Family Relations, Low Income and Child Outcomes:
A Comparison of Canadian Children in Intact, Step and Lone Parent Families

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ABSTRACT:

This paper examines conditions that are more likely to lead to positive or negative child outcomes in intact, female lone parent and reconstituted families. Family type is found to be more important than low income in predicting a set of behavioural, emotional and psychological difficulties. After establishing measurement equivalence across family types, multiple group analysis using structural equation modelling shows that the explanatory factors also operate differently in the various family settings. In particular, low income has a significant impact on childhood difficulties in lone parent and step-families, but not in intact families. Family functioning has less impact on children's outcomes in step-families than in intact or lone parent families, and larger family size predicts negative child outcomes only in non-intact families. These observations can be interpreted in terms of the impact of family type on the transfer of financial, human and social capital to children.

INTRODUCTION

Several family changes over recent decades have benefited Canadian children. Smaller family size means that parents can devote more time to a given child. Later childbearing and the greater proportion of families with two incomes enhance the resources that parents can offer. On the other hand, other changes have been less beneficial. In particular, the proportion of children living with lone parents has continued to climb, as has the proportion of children living in stepfamilies. These changes have introduced considerable diversity in family patterns across Canadian children, both in terms of family types and resources available from parents.

According to recent data from the National Longitudinal Survey on Children and Youth (NLSCY), about one in four Canadian children (aged 0-11) are not living with both biological parents, with about one in six living in a lone parent family and one in twelve living in a stepfamily (Statistics Canada, 1998). This has important repercussions with regard to the amount of financial, human and social capital that comes to children from their parents (Beaujot, 2000; Picot and Myles, 1996; Ross, Scott and Kelly, 1996; Dooley, 1991). In particular, a larger proportion of fathers are not living with their children, and are less involved with daily child care.

At the same time, it is important to observe that most Canadian children are doing reasonably well. On the whole, recent evidence suggests that the majority of Canadian children are physically, emotionally and socially healthy (Scott, 1996; Canadian Council on Social Development, 1998). This paper will further examine which conditions are most likely to lead to difficulties, in intact, lone-parent and reconstituted families. As emphasised by Lefebvre and Merrigan (1998), while the majority of children across family types are doing relatively well, the children most at risk are those who are in non-intact homes as well as those living in poor families. As economic hardship is highly associated with family disruption, we also attempt to differentiate the relative importance of income and family structure on child outcomes. After establishing equivalence in the measurement of child outcomes across family types, systematic comparisons will be made across intact, lone parent and stepfamilies.

PRIOR STUDIES

In one of the most comprehensive studies of the impact of economic well-being on child outcomes, Duncan and Brooks-Gunn (1997) conclude that both poverty and family structure are relevant to child outcomes. In summarising the collaborative efforts of a dozen research groups working with a wide variety of data sets, they conclude that income has a relatively narrow effect on child outcomes (in terms of both mental health and behavioural problems). Without trivialising the economic hardships experienced by a substantial number of American children, this research demonstrates the relevance of several other factors to the study of child psychosocial morbidity. Clearly the difficulties due to economic disadvantage can serve to disrupt family life and increase the psychological distress of both parents and children. Similarly, the difficulties of marital conflict, divorce and the absence of a parent, can increase a child's psychological distress. On the other hand, under some circumstances, and especially when children are in highly conflictual families, divorce can be advantageous to children's well-being. As empahsized by Amato and Booth (1997:238) "the worse situation for children to be in is either a high-conflict marriage that does not end in divorce or a low-conflict marriage that does end in divorce". To further complicate matters, low income status is correlated with higher levels of family tension, conflict and parental depression, factors associated with negative child outcomes (McLoyd,1990; Lipman et al., 1998). The difficulty rests in efforts to differentiate which are the most fundamental factors.

