw & Emery, 1987). Most of the research in this area has been based on representative cross-sectional samples of children in the United States and Canada. In these

studies, divorce or lone parenthood has been linked with externalising behaviours, such as disobedience, aggression, low self-control, other conduct problems (Hetherington, Cox & Cox, 1978; Mott, Kowaleski-Jones & Menaghan, 1997; Peterson & Zill, 1986; Tuckman & Regan, 1966; Zill, 1978); delinquency (Goldstein, 1984; Kalter, Riemer, Brickman & Chen, 1985); attending mental health services (Zill, Morrison, & Coiro, 1993; Zill & Schoenborn, 1990); dropping out of high school; having a child in their teenage years (McLanahan & Sandefur, 1994); or having a divorce themselves (Amato, 1996; Bumpass, Martin, & Sweet, 1991; Glenn & Kramer, 1987; Keith & Finlay, 1988; McLanahan & Bumpass, 1988).

In Britain, the relationship between family structure and the well-being of children has been studied using data from longitudinal follow-up studies of several birth cohorts. Using data from the National Child Development Study (NCDS) (the 1958 cohort), Kiernan (1992) looked at the relationship between family disruption and both early school leaving and early parenthood at ages 16 and 23. Consistent with results in North America, she found that 16 year olds who were in a 'reconstituted' (in this paper we use the term 'reconstituted' to refer to two parent families in which at least one of the parents is not a natural parent) or lone parent family, although moderated by the inclusion of additional controls, were more likely to have left school or to be a parent than those in intact families. At 23, significantly more young adults from divorced (11%) compared with married (8%) families scored high on a depression index (Chase-Lansdale, Cherlin, & Kiernan, 1995). Kiernan (1997) has since looked at the legacy of divorce for educational attainment, economic situation, partnership formation and dissolution and parenthood behaviour when cohort members were aged 33 and found that in most domains, children whose parents had divorced had more negative experiences than those whose parents had not. Using data from the Child Health and Education Study (CHES) (the 1970 birth cohort), Wadsworth, Burnell, Taylor, and Butler (1985) found that five-year old children in lone parent or 'reconstituted' families were significantly more at risk for behavioural and developmental problems. Children of lone parents were more at risk than children in 'reconstituted' families. Evidence from the National Survey of Health and Development (NSHD) (the 1946 birth cohort) has also shown that children whose parents have divorced are more likely to have long-term difficulties in forming and maintaining families of their own (Wadsworth, Maclean, Kuh, & Rodgers, 1990).

After a divorce, children may experience an additional change in family structure in the form of remarriage. Studies of the effects of remarriage on children in large survey databases fail to show a beneficial effect (Fergusson, Lynskey, & Horwood, 1994; Hetherington

& Jodl, 1994; Pagani, Tremblay, Vitaro, Kerr, & McDuff, 1998; Walper, 1995), despite the financial advantages that are clearly evident (Duncan & Hoffman, 1985; Zill, 1988). A growing body of evidence indicates that remarriage is not a simple reconstitution of the two parent family but is, instead, yet another difficult transition for all concerned. Hetherington and Jodl (1994) pooled data from three longitudinal studies of marital transition to show that children were less warm and communicative in the early stages of a remarriage, but that this situation improved over time unless the remarriage occurred during adolescence. They also found that stepparents remain less engaged and more authoritative in parenting stepchildren than in parenting their biological children. Many studies have found that early adolescence is a more difficult time for a remarriage to occur than when children were younger (Hetherington & Clingempeel, 1992; Hetherington & Jodl, 1994; Vuchinich, Hetherington, Vuchinich, & Clingempeel, 1991; Wallerstein & Kelly, 1980).

Possible mediating factors: socio-economic status and parental mental health

Studies have shown that divorced and remarried families face a number of important risks underlying those of divorce and remarriage per se, such as socio-economic difficulties (Devillier & Forsyth, 1988; Keirnan & Mueller, 1998) and poor parental mental health and well-being (Capaldi & Patterson, 1991; Hope, Power, & Rodgers, 1999). It is well known that poverty is more prevalent in lone parent families than in two parent families. Allan (1999) has shown that 80 per cent of lone mother families are dependent on state benefits or are otherwise close to the poverty line. Shouls, Whitehead, Burstom, and Diderichsen (1999) have shown that the poverty gap between lone and couple mothers widened from a seven-fold to a ten-fold differential between 1984 and 1995. A number of early studies showed that divorce has devastating financial consequences for many women and their children, often pushing them below the poverty line (Arendell, 1987; Devillier & Forsyth, 1988; Duncan & Hoffman, 1985; Everett, 1991; Maclean, 1991). Using data from the British Household Panel Survey (BHPS), Jarvis and Jenkins (1998) showed that marital dissolution was associated with substantial declines in income for women and children, with much less change in the incomes of men. Other studies have shown that unemployment, reliance on state benefits and low social class are both precursors to and by-products of divorce in the UK (Haskey, 1984; Keirnan & Mueller, 1998).

Socio-economic circumstances are also associated with child delinquency (Rutter & Giller, 1983) and emotional and behavioural difficulties in children

(McMunn, Bost, Nazroo, & Primatesta, 1998). The inter-relationship between socio-economic indicators, family structure and child behavioural problems suggests that the relationship between family structure and child behavioural problems might be mediated by socio-economic circumstances. Several studies have investigated the relationship between socio-economic circumstances, family structure and child well-being, or at least controlled for certain socio-economic indicators when studying the relationship between family structure and child outcomes, but, so far the results are not conclusive. Most recently, the report of the British child mental health survey (2000) showed that the increased risk of a psychiatric diagnosis for children in lone parent families was not entirely removed when a variety of socio-economic factors were included. However, when Joshi *et al.* (1999) compared NCDS data for children in Britain with children from the National Longitudinal Survey of Youth (NLSY) in the United States, they found that maternal educational attainment and, to a lesser extent, family economic circumstances eliminated the relationship between family structure and children's cognitive and behavioural outcomes in both Britain and the United States. They conclude that the "so-called handicaps" of the lone and 'reconstituted' families work partly through economic disadvantage.