This research on the well being of children points to the importance of not only the financial capital available to families, but also the transfer of human and social capital to children (Coleman, 1988). The financial capital available to children is largely a

function of the income of parents, and transfers may be disrupted through parental separation. When one of the parents is not living with the child, there is the potential of lower transfer of human capital; that is, the absent parent's education and experience may be less useful to the child. It is similar for social capital, that is, the contacts and social relations that children receive from parents may be affected by family type. Amato (1998) emphasises that fathers are potentially important to meeting the economic and emotional needs of children. Unless one or both parents are a net negative for the child, children in intact families can most readily benefit from such transfers. In non-intact families, non-resident fathers can still provide these various forms of capital, but the conditions are often less than favourable. Children benefit less from the father's human capital because they receive a lower investment in parental time (Bumpass, 1994). Separated parents have particular difficulties generating co-parenting social capital. Stepparents would have a similar problem, possibly because the child does not "buy into" the co-parenting social capital in the reconstituted relationship (Amato, 1998). A step parent may contribute financial and human capital, but the non-biological parent may be less involved with the child and may also disrupt the transfer from the absent parent. Amato (1998) observes that stepparents, in particular, operate through the biological parent, and they are often no longer involved once they are not living with the biological parent. In other cases, the concept of stepparent may be too strong, since the adult is seen as the parent's partner rather than a parent (McLanahan, 2000).

It is consequently important to consider the impact of both the parent's marital relationship as well as the quality of child-parent relationships (Davies and Cumming, 1994; Grych and Fincham, 1990). For example, in reference to the transferral of social

capital, conflict within the home has repeatedly been shown to have a negative impact on young children. Children may simply suffer from the conflict, but they may also model problematic interpersonal styles or make self-attributions as to the cause of family conflict. As a determinant of psychological and behavioural problems, the quality of both marital and child-parent relationships have also been shown to interact in an important manner with family types (Rogers, 1996; Hanson, McLanahan and Thomson, 1997). While marital conflict is associated with childhood difficulties in both intact families and stepfamilies, its impact appears to be less important in stepfamilies. As Coleman and Ganong (1987) have argued, because children may be less attached to step parents and less committed to new relationships, they may be less negatively affected by resultant conflict.

Research from cycle 1 of Canada's first national longitudinal survey on children and youth (NLSCY) supports the idea that problems with lone parenting and step parenting are as much a function of the transferral of human and social capital as the transferral of financial resources. After examining through a multivariate analysis the impact of several socio-economic and demographic controls, Dooley et al. (1998) present estimates that reveal a persistent and strong association between lone parenthood and a variety of child difficulties. Low-income status was found to have a relatively weak impact, which also depended on which income measure was analyzed. Considering stepfamilies, Cheal (1996) documents higher levels of behavioural and psychological problems, irrespective of the economic resources available to parents. In terms of the involvement of fathers in daily child care, Canadian fathers behave in a similar manner to American fathers, with typically a much more limited contact after divorce, irrespective

of whether their children live in lone parent or stepparent households (Stephens, 1996; Le Bourdais and Marcil-Gratton, 1998). In terms of step families, greater difficulties are reported with family relationships, along with lower levels of emotional support and higher levels of erratic punishment for children (Cheal, 1998). While most children living in stepfamily and lone parent households have succeeded in their adjustment to new parenting arrangements, there appear to be factors that contribute to a greater likelihood of behavioural and psychological difficulties. Children living with parents that are younger, with fewer economic resources, a lower level of education, more siblings, and poor parenting or communication skills, are more at risk to childhood difficulties in both intact and step family households (Ross et al. 1998).

This study further examines conditions associated with childhood behavioural and psychological difficulties in Canadian households. The National Longitudinal Survey on Children and Youth is ideally suited to analyse the factors associated with emotional, psychological and behavioural problems among Canadian children. Information is available on family functioning, as well as a variety of economic and demographic controls. Systematic comparisons of child outcomes will be made, between intact, female lone parent, and step families, after having established measurement equivalence across family types. The present analysis will determine whether given explanatory variables operate differently by family type, through a multiple group analysis using structural equation modelling techniques.

RESEARCH PROCEDURES

The NLSCY was designed to measure child development and well being. Although the linked longitudinal data from this survey is yet to be made available for public use, the long-term goal of the NLSCY is to develop a national database on the life course of Canadian children, from infancy into young adulthood. With the first cycle of this survey, information was collected on a probability sample of 22,831 children under age 12. In the current study, a sub-sample of 14,007 children aged 4-11 in 1994-95 was selected. By focusing on this age group, which has been labelled an understudied segment of the life course (Kowaleski-Jones, 1999), a series of age appropriate indicators of behavioural and psychological difficulties are available. The sample, based on the sampling frame of the Canadian Labour Force Survey, excludes a very small number of Canadians, including those who are living in the Yukon or Northwest Territories, residents of institutions, persons living on Indian reserves, and full time members of the Canadian armed forces living in barracks (under 2% of Canada's population). The overall response rate was 86.3%.

Basic information is gathered through this survey on the living arrangements of children - with 1,981 children living in lone parent families, 1,467 in stepfamilies and 10,559 in intact families. In addition, this survey gathers information on a variety of child and family background characteristics, including information on family functioning, income poverty, parental age, education, labour force involvement, the number of children in the family, among various other characteristics. Building on previous Canadian research into psychosocial health (Tremblay et al., 1992; Offord et al., 1992, Offord et al., 1987), the measurement items selected for the NLSCY include the multiple

components of healthy child development, with information gathered from the parent (typically the mother) classified as most knowledgeable about the selected child. In the measurement of child psychiatric and behavioural difficulties, a series of scales were developed, including scales meant to measure: hyperactivity (inattention, impulsive and symptomatic motor activity), emotional disorder (feelings of anxiety and depression), physical aggression (physical violence against persons), indirect aggression (verbal aggression and cruelty to others), and property offence (vandalism, theft).

In developing its measures of child behavioural and psychological difficulties, the aforementioned scales involve the combination of over 30 items. In interpreting these scales, alternate thresholds have been developed in the identification of child disorders, with the assistance of child psychiatric assessments (Boyle, 1987; Lipman et al., 1996). Lipman et al., (1996) identified a set of disorder thresholds, established by selecting for each scale that score which separated the top 10% of scores from the bottom 90% in the sample. In the analysis of psychiatric and behavioural problems, several research studies have specifically examined the likelihood of falling above or below such thresholds (DeWit et al., 1998; Haddad, 1998; Lipman et al., 1996). For example, Dooley et al. (1998) enacted several separate logit analyses of the probability of disorders on hyperactivity, emotional disorder and aggressive behaviour, separately and in combination.

In working with the NLSCY, Ross et al. (1998) have instead developed a general index of childhood difficulties. This analysis was based on a combination of the additive scales mentioned earlier, which they called a general index of childhood “vulnerability”. It must be appreciated that additive scales have various limitations, including the problem

that indicators load in roughly the same manner on the construct of interest, while not allowing for the possibility of systematic response error across items. In summarising the subsequent results from their multivariate analysis, including some unexpected results, Ross et al. (1998:48) acknowledge that individual items "were not weighted by importance before including them in the scale". As has been demonstrated through the use of structural equation modelling techniques, shortcomings in measurement can have serious repercussions in a multivariate analysis, potentially attenuating or even exaggerating hypothesised relationships in an unpredictable manner (Bollen, 1989).

As an alternative to working with additive scales, structural equation models have been widely employed to bring greater precision in terms of measurement and subsequent analysis (Kline, 1998; Mueller, 1996; Hoyle, 1995). There are several methodological reasons why structural equation models have grown in popularity as an extension of the general linear model, including their ability to directly incorporate and integrate confirmatory factor analysis with more comprehensive explanatory models. For the purposes of the current paper, an "item parcelling" technique is selected; this is a recent extension of structural equation modelling techniques, which at least partially deals with problems that surface when researchers face a large number of items in the measurement of specific latent constructs (Hall et al., 1999; Marsh et al., 1998; Russel et al., 1998; Bagozz et al., 1994). The basic idea in working with "item parcels" is that subsets of items are first selected, composite scores for each subset are obtained, these composite scores are then used as individual indicators in the structural equation model. In turn, the current analysis will incorporate "parcels", understood as "the simple sum of several items meant to assess the same construct" (Kishton and Widaman, 1994). Several

parcels can be developed, with no single item assigned to more than one parcel. A first-order factor defined by a number of parcels of items may then be used to represent a more general latent construct of specific interest. The composite scores as obtained on the aforementioned additive scales (hyperactivity, emotional disorder, indirect aggression, physical agression, and property offence) are treated as representing "item parcels", in developing a more general latent variable meant to measure "child psychiatric and behavioural problems" or "child vulnerability". Preliminary work with these composite scores indicate an acceptable measurement model, for specifying a latent dependent variable measuring child outcomes.