Studies prior to Joshi *et al.*'s have shown mixed results. In a community study of four year olds and their older siblings (aged seven on average), Dunn, Deater-Deckard, Pickering, O'Connor, and Golding, (1998) found that emotional and behavioural difficulties among the older children of lone mothers were accounted for by the combined effects of psychosocial status of the mother; quality of the mother-child relationship; and social risk factors (including income, housing and financial problems). However, these factors did not account for emotional and behavioural difficulties in the younger (four year old) children of lone mothers. The relationship between adult socio-economic circumstances and childhood family structure shown by Kiernan (1997) in the NCDS sample was attenuated, but not eliminated by, adjusting for financial hardship in childhood. Also, the relationship between family structure and behavioural and development problems was seen in the CHES 1970 birth cohort even after controlling for mother's education and neighbourhood type (Wadsworth *et al.*, 1985). In the US, Duncan, Brooks-Gunn, Klebanov (1994) found that adjustments for family income differences did not account for the relationship seen between lone motherhood and behaviour problems in five year olds, although they did account for the effects of lone motherhood on the children's low IQ scores. In McLanahan and Sandefur's (1994) study mentioned previously, controlling for income reduced the risk for high school drop out and teenage pregnancy by about half, but did not eliminate

it. Similarly, the increased risk for receiving psychological help documented by Zill et al. (1993) was unaffected by parents' educational attainment.

Divorce is also associated with psychological distress for the adults involved, both as an outcome (Capaldi & Patterson, 1991) and a precursor (Emery, Weintraub, & Neale, 1982). Looking at the British NCDS at age 33, Hope et al. (1999) found that psychological distress was greater among lone mothers than married mothers, although this was partly attenuated by allowing for financial hardship. Also, psychological distress was greater for divorced lone mothers than for never-married lone mothers. Parental psychological distress may be an important influence on the pathway between family structure and child well-being. Certainly, both clinical and community studies have reported a link between parental disorder and disruptive behaviour, functional impairment and high CBCL scores in children (Grizenko & Pawliuk, 1994; Canino, Bird, Rubio-Stipec, Bravo, & Alegria, 1990).

The present study

As a large, annual, nationally representative survey, the Health Survey for England (HSE; Prescott-Clarke & Primatesta, 1998) provides an opportunity to try to unravel the complex relationship between family structure, child psychological well-being, socio-economic status and parental mental health. The 1997 HSE focussed on the health of young people in England and was the first to use the Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997), a relatively new screening instrument for child psychological morbidity, in a large nationally representative sample of children. This paper seeks to address two main questions in this sample. First, do children living in lone and two parent family situations differ in terms of their behavioural and emotional symptoms? Second, if so, does this relationship persist once socio-economic circumstances and parental mental health are taken into account?

Methods

Sampling

The HSE comprises a series of annual cross-sectional surveys on the health of the population of England and has been funded by the Department of Health since 1991. Since 1994, the survey has been conducted by the Joint Health Surveys Unit based both in the Department of Epidemiology and Public Health at Royal Free and University College London Medical School and at the National Centre for Social Research. Each annual survey covers the non-institutionalised population of

England aged two and over. A stratified multi-stage probability sampling design is employed which results in self-weighting (equal selection probabilities) samples, both of households and adult individuals. Using the small user Postcode Address File as the sampling frame, postal sectors are selected as the primary sampling units. These are contiguous geographical areas containing on average around 2500 households. First, the frame of all sectors in England is stratified according to a number of socio-demographic factors (using data from the 1991 Census), to maximise the representativeness of the sample. Once stratified, addresses are systematically identified within each selected postal sector for inclusion in the sample. Once an address has been selected, all of the adults and up to two of the children living there (as identified by interviewers using a Kish grid) are included in the survey.

Each year the focus of the HSE changes. In 1997 the focus was children and young people, so the annual 'core' sample was supplemented with households in which two children and no adults were interviewed in order to provide a child 'boost'. For that year 23,328 addresses were randomly selected from 648 postal sectors within the Postcode Address File. Interviews were conducted with 76 per cent of eligible households in the core sample and 88 per cent of eligible households in the boosted child sample, yielding 5705 children aged 4 to 15 whose parent filled in the SDQ. The data have been weighted in order to compensate for the strategy of interviewing a maximum of two children per household.

Instrument and data collection

The Strengths and Difficulties Questionnaire (SDQ) is a relatively recently developed instrument for assessing psychological morbidity in children. It improves upon previous instruments, such as the Child Behavior Checklist (CBCL) (Achenbach, 1991) and the Rutter questionnaires (Rutter, 1967; Rutter, Tizard, & Whitmore, 1970) by focusing on children's strengths as well as their difficulties, and by an increased focus on hyperactivity and peer relations. As it fits on one side of A4, the SDQ is also shorter in length than its predecessors. The parent-fill version of the SDQ, used here, has been shown to correlate highly with both the CBCL and the Rutter questionnaire, and to discriminate between cases of child psychological morbidity and controls at least as well as these instruments (Goodman, 1997; Goodman & Scott, 1999).

The SDQ is composed of 25 items: 10 strengths, 14 difficulties and one neutral item. The 25 items are divided into 5 scales of 5 items each: hyperactivity, emotional symptoms, conduct problems, peer problems and prosocial behaviour (see Appendix A for a list of items). Each item has three possible answers, each of

which is assigned a value 0, 1 or 2. The score for each scale is generated by adding up the scores on the 5 items within that scale, producing scale scores ranging from 0 to 10. A total difficulties score is derived by adding the scores of each of the scales, except the prosocial behaviour scale, producing a total score ranging from 0 to 40. For this analysis the SDQ total difficulties score has been dichotomised into 'normal/borderline' (0–16) and 'high' (17–40), following the recommendations of its author. For a full discussion of the SDQ see Goodman (1997).