The appendix includes a listing of all items selected from the NLSCY for the current analysis. Five items are used to measure family functioning - suggestive of constructive and supportive familial relations. Drawing from previous research (Epstien et al., 1993), the NLSCY included several items for the purpose of developing a general assessment of family functioning and an indication of the quality of the relationships among family members. In reliance upon structural equation models, five of these items are included as manifest variables – after eliminating items that loaded relatively weakly with this latent construct or demonstrated problematic distributions (e.g. high kurtosis). All other predictor variables listed in the appendix are included as single indicators, on the assumption that they are without measurement error.

Initially, child outcomes will be examined for the full sample of 4-11 year olds, followed by systematic comparisons of children depending upon whether they are living in intact, female lone parent or stepfamilies. In so doing, the current paper draws from one of the strengths of structural equation models, that is, its utility in terms of multiple

group analysis. After establishing measurement equivalence across family types, it is anticipated that important interaction effects (involving family structure) will be isolated in the study of childhood difficulties. Of particular interest is the impact of low income and family functioning by family type. The transferral of both economic and non-economic resources from parents may differ significantly across family types.

DESCRIPTIVE RESULTS

Prior to presenting the structural equation model results, Table 1 indicates whether or not there are significant mean differences on the initial scales and variables across subsamples of children in intact, female lone parent and stepfamily households. Since male lone parenting is not common for this age group of children (less than 1.5% of families with children), insufficient numbers in the initial sample leave for an exclusion of children living in this family type. Using intact families as a reference, those living in female lone parent and stepparent families appear to be relatively disadvantaged across all of the additive scales measuring child outcomes. Children living in stepfamily households exhibit greater difficulties (higher scores) relative to intact family households, although relative disadvantages are larger for children living with a lone parent. Children in female lone parent and step family households are more likely to be exhibiting signs of hyperactivity, emotional distress and anxiety, as well as signs of direct and indirect aggression.

The incidence of low income is particularly pronounced among children in female lone parent families (67%). Although this information was gathered during a period of economic recession in Canada, the relative disadvantage of children living with single

mothers has not since improved noticeably, and remains particularly pronounced among mothers with young children. Although children living in step-families also experience significantly higher levels of low income (at 23% low income relative to only 14% in intact families), in terms of the financial resources available to children, stepfamilies have more in common with intact families then with female lone parent families.

TABLE 1
Means and Standard Deviations of Child Outcomes and Explanatory Variabes, by Family Type

	Intact Families		Female Lone Parent		Step Families	
Child Outcomes	Mean	*SD*	Mean	*SD*	Mean	*SD*
Hyperactivity	4.29	*3.48*	5.52 *	*3.85*	5.37 *	*3.71*
Emotional disorder	2.38	*2.44*	3.37 *	*3.02*	2.87 *	*2.78*
Aggressive behavior	1.27	*1.75*	1.87 *	*2.34*	1.45 *	*1.84*
Indirect aggression	1.08	*1.60*	1.67 *	*2.12*	1.44 *	*1.78*
Property Offenses	0.72	*1.08*	1.24 *	*1.64*	1.07 *	*1.28*
Explanatory Variables						
Incidence of low income	0.14	*0.35*	0.67 *	*0.47*	0.23 *	*0.42*
Family functioning (additive scale)	17.10	*2.27*	16.60 *	*2.52*	16.90 *	*2.31*
No. of children	2.43	*0.82*	2.11 *	*0.92*	2.43	*0.97*
Avg. # of hrs worked	22.30	*18.19*	19.60 *	*18.89*	23.70	*18.58*
Female child	0.48	*0.50*	0.52	*0.50*	0.50	*0.50*
Less than High School	0.14	*0.35*	0.23 *	*0.42*	0.22 *	*0.41*
Under 35 years	0.37	*0.48*	0.52 *	*0.50*	0.61 *	*0.49*
N	10,559		1,981		1,467	

* indicates significant difference relative to intact families, $p < .05$

"Family functioning" is presented here as an additive scale that includes items on the quality of the relationships among family members, and the degree of constructive and supportive relations between all family members. These will be entered into a more formal measurement model of the structural equation model. Given significant average differences observed across family types, again female lone parent families are particularly disadvantaged (lower scores), with stepfamilies falling somewhere between the other two family types. In terms of number of children per family and number of hours worked (by the parent most knowledgeable), Table 1 reports non-significant mean differences between stepfamily and intact families, but the lone parent families are somewhat distinct (with fewer children and fewer hours worked in paid employment).

Age and education of the parents indicate that stepfamilies have more in common with female lone parent families than with intact families, since a higher proportion of parents are under 35 and without high school. These latter results with regard to age and education are noteworthy in light of recent research which suggests an increased bifurcation of resources made available to children, with families delineated in terms of early and late childbearing (Bianchi, 2000). For example, Martin (2000) has emphasised that delayed childbearers, who also tend to have more education, are increasingly likely to raise their children in intact marriages, while early childbearers are more likely to raise children outside of marriage. While the current study considers the education and age of the parent most knowledgeable (which is nearly always the child's mother), homogamy would suggest that fathers in non-intact families also tend to be younger and less educated. Based on data from the United States and Sweden, Goldscheider et al. (1996)

found that stepfathers tend to be quite different from men living with their biological children: they are more likely to have less education, lower incomes, and to be younger. Our analysis does not include information on the education and age of father, since this information is lacking for a sizeable proportion of children living in non-intact households.

MULTIVARIATE RESULTS

Figure 1 summarises the multivariate results from the full sample of children irrespective of family type. Maximum likelihood estimates of model coefficients are presented, with both "family functioning" and "child outcomes" measured as second order multiple indicator constructs. This analysis based on the full sample includes two further dichotomous variables for female lone parent and stepfamily settings. With the remainder of explanatory variables measured through single indicators, the overall fit of the model was good (GFI=.973; AGFI=.954; RMSEA=.047).

With standardised estimates, all factor loading with childhood difficulties and family functioning are significant and of sizeable magnitude. In terms of structural relationships, most coefficients are significant and in the expected direction. Two noteworthy exceptions include the coefficients associated with low income and the number of hours worked, neither of which are significant. Living in a female lone parent family has a particularly pronounced impact (b=.158) while living in a step family also contributes to childhood difficulties (b=.070). The only other coefficient of greater magnitude than female lone parent status is family functioning, with families reporting higher levels of support also reporting fewer childhood difficulties (b= -.230). More