With the exception of parental mental health, information for the independent (non-SDQ) variables in this analysis was collected during face-to-face interviews with respondents in their homes using computer-assisted personal interviewing (CAPI). Parental mental health was measured by the 12-item General Health Questionnaire (GHQ12; Goldberg & Williams, 1988) administered using self-completion booklets.

Analysis and sub-samples

A list of the variables relating to socio-economic status and parental mental health that were available in this data set is shown in Appendix B. Many of the 'socio-economic' variables may include non-economic elements (for example, parental working status or parental educational attainment). We have crudely grouped these factors under the umbrella term of 'socio-economic factors' for purposes of analysis; however, their complexity will be addressed in the discussion of these results.

Because parents were not interviewed in the 'child boost' sample, parental (as opposed to 'household') variables could not be applied to the sample as a whole. Also, paternal factors could not, of course, be applied to the children of lone mothers. It was, therefore, necessary to analyse the sample in three distinct groups: samples A, B and C.

Sample A includes all children, regardless of whether their parents were interviewed. After excluding children who were missing information on any of the variables included in this model, this resulted in a sample of 5405 children. Only child variables and household demographics are available for children in sample A. In this sample, we looked at the effect of family structure, three indicators of socio-economic status, age and gender on child emotional and behavioural difficulties. Family structure was comprised of five family types:

- families with two natural parents;
- 'reconstituted' families: families with two parents in which at least one parent was not a natural parent;
- lone mother families where the mother was previously married;

- lone mother families in which the mother had never been married; and
- lone father families.

The socio-economic indicators included were receipt of benefits ('benefits' may include income support, family credit, housing benefit or any other state benefits), Registrar General's social class of head of household divided into four categories (I/II, IIINM, IIIM, IV/V) and housing tenure (own/buying or renting/rent free).

Sample B includes children whose parents were interviewed ($n=1,426$). For lone parent families the sample design meant that it was only possible to interview the parent living in the same household as the child, so while maternal information was present for most of these children, paternal information was only available for some of them. Consequently, only maternal variables are included in the analysis of sample B. Maternal information did not exist for children of lone fathers, however, so inclusion of only children who had valid responses for maternal information meant exclusion of the few children from lone father families.

Analysis in sample B included those variables used in sample A with the addition of maternal working status (homemaker, part-time employed or full-time employed), maternal psychological status (0–3 or 4+ on the GHQ12), and maternal educational qualifications divided into four categories (degree or some higher education, 'A' level or equivalent, 'O' level or equivalent, no qualification. 'A' level is equivalent to a North American or European high school diploma while 'O' level is equivalent to completion of education up to the age of 16). The model from sample A was also run in this sample in order to address the possibility of bias in the sub-sample.

All parental variables are included in the analysis of sample C, which includes only children in two-parent families ($n=967$). Analysis in sample C included the variables in model two as well as paternal working status (employed or unemployed), paternal psychological status (0–3 or 4+ on the GHQ12) and paternal educational attainment (degree or some higher education, 'A' level or equivalent, 'O' level or equivalent, no qualification).

Initial, exploratory cross tabulations were done separately for boys and girls in order to determine which variables to include in the regression models. Bivariate odds ratios and 95 per cent confidence intervals were tabulated for high SDQ total difficulties and sub-scale scores with each of the independent variables in Appendix B. The results of this initial analysis indicated negligible differences in the relationship between independent variables and SDQ score for the SDQ sub-scales, or when these relationships were explored separately for boys and girls, so further analyses were conducted on the SDQ total difficulties score for boys and girls combined. Next, multivariate

logistic regression models were created for each of the three samples. The dependent variable was SDQ total difficulties score, dichotomised into 'high' and 'borderline/low' for each of the three models. Each model was run in a forward stepwise fashion using SPSS. This method allows researchers to specify the order in which variables are added to the model. Models were run in two steps, first with just gender, age and family structure, then with other independent variables added. This allowed us to explore the influence of family structure, and whether this might be mediated by other factors. Equivalised household income and overcrowding were included in the initial regression models and then dropped due to a lack of relationship in any of the models.

Results

Family structure and socio-economic status

Table 1 shows the effects on SDQ total difficulties score of family structure, socio-economic indicators, age

and gender in sample A (all children). The first step in the model shows the effect of family structure on high SDQ total difficulties score, taking gender and age into account. Compared with families where two natural parents were present, children of never married lone mothers were almost three times more likely to have a high SDQ score. Similarly, children in 'reconstituted' or previously married lone mother families were about twice as likely to have a high SDQ total difficulties score as children in families with two natural parents. Children in lone father families were not significantly more likely to have a high SDQ score than children living with two natural parents. Girls were less likely than boys and 13–15 year olds were less likely than 4–6 year olds to have a high SDQ score.

Table 1 then shows the effect of family structure on high SDQ total difficulties score after taking the effects of being on benefits, social class of head of household and housing tenure into account. These indicators of socio-economic status appear to remove the effect of lone motherhood on child psychological status. Neither never married nor previously married lone mother

Table 1
The effect of family structure and selected socio-economic factors on SDQ total difficulties score

| | Bases | Family structure | | + socio-economic factors | |
|---------------------------------------|-------|------------------|-----------|--------------------------|-----------|
| | | OR | 95% CI | OR | 95% CI |
| Gender ^a | | | | | |
| Boy ^b | 2702 | 1 | | 1 | |
| Girl | 2703 | 0.58 | 0.48–0.71 | 0.60 | 0.49–0.74 |
| Age | | | | | |
| 4–6 ^b | 1414 | 1 | | 1 | |
| 7–9 | 1457 | 1.14 | 0.89–1.47 | 1.15 | 0.89–1.49 |
| 10–12 | 1369 | 0.84 | 0.64–1.10 | 0.89 | 0.67–1.17 |
| 13–15 | 1165 | 0.71 | 0.52–0.95 | 0.78 | 0.58–1.06 |
| Family structure | | | | | |
| 2 natural parents ^b | 3870 | 1 | | 1 | |
| 'Reconstituted' families ^c | 509 | 2.28 | 1.73–3.02 | 1.60 | 1.20–2.14 |
| Lone mother, previously married | 644 | 1.80 | 1.37–2.36 | 0.98 | 0.72–1.34 |
| Lone mother, never married | 289 | 2.82 | 2.00–3.98 | 1.16 | 0.79–1.70 |
| Lone father | 93 | 1.33 | 0.63–2.80 | 0.68 | 0.31–1.46 |
| Benefits | | | | | |
| Receiving no benefits ^b | 3841 | | | 1 | |
| Receiving benefits ^d | 1564 | | | 1.93 | 1.50–2.48 |
| Social class of head of household | | | | | |
| I/II ^b | 1972 | | | 1 | |
| IIINM | 654 | | | 1.07 | 0.71–1.59 |
| IIIM | 1582 | | | 1.74 | 1.31–2.31 |
| IV/V | 1197 | | | 1.96 | 1.45–2.64 |
| Housing tenure | | | | | |
| Own or buying ^b | 3756 | | | 1 | |
| Renting or rent-free | 1649 | | | 1.80 | 1.42–2.28 |

^a 12% of boys and 8% of girls had a high SDQ score.

^b reference category.

^c 'Reconstituted' families = 2 parents, at least one not natural.

^d Any of income support, family credit, housing benefit, or any other state benefit.

families display a strong or significant relationship once socio-economic factors are introduced. Children of 'reconstituted' families remain more than 60 per cent more likely to have a high SDQ total difficulties score than children of families with two natural parents, despite the inclusion of socio-economic factors. Gender and age relationships were unchanged.

Each of the socio-economic factors in Table 1 had a strong, significant effect. Both children in households receiving benefits or 'renting' households were nearly twice as likely to have a high SDQ score than children in households not receiving benefits or 'owned/buying' households. Children in manual households were significantly more likely to have a high SDQ total difficulties score than those in non-manual households. The model was rerun separately for each of the socio-economic variables in order to examine which was most important for changes seen in family structure. Both types of lone mother family were reduced to non-significance when benefits status was included in the model on its own. When housing tenure was included on its own in the model, the effect of previously married lone mothers became non-significant, while the risk for children of never married lone mothers was reduced, but remained significant. There was no change in the effect of family structure when social class of head of household was included on its own in the model. Another interesting aspect of these separate models was that the size of the socio-economic effect for each was much larger individually than when included in the model with the other socio-economic indicators. The odds ratios for benefits status and housing tenure were 3.08 and 2.81 respectively compared with 1.93 and 1.80 in Table 1. Similarly, the odds ratios for social class of

head of household ran 1.29, 2.28 and 3.08 compared with 1.07, 1.74 and 1.96 in Table 1. These reductions in the effect seen in the multi-variate analysis suggest that the three variables to a large extent may be tapping into the same construct.

Given the increased risk for children of lone mothers, shown in Table 1, the fact that there is no increased risk for children of lone fathers is puzzling. One possibility is that this is a consequence of differing socio-economic circumstances in father and mother headed lone parent families. Table 2 compares the socio-economic circumstances of lone mothers and lone fathers. Lone mothers were more than three times more likely to be receiving benefits (OR = 3.16, 2.00–5.01) and nearly twice as likely to be living in rented or rent-free accommodation (OR = 1.87, 1.20–2.91) as lone fathers. While lone fathers were twice as likely as lone mothers to be in a manual occupation (OR = 2.05, 1.27–3.30), lone mothers were about 60% more likely than lone fathers to be employed in routine or semi-routine manual occupations (social class IV/V; OR = 1.62, 1.01–2.62).

Maternal factors: educational attainment, working status, and psychological well-being

Maternal information was only available for the subsample of child survey respondents whose mother was also interviewed about her health and certain socio-demographic factors ($n = 1426$).

While maternal factors, family structure and socio-economic indicators were all associated with a high SDQ total difficulties score, they were also strongly associated with one another in initial bivariate analyses (not shown). Mothers with no educational qualification were

Table 2
Socio-economic circumstances of lone mothers and lone fathers

| | Lone mothers | | Lone fathers | |
|--|--------------|------|--------------|------|
| | <i>n</i> | % | <i>n</i> | % |
| Benefits ^a | | | | |
| Receiving no benefits | 202 | 19.3 | 40 | 43.0 |
| Receiving benefits ^b | 847 | 80.7 | 53 | 57.0 |
| Social class of head of household ^c | | | | |
| I/II | 169 | 17.4 | 22 | 22.9 |
| IIINM | 288 | 29.6 | 7 | 7.3 |
| IIIM | 115 | 11.8 | 38 | 39.6 |
| IV/V ^d | 401 | 41.2 | 29 | 30.2 |
| Housing tenure ^c | | | | |
| Own or buying | 334 | 31.1 | 44 | 45.8 |
| Renting or rent-free | 739 | 68.9 | 52 | 54.2 |

^a $P < 0.001$.

^b Any of income support, family credit, housing benefit, or any other state benefit.

^c $P < 0.005$.

^d $P < 0.05$.

the most likely to be lone mothers and the least likely to be in families with two natural parents, while the converse was true for mothers with degrees or some higher education ($p < 0.001$). Full-time homemaking mothers were the most likely to have no educational qualifications, to be receiving benefits, and to be in a manual class, while the opposite was true for mothers who were in full-time paid employment ($p < 0.001$). Also, mothers with high GHQ12 scores were more likely to be receiving benefits than mothers with low GHQ12 scores ($p < 0.001$). There was only a small (but significant) relationship between mother's GHQ12 score and her

educational attainment ($p < 0.005$) or the social class of her household ($p < 0.05$).