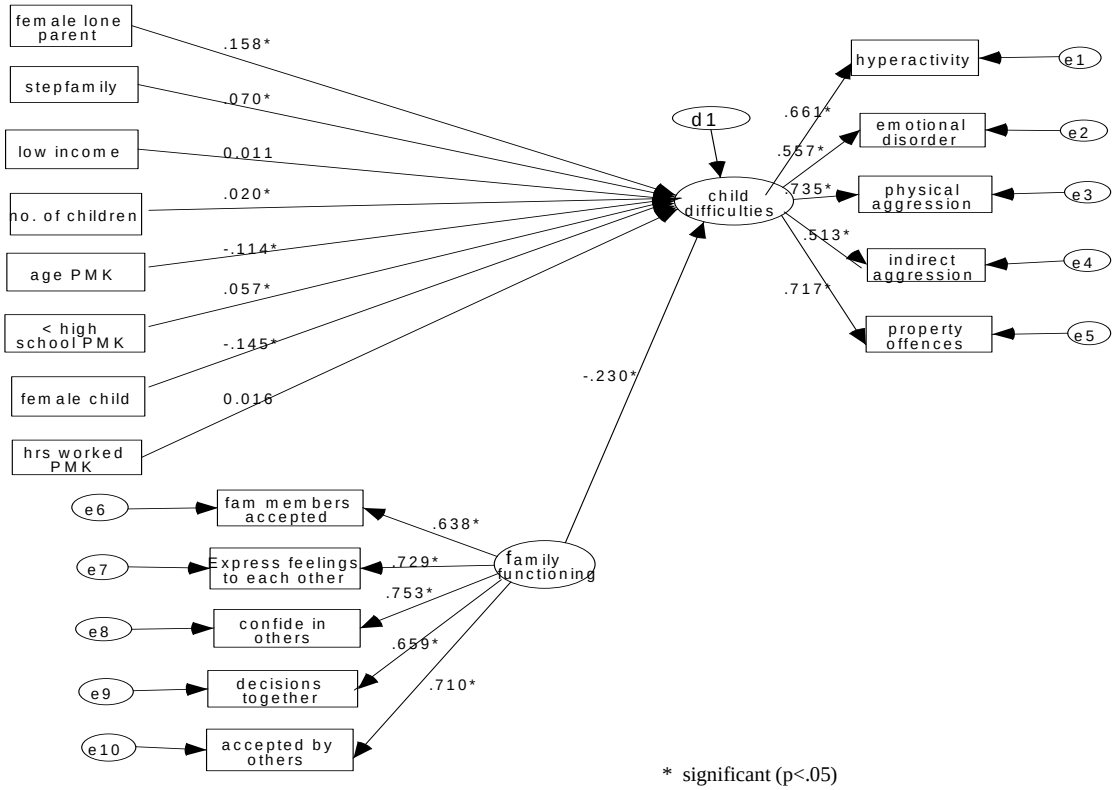

Figure 1: Maximum Likelihood Estimates (Standardized) for Full Model

children and siblings in the family suggests slightly greater difficulties (b=.020), as does "no high school degree" on the part of the parent most knowledgeable (b=.057). Female children seem to have a clear advantage (b=-.145), as has been frequently documented in the literature.

These results are quite similar to those of Dooley and his co-authors (1998). In particular, their logit analysis of the likelihood of childhood disorders produced estimated coefficients for lone-mother status that were quite robust, while the effect of low-income was relatively weak. On this basis, their research examined the possibility of an interaction effect involving both family type and low income. The question addressed in this context was whether the effect of living with a lone-mother, while controlling for current low-income status, might capture further differences in the economic resources available to children. While controlling for current economic conditions, the effect of lone parent status might at least partially reflect a situation whereby lone mothers experience longer spells of low income relative to other family types.

While longitudinal analysis is required to decisively answer this question, a significant interaction effect involving family structure and low-income status provides indirect evidence. If the effect of low-income status is greater for female lone parent families than for other family types, this is consistent with the idea that their experience with low income presents more difficulties relative to others. While research with taxation data has demonstrated that dual parent families in Canada, on average, recover and exit income poverty much more quickly than lone parent families (Laroche, 1998), Dooley et al., (1998) *did not* find evidence of such an interaction effect. The question

raised in the current context is whether the methodology used in the present analysis may be better able to locate an interaction effect.

MULTIPLE GROUP ANALYSIS

Multiple group analysis is ideally suited for the testing of interactions. Table 2 presents the results from our analysis after having established measurement equivalence across the three subsamples. Also included are relevant indexes of goodness of fit, prior to and after setting all loading on the two latent variables as equivalent across subsamples. Due to the very large sample size involved, chi square and Lagrangian multiplier tests are not appropriate when comparing nested models, with several alternate indexes developed for this purpose (Joreskog and Sorbom, 1979; Bollen, 1989; Kline, 1998). The negligible differences as reported on these indexes clearly suggest little difficulty in establishing measurement equivalence – which in turn allows us to make more meaningful comparisons by family type.

In examining the resultant unstandardized parameters, clear evidence of an interaction between family type and low income is presented. The impact of low income on childhood difficulties is significant for both female lone parent and stepfamily households, while not significant for intact families. In this context, the lack of significance as observed for the full sample (Figure 1) appears to largely reflect the situation of children in intact families. In interpreting these results, it is noteworthy that both lone mother and stepfamily households show unstandardized coefficients of roughly the same magnitude. While such an interaction is consistent with what we know of the experience of lone parent families in income poverty, further longitudinal research is

TABLE 2
Maximum Likelihood Unstandardized Coefficients, Multigroup Analysis, by Family Type