Table 3 shows the effect of family structure, maternal factors, socio-economic indicators, age and gender on children in sample B (whose mothers were interviewed). As in sample A, the model was first run with gender, age, and family structure, before including the maternal and socio-economic variables. The first step reveals that, in this sub-sample, children in 'reconstituted' families were nearly two-and-a-half times more likely and children in never married lone mother families were about twice as likely to have a high SDQ score as children living with

Table 3

The effect of family structure and selected maternal and socio-economic factors on SDQ total difficulties score

| | Bases | Family structure | | + socio-economic and maternal factors | |
|---------------------------------------|-------|------------------|-----------|---------------------------------------|------------|
| | | OR | 95% CI | OR | 95% CI |
| Gender | | | | | |
| Boy ^a | 701 | 1 | | 1 | |
| Girl | 725 | 0.63 | 0.43–0.91 | 0.62 | 0.42–0.90 |
| Age | | | | | |
| 4–6 ^a | 386 | 1 | | 1 | |
| 7–9 | 395 | 1.01 | 0.63–1.61 | 0.99 | 0.50–1.38 |
| 10–12 | 345 | 0.83 | 0.50–1.38 | 0.87 | 0.51–1.47 |
| 13–15 | 300 | 0.59 | 0.33–1.05 | 0.52 | 0.28–0.96 |
| Family structure | | | | | |
| 2 natural parents ^a | 1041 | 1 | | 1 | |
| 'Reconstituted' families ^b | 127 | 2.45 | 1.44–4.17 | 2.01 | 1.13–3.58 |
| Lone mother, previously married | 191 | 1.37 | 0.81–2.32 | 0.81 | 0.42–1.55 |
| Lone mother, never married | 67 | 2.13 | 1.02–4.46 | 0.98 | 0.42–2.26 |
| Maternal working status | | | | | |
| Homemaker ^a | 484 | | | 1 | |
| Part-time employed | 594 | | | 0.75 | 0.47–1.21 |
| Full-time employed | 348 | | | 1.44 | 0.81–2.54 |
| Maternal GHQ12 score | | | | | |
| 0–3 ^a | 1169 | | | 1 | |
| 4+ | 257 | | | 2.01 | 1.30–3.11 |
| Maternal educational qualification | | | | | |
| Degree or some higher ^a | 353 | | | 1 | |
| A level or equivalent | 165 | | | 2.10 | 0.85–5.14 |
| O level or equivalent | 618 | | | 3.17 | 1.51–6.63 |
| No qualification | 290 | | | 4.93 | 2.24–10.89 |
| Benefits | | | | | |
| Receiving no benefits ^a | 1047 | | | 1 | |
| Receiving benefits ^c | 379 | | | 1.15 | 0.66–1.99 |
| Social class of head of household | | | | | |
| I/II ^a | 578 | | | 1 | |
| IIINM | 164 | | | 0.93 | 0.44–1.96 |
| IIIM | 383 | | | 1.16 | 0.68–1.97 |
| IV/V | 301 | | | 1.04 | 0.58–1.87 |
| Housing tenure | | | | | |
| Own or buying ^a | 1029 | | | 1 | |
| Renting or rent-free | 397 | | | 2.03 | 1.25–3.29 |

^areference category.

^b'reconstituted' families = 2 parents, at least one not natural.

^cany of income support, family credit, housing benefit, or any other state benefit.

two natural parents, before taking other factors into account. Children of previously married lone mothers were no longer at significantly increased risk in this sample. However, the 95% confidence intervals in this sample overlap with those in sample A for each family structure category, suggesting that the results in the two samples are broadly consistent. The effect of gender and age in this sub-sample was similar to that in Table 1.

Next Table 3 suggests that, as in Table 1, the inclusion of the socio-economic and maternal variables, particularly housing tenure, maternal educational qualification and maternal mental health, eliminated the increased risk of lone motherhood, but did not remove the effect of living in a 'reconstituted' family. There was a strong gradient between mother's educational attainment and likelihood of having a high SDQ total difficulties score. Children of mothers whose highest qualification is 'O' level or equivalent were more than three times more likely, and children of mothers with no educational qualification were nearly five times more likely, to have a high SDQ score than children of mothers with a university degree or some higher education. Children living in rented accommodation were twice as likely to have a high SDQ score, while the effects of benefits receipt and social class of head of household were reduced to non-significance.

Table 3 also shows that children of mothers with high GHQ12 scores were twice as likely to have a high SDQ score as children of mothers with low GHQ12 scores, even with socio-economic factors included in the model. While maternal employment status did not show any significant effect when socio-economic factors were included in the final stage of the model, stepwise creation of the model suggested a protective effect of maternal part-time employment. Before socio-economic variables are included, children of mothers who were employed part-time were less likely to have a high SDQ score than either children of full-time homemakers or children whose mothers were employed full-time outside the home (analysis not shown). Given that this protective effect became non-significant when socio-economic factors were included in the model, it may have been a consequence of the improved socio-economic circumstances of families where the mother worked.

Paternal factors: educational attainment, working status, and psychological well-being

Paternal information was available for a smaller sub-sample of children ($n = 967$). Again, Table 4 first shows the original family structure model in this reduced sub-sample (sample C). Socio-economic, maternal and paternal factors were then added. Only two-parent families ('two natural parents' and 'reconstituted') can be included in this model as the inclusion of both

maternal and paternal factors means that both parents must have been present in the household. The first step in Table 4 shows that the effect of living in a 'reconstituted' family was no longer significant in this sub-sample. However, the 95% confidence intervals did overlap with those for 'reconstituted' families in samples A and B, suggesting that the results for sample C are not significantly different from those seen in the previous samples. This suggestion is strengthened by the inclusion of socio-economic and parental factors, which did not greatly change the size of the reconstituted family effect in this model.