	Intact Families		Female Lone Parent		Step Families	
	coefficient	*SE*	coefficient	*SE*	coefficient	*SE*
Explanatory Variables						
Incidence of low income	0.03	*0.04*	0.23 *	*0.11*	0.24 *	*0.10*
Family functioning	-0.81 *	0.04	-0.71 *	*0.10*	-0.54 *	*0.11*
No. of children	-0.04 *	*0.02*	0.17 *	*0.05*	0.16 *	*0.04*
Avg. # of hrs worked	0.00	*0.01*	0.00	*0.00*	0.00	*0.01*
Female child	-0.37 *	*0.03*	-0.61 *	*0.08*	-0.54 *	*0.08*
PMK Less than High School	0.20 *	*0.04*	0.32 *	*0.11*	0.18	*0.10*
PMK < 35 years	0.17 *	*0.01*	0.10 *	*0.04*	0.08 *	*0.04*
* significant at the .05 level						

	With Measurement Equivalence	Without Equivalence
Goodness of Fit Index (GFI)	0.967	0.968
Adjusted Goodness of Fit (AGFI)	0.945	0.945
Root Mean Square Error of Approximation (RMSEA)	0.032	0.032

necessary, particularly in delineating the underlying dynamics in stepfamilies. This would be consistent with research demonstrative that stepfathers tend to be quite different from men living with their biological children, more likely to have less education and lower incomes (McLanahan, 2000). Further research with Canadian data would be needed to examine whether step fathers are more likely to experience a longer spell of low income relative to intact families.

The relationship between family functioning and childhood difficulties also varies somewhat across subsamples. In comparing unstandardized parameters, this association

is found to be greatest for intact families and least important for stepfamilies. This finding supports the view that stepfamilies are distinct in terms of the types of relationships, and it is consequently important to isolate family type when examining the relationship between family functioning and child outcomes (Coleman and Ganong, 1987; Hetherington and Jodl, 1994). For instance, if a child is less attached to a stepparent or if both stepchild and stepparent are comfortable with a more disengaged style of parenting, a lower level of communication might not have the same negative ramifications as in other contexts. With a wider range of possibilities of socially acceptable behaviour in stepfamilies, it is useful to observe that these include a large range of alternatives, from families where a stepparent takes full parental status to others where they have virtually no parental involvement (Gamache, 1997). In the study of family dynamics and associated factors most important to child outcomes, the distinct situation of stepfamilies relative to both intact families and lone parent families need be studied. With higher proportions of stepfamilies in the population, more refined analyses are now possible.

The impact of number of children within the family is also found to vary by family type, with larger family size associated with negative outcomes in non-intact families. In stepfamilies, a higher number of siblings implies a higher likelihood of stepsiblings – relationships that have been characterised as being less close and with a slightly higher probability of conflict (Anderson and Rice, 1993). Across all family types, additional children imply greater demands on the part of parent's time, which is known to be particularly disadvantageous for single parent families. As to the remaining variables in the model, the number of hours worked on the part of the responding parent

remain non-significant across family types; it may be that the benefits and costs of labour force involvement offset each other. With regard to gender, male children appear to be slightly more disadvantaged in female lone parent families than in either intact or stepfamily households, consistent with a long tradition of research which has suggested that the absence of a father might be particularly problematic for boys (McLanahan and Sandefur, 1996; Popenoe, 1996). Both low education and younger age are also found to contribute to negative outcomes across family types; parents with less education and experience appear to be less successful in transferring human and social capital to their children.

DISCUSSION

This study has examined conditions associated with childhood behavioural and psychological difficulties in Canadian families. The descriptive and multivariate analysis suggest that children living in both stepparent and female lone parent families are more likely to be experience difficulties. Relative to intact families, young children in non-intact families are more likely to be exhibiting signs of hyperactivity, emotional distress and anxiety, as well as signs of direct and indirect aggression. While these differences should not be exaggerated, and while the majority of children in each family type are doing relatively well, these average differences are significant and need be acknowledged as a growing proportion of Canadian children are being raised in non-intact families.