Mother's educational attainment remained important among two parent families. Children of mothers with no qualification were nearly five times more likely, and children of mothers with an 'O' level or equivalent education three times more likely, to have a high SDQ score than children of mothers with a university degree or some higher education. Perhaps surprisingly, father's educational attainment did not appear to have any effect on having a high SDQ score. Benefits receipt, housing tenure, and social class of head of household no longer had significant effects in this sub-sample of two parent families.

The effect of parental mental health remained strong in this sample, even with the inclusion of socio-economic and other parental variables. Children whose father scored high on the GHQ12 or whose mother scored high on the GHQ12 were twice as likely as other children to score high on the SDQ. Paternal employment status was not significant when socio-economic indicators were included in the model; however stepwise creation of the model showed that father's unemployment did have strong significant effects on children's likelihood of scoring high on the SDQ before inclusion of socio-economic indicators. Children of unemployed fathers were almost two-and-half times more likely to have a high SDQ score than children of employed fathers before socio-economic variables were included. The relationship with maternal employment status was the same as that in Table 2.

Discussion

Lone motherhood

This study shows that lone motherhood per se is not detrimental to children's psychological well-being. Rather, it is the poverty that accompanies lone motherhood, as well as the low educational attainment that is associated with both poverty and lone motherhood, that increases the risk of behavioural and emotional problems among children of lone mothers. In sample A (Table 1), the increased risk of psychological morbidity seen among children of lone mothers

Table 4
The effect of family structure and selected parental and socio-economic factors on SDQ total difficulties score

| | Bases | Family structure | | + SES & parental | |
|---------------------------------------|-------|------------------|-----------|------------------|------------|
| | | OR | 95% CI | OR | 95% CI |
| Gender | | | | | |
| Boy ^a | 485 | 1 | | 1 | |
| Girl | 482 | 0.56 | 0.34–0.91 | 0.55 | 0.32–0.92 |
| Age | | | | | |
| 4–6 ^a | 258 | 1 | | 1 | |
| 7–9 | 262 | 1.65 | 0.88–3.09 | 1.82 | 0.93–3.57 |
| 10–12 | 238 | 0.94 | 0.46–1.90 | 0.98 | 0.46–2.09 |
| 13–15 | 209 | 0.82 | 0.38–1.74 | 0.68 | 0.30–1.54 |
| Family structure | | | | | |
| 2 natural parents ^a | 906 | 1 | | 1 | |
| ‘Reconstituted’ families ^b | 61 | 1.54 | 0.67–3.55 | 1.36 | 0.53–3.45 |
| Paternal working status | | | | | |
| Working ^a | 880 | | | 1 | |
| Not working | 87 | | | 1.86 | 0.80–4.33 |
| Maternal working status | | | | | |
| Homemaking ^a | 258 | | | 1 | |
| Part-time employed | 458 | | | 0.71 | 0.38–1.34 |
| Full-time employed | 251 | | | 1.45 | 0.69–3.06 |
| Paternal GHQ12 score | | | | | |
| 0–3 ^a | 848 | | | 1 | |
| 4+ | 119 | | | 2.08 | 1.08–4.00 |
| Maternal GHQ12 score | | | | | |
| 0–3 ^a | 813 | | | 1 | |
| 4+ | 154 | | | 2.13 | 1.16–3.91 |
| Paternal educational qualification | | | | | |
| Degree or some higher ^a | 398 | | | 1 | |
| A level or equivalent | 115 | | | 0.78 | 0.30–2.05 |
| O level or equivalent | 282 | | | 0.97 | 0.49–1.93 |
| No qualification | 172 | | | 0.85 | 0.39–1.84 |
| Maternal educational qualification | | | | | |
| Degree or some higher ^a | 283 | | | 1 | |
| A level or equivalent | 121 | | | 1.22 | 0.36–4.13 |
| O level or equivalent | 378 | | | 3.04 | 1.23–7.50 |
| No qualification | 185 | | | 4.90 | 1.86–12.91 |
| Benefits | | | | | |
| Receiving no benefits ^a | 829 | | | 1 | |
| Receiving benefits ^c | 138 | | | 1.02 | 0.44–2.36 |
| Social class of head of household | | | | | |
| I/II ^a | 463 | | | 1 | |
| IIINM | 71 | | | 0.60 | 0.15–2.45 |
| IIIM | 271 | | | 1.69 | 0.85–3.32 |
| IV/V | 162 | | | 1.24 | 0.56–2.76 |
| Housing tenure | | | | | |
| Own or buying ^a | 781 | | | 1 | |
| Renting or rent-free | 186 | | | 1.36 | 0.68–2.72 |

^a reference category.

^b ‘reconstituted’ families = 2 parents, at least one not natural.

^c Any of income support, family credit, housing benefit, or any other state benefit.

disappeared when benefits receipt and housing tenure were added to the model. Table 3 suggested that both maternal education and poverty are important for child psychological well-being. The increased risk for children

living in lone mother families was no longer apparent when maternal educational attainment and housing tenure were included in the model, while the effect of benefits receipt dropped out. The results seen here are

very similar to those found by Joshi et al. (1999) using British and American longitudinal data. Dunn et al. (1998) also found similar results for the older siblings of the ALSPAC cohort, but not for the cohort of four year-olds themselves. These results do not coincide with recent results from the child mental health survey (Meltzer, Gatward, Goodman, & Ford, 2000).

It would be interesting to explore these relationships further in three-way or interaction analyses. However, the highly interdependent nature of these variables does not allow large enough sample sizes in some of the groups to conduct these analyses. For example, only 25 children whose mother had an educational qualification of A level or higher scored high on the SDQ, and only 16 children in two-parent families not receiving benefits did so.

As discussed previously, the relationship between poverty and lone mother families is well documented. Our data further reflect the socio-economic disparity between lone mother and other family types. In this sample, never married lone mothers were four times more likely to be in social class IV or V, more than 30 times more likely to be receiving benefits and almost two-and-a-half times more likely to have no educational qualification than mothers in other family types.

It is interesting that there was no increased risk of emotional and behavioural problems for children living in lone father families, even before taking socio-economic status into account, indicating that socio-economic inequality is not limited to a comparison of lone and two-parent households. Table 2 showed that lone mothers were significantly more likely to be living in poverty than lone fathers in this sample. This is in line with findings by Jarvis and Jenkins (1998) mentioned previously and suggests that the socio-economic disparities in family structure may reflect gender inequality in salaries and employment, as well as the higher risk of poverty for women generally. Of course, the vast majority (90%) of lone parent households are currently lone mother households.

Family disruption

While poverty and maternal education appear to account for the increased behavioural and emotional problems in children of lone mothers, these effects were not seen for the greater risk of children in 'reconstituted' families, (i.e. two parent families with at least one non-biological parent) (see Tables 1 and 3). In these cross-sectional data, it is not possible to determine whether the natural parent in these 'reconstituted' families had separated or divorced from a previous partner, or had previously been a never-married lone parent. Nor is it possible to assess the impact of the introduction of a new parental figure into the household. As a result, we can not say whether the unexplained effect seen in

'reconstituted' families is attributable to a previous divorce, or to the introduction of a new parental figure, or both, nor how such effects might be mediated.

As discussed previously, many studies have documented an association between marital disruption and a wide range of deleterious effects in children, while studies of the effects of remarriage on children generally fail to show a beneficial effect. Experts in this area emphasise that both divorce and remarriage are most usefully viewed as complex processes beginning before and continuing after the divorce, rather than as simplistic, single events (Emery, 1999; Hetherington & Stanley-Hagan, 1999; Rodgers & Pryor, 1998).

Reviews of the evidence regarding the impact of parental separation and child well-being in both the UK (Rodgers & Pryor, 1998) and the US (Emery, 1999; Hetherington & Stanley-Hagan, 1999; Richards, 1997) present sources of change and disruption which may be important for the children involved:

- Parental conflict before, during and possibly after the divorce appears to be a particularly important influence on children's psychological well-being (Amato, Loomis, & Booth, 1995; Amato, & Keith, 1991a, b; Cummings & Davies, 1994; Davies & Cummings, 1994; Erel & Burman, 1995; Grych & Fincham, 1990). Other research shows that children from divorced but conflict-free homes have fewer behavioural problems than children whose parents remain in an unhappy marriage (Borrine, Handal, Brown, & Searight, 1991; Forehand Neighbors, Devine, & Armistead, 1994).
- Uncertain, erratic or substantial loss of contact with one parent, typically the father. In an analysis of the National Survey of Families and Households in the US, Seltzer (1991) found that nearly a third of divorced fathers had seen their children only once or not at all in the past year.
- 'Diminished parenting' (Wallerstein & Kelly, 1980) during the first few years after separation when emotional and practical demands on parents peak. The need for a new job and a new social life may make residential parents less physically and psychologically available to their children.
- Other changes in the relationship with (Emery, 1999) or child rearing practices of (Faubert, Forehand, Thomas, & Wiersen, 1990) the residential parent.
- The negative financial impact of divorce may necessitate changes in residence, schools, peer groups and childcare.
- As discussed previously, remarriage represents yet another challenging transition for most children.
- Finally, the higher divorce rate for second marriages also has one more important influence on many children. In one US national survey, 37% of children

with a remarried parent later experienced a second divorce (Furstenberg, Peterson, Nord, & Zill, 1983).

So, the increased risk of behavioural and psychological symptoms among children in ‘reconstituted’ families may be the consequence of a number of potential disruptions or combination of disruptions. We are not able to investigate these particular disruptive aspects of divorce or remarriage in these data. Nor are we able to examine the effect of the passage of time which is important for many aspects of family disruption (Hetherington, Bridges, & Isabella, 1998). Whichever aspect(s) of disruption are most important for child mental health, however, these effects were not directly attenuated by socio-economic status, parental educational attainment, or parental psychological well-being in this study.

Parental psychological well-being

Finally, this study shows the overwhelming importance of parental psychological well-being on children’s psychological well-being, independent of both socio-economic status and family structure. These results are in line with previous investigations. For example, Dunn et al. (1998) found that children of mothers with high levels of depressive symptomatology had higher SDQ total difficulties scores than children of other mothers.

While the association between parental psychological disorder and risk for maladjustment in offspring is fairly well documented, it is not clear how much of this risk derives from: genetically determined factors; a direct environmental relationship between parental mental health and child mental health (for example, via parenting behaviour or parent–child bonds); an indirect environmental effect via the shared family environment; or a combination of these three. In this study, the environmental effect of poverty, as measured by benefits receipt, was associated with poor maternal mental health (not shown). This raises the possibility that the link between family poverty and children’s high SDQ score may work partly through parental psychological distress.

Limitations of the study

As these are cross-sectional data, it is not possible to determine the sequence of the events or processes studied. For instance, we cannot determine whether the onset of childhood problems occurred before or after a divorce or separation. This is particularly problematic for the relationship between parental and child psychological problems. It is not possible to determine whose illness occurred first and the literature indicates that these relationships can work in either direction. In addition, a proportion of our group of never married

lone mothers may contain mothers who record themselves as single, but who have ‘divorced’ themselves and their children from a long-term cohabitation that was a ‘marriage’ in all but name (perhaps as many as half are in this situation, Marsh, Ford, & Finlayson, 1997).