While low income has often been considered one of the most relevant explanatory variables in public debates on childhood developmental difficulties, our

study is certainly inconclusive as to its relative importance. For the full sample of Canadian children, the results from our multivariate analysis suggests that low income is of much lesser importance than other factors, such as family functioning, number of children in the family, as well as education and age of parents. On the other hand, the results from our multigroup analysis suggest that an important interaction exists between low income and family structure in shaping child outcomes. In both female lone parent and stepfamily households, low income is found to have a significant impact on the child psychosocial morbidity, whereas this was not found to be the case with intact families. The interpretation of this finding is far from obvious, but it points to the importance of longitudinal research on the dynamics of low-income, given the tendency for non-intact families to experience longer "durations" of low income. These results are consistent with what is known about how female lone parent families experience poverty, in particular, their greater difficulties in exiting low income.

The lack of information on family history in terms of low income highlights a more general limitation of the current study. As this cross-sectional analysis does not consider the dynamics of family income, it also does not consider the pre-existing conditions or breakdown in family functioning that so often lead to divorce, separation, and lone parenthood in the first place. Studies that do not take into account the pre-existing difficulties of children and their families have a tendency to overstate the effect of growing up in a single-parent family. After establishing an association between lone parenthood or living in a stepfamily and childhood difficulties, what exactly are the causal factors at play? Not to overstate the importance of family structure, it is appreciated that many of the difficulties observed with children in non-intact families

may reflect their experiences in the two-parent family in which those children once lived, rather than problems in their current living arrangements. The strong association that the current study observes between family structure and childhood difficulties remains valid in a descriptive sense, while further longitudinal research is necessary to understand both the determinants and consequences of family change.

APPENDIX INVENTORY OF VARIABLES

1. Child Outcomes:

Based on both the Montreal Longitudinal Study (Tremblay et al., 1992) and the Ontario Child Health Survey (Boyle et al., 1987), a series of scales were developed in the measurement of child outcomes, including:

- Hyperactivity: This consists of an 8 item scale tapping the parent's reporting of hyperactivity in their children, including items that measure inattention, impulsivity, and symptomatic motor activity (Cronbach's alpha=.838).
- Emotional Disorder: an 8 item scale measuring the parent's reporting of feelings of anxiety or depression among their children (Cronbach's alpha =.794).
- Indirect Aggression: a five item scale tapping the non-physical and verbal aggression of children toward their peers (Cronbach's alpha =.781).
- Physical Aggression: a 6 item scale, tapping reported physical aggression of children toward their peers (Cronbach's alpha =.770).
- Property Offence: a 6 item scale, measuring vandalism and theft among children (Cronbach's alpha =.637).

2. Child and Family Background Variables

i) Low Income:

A conventional measure of family economic well being, which classifies families according to whether or not they fall below Statistics Canada Low Income Cut-offs (1992 base – before tax). This measure is adjusted according to size of family and size of community in which the family lives. Based on the 1992 Survey of Consumer Finances, and adjusted for inflation, this is the most widely quoted measure of low income in Canada.

ii) Family Structure:

Children are classified according to whether then live in a (i) lone parent family (one parent without a spouse or common law partner), (ii) an intact family (married or common-law couple where all children are the natural and/or adopted offspring of both members of the couple), or (iii) a step-family (married or common-law couple residing in the same household, with at least one child living with them who is the biological or adopted child of one parent but not the other parent). Children who are biologically related to both parents are also said to belong to a stepfamily, if at least one of these parents has a stepchild residing in the household.

iii) Number of Children:

Number of additional children (under 18 years) in the household (including siblings of step families)

iv) Age of parent most knowledgeable

v) Sex of child

vi) Education of parent most knowledgeable

vii) Work activity of parent most knowledgeable – hours worked

viii) Family Functioning scale:

Several items developed by researchers at the Chedoke-McMaster Hospital of McMaster University were used for the current study (Epstein,1993). The items selected from the McMaster family functioning scale include those that loaded to the highest degree on the latent construct of interest, while eliminating those items that had problematic distributions, ex. high kurtosis. The scale is aimed at providing a general assessment of family functioning and an indication of the quality of the relationships among family members. The unit of analysis for the scale is the family, and uses a Likert scale with the following items: (i) Individuals in the family are accepted for who they are, (ii) We are able to make decisions in order to solve problems, (iii) We confide in each other, (iv) We express feelings to each other, and (v) We feel accepted for who we are.

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