It might also be argued that the link we have shown between parental characteristics and child psychological illness is due to response biases introduced when parents completed the SDQ on behalf of their children. Elsewhere, we have explored the possible response bias introduced by a mother’s psychological state (as indexed by her GHQ12 score) on the completion of her children’s SDQ assessment and found no evidence to support this possibility (McMunn, Nazroo, & Goodman, 1999, unpublished).

It is possible that sub-samples B and C (Tables 3 and 4) may not be entirely representative of the full sample of children. We have attempted to assess the effect any sample bias might have on our analysis by rerunning the original model in each sub-sample. The relationships seen in the original family structure model are nearly identical in samples A (the main sample of children) and B (children whose mother was also interviewed). The increased risk of ‘reconstituted’ families was not seen in sample C (children whose mother and father were both interviewed). However, the 95 percent confidence intervals for each variable category overlap in the three samples, suggesting that the results in the sub-samples are not significantly different from those in the main sample.

Conclusion

This paper has shown that being in a ‘reconstituted’ family, parental psychological well-being, maternal education and poverty are important factors for child emotional and behavioural well-being. In addition to their direct effects, many of these factors are also highly interrelated with many possible interaction effects. Elsewhere we have shown that biological factors, such as birthweight and maternal smoking, have an additional effect on children’s emotional and behavioural well-being (Kelly, Nazroo, McMunn, Boreham, & Marmot, 2000). These factors may also be highly inter-related with the variables in the models included here. For example, it is well known that there is a socio-economic gradient in smoking behaviour (Hedges, di Salvo, & Purdon, 1998), and we have shown elsewhere that the effect of birthweight on child psychological morbidity is contingent on social position (Kelly et al., 2000).

These complex interrelationships make determination of a causal chain problematic. For example, one of many pathways might begin with a young woman’s low educational attainment which might have been effected

by the social class and/or parenting techniques of her parents as well as the structure of the family and the area in which she was raised. In adulthood, this may affect her parenting techniques, her socio-economic status and the structure of her family, while the structure of her family (whether she is divorced or a lone mother) will also affect her socio-economic status. Both her socio-economic status and her family structure will have an effect on her own mental health. Each of these may have independent and interactive effects on the behavioural and emotional well-being of her children. In addition, there are the potential influences of the mother's smoking status, and the birthweight of her children. The area in which her children live may also affect their educational chances and their behavioural and emotional well-being, and this area may be the same, or similar, to that in which the mother was originally raised. The number of possible permutations of such a complex temporal chain is large and cannot be fully examined using cross-sectional data. The one thing we can say with confidence is that both the upstream effect of maternal education, and the downstream effect of poverty seem to account for the high prevalence of psychological symptoms in the children of lone mothers in this sample.

In addition to highly inter-related variables and complex temporal pathways, it is not always entirely clear which causal mechanisms particular variables represent. For instance, maternal education may be a marker for socio-economic effects; it may be playing a more direct role, for example through environmental factors such as parenting techniques or biological factors such as inheritable dyslexia; and/or it may represent early life chances that influence later marital and/or parental status (ie. family structure). Anthropological, historical and demographic findings make it clear that family structure and the consequences of divorce vary across history, culture and subculture. For instance, divorce was less common and less socially acceptable during the 1950s than in the 1980s and 1990s when this cohort would have experienced it, and marital dissolution does not result in the same life changes for children in different cultures (Emery, 1999). This suggests the need for caution in extrapolating the findings here to any groups other than the general English population in 1997, including subgroups within this population.

Nevertheless, these findings suggest two areas of action for enhancing the well-being of the next generation. The first is to reduce inequalities in women's socio-economic circumstances by making education more accessible and attractive to the particularly vulnerable group of girls who are not attaining educational qualifications. The second is to improve the economic circumstances of lone mother families. Three main sources of income are available to lone mothers: their

own earnings, child support payments from non-residential fathers, and benefits. There is increasing recognition that these sources ought to be viewed as complimentary, rather than as alternatives (Millar & Ford, 1998). The current New Labour government is introducing policies aimed at encouraging lone-mothers to become employed, rather than rely on welfare payments; however, issues such as the provision of affordable, accessible, high-quality child-care facilities and whether mothers have the right to choose to be full-time carers remain unresolved. In addition, policies to break down gender segregation in employment and to promote equal pay and equal opportunities may be effective ways to help lone mothers achieve greater independence. Given that an estimated one in five of all dependent children in Great Britain were living in a lone parent family in 1995, policy issues concerning lone parents are important and of relevance to a significant and increasing proportion of the nation's children.

Appendix A. SDQ Items¹

Hyperactivity

Restless, overactive, cannot stay still for long
 Constantly fidgeting or squirming
Thinks things out before acting
Sees tasks through to the end, good attention span
 Easily distracted, concentration wanders

Conduct Problems

Often has temper tantrums or hot tempers
Generally obedient, does what adults request
 Often fights with other children or bullies them
 Often lies or cheats
 Steals from home, school or elsewhere

Emotional Symptoms

Often complains of headaches, stomach-aches or sickness
 Many worries, often seems worried
 Often unhappy, down-hearted or tearful
 Nervous or clingy in new situations, easily loses confidence
 Many fears, easily scared

Peer Relationships

Rather solitary, tends to play alone
Has at least one good friend
Generally liked by other children

¹ Items in italics are reverse scored.

Picked on or bullied by other children
Gets on better with adults than with other children

Prosocial Behaviour

Considerate of other people's feelings
Shares readily with other children (treats, toys, pencils, etc.)
Helpful if someone is hurt, upset or feeling ill
Kind to younger children
Often volunteers to help others (parents, teachers, other children)

Appendix B. Available family circumstance variables

Family structure

Socio-economic variables:

Social class of head of household
Benefits receipt
Housing tenure
Maternal and paternal educational attainment
Household equivalised income²
Overcrowding (fn2)
Paternal and maternal working status

Parental mental health variables:

Maternal psychological well-being
Paternal psychological well-being

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