Outcomes for Children in Canada, Norway, and the US:

A Microdata Comparison

By

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I. Introduction

The goal of this paper is to compare levels and determinants of child economic wellbeing in Canada with the equivalent for children in Norway and the US. Two principal questions are addressed: Are Canadian children better or worse off than their counterparts in these other affluent countries? Are the same risk factors evident? The existing literature (see, for example, Rainwater and Smeeding, 1995) has clearly established the fact that rates of child poverty are much higher in Canada and particularly in the US than in most other industrialized countries. Are other outcomes for children also worse in Canada and the US than elsewhere? This paper presents a microdata-based examination of differences in outcomes for children such as physical health, happiness, and social adjustment.

While the focus of this paper is not on policy, it is important to note at the beginning that there are important differences in the policies available for children in Canada and the US (e.g., universal health care is available in Canada but not in the US; paid maternity leaves are available in Canada but not the US; child benefits are paid to all middle to lower-income families in Canada but such a benefit does not exist in the US). There are even larger policy differences between Canada and Norway (e.g., all Norwegian children receive extremely generous family allowances, by Canadian standards, maternity/parental leaves are very extensive and well-paid, very generous programmes are available to assist single mothers).¹ The differences in policy setting add to the interest of the microdata comparisons. While no conclusions can be drawn about the link between policy and outcomes for children based on the work presented here, it is interesting to note whether better outcomes for children are observed in countries with more

¹ See Phipps, 1998b which discusses these programme differences in detail.

generous programmes; whether, for example, lone-parenthood constitutes the same risk in a country with very generous/supportive programmes for lone-mother families as in countries with much less extensive programmes.

Canadian estimates are based on the National Longitudinal Survey of Children and Youth (NLSCY). The Statistics Norway Health Survey and the National Survey of Children for the US are reasonably comparable microdata sets obtained to conduct cross-national comparisons.

The remainder of the paper is divided into 4 sections. Section 2 provides more detail on the data used. Section 3 discusses differences in levels of child outcomes across the 3 countries studied. Section 4 presents econometric models of the determinants of various child outcomes. Section 5 concludes.

II. Data

In locating data sets for the non-Canadian countries, a key condition was that the surveys contain reasonably similar information to that available in the NLSCY. For the US, this was not a problem, since content is extremely similar. The content of the Norwegian survey is more limited in focus to health-related issues, since the child-related questions which we use were a subset of the 1995 Statistics Norway Health Survey. Unlike the Canadian and US studies, there were no questions about problem behaviours, for example.

One difference across the surveys is whether or not the population of children in the country was the primary focus of the study. In Canada, children aged 0 to 11 years were the principal focus. The main component of the survey consists of children living in households who had recently been part of the Labour Force Survey (thus households living in the North, on Indian

Reserves or in institutions are excluded). On the other hand, for the US, the parents were the original focus of the survey, with the questions about the respondent's children added at a later stage. The child data we use for the US are based on questions asked of the original NLSY respondents about their children. The survey was not designed to obtain a nationally representative sample of children, as was true for the Canadian data. Fortunately for the sake of making the international comparisons proposed for this paper, the key limitation of the survey is that given the current ages of the parents, the child sample is most representative of *younger* children (mothers in the US would be between the ages of 30 and 38 in 1995). Estimates for the US are considered fully representative of the national population of children for younger children, but not for teens or young adults. Since the first wave of the Canadian NLSCY only contains information about children aged 0 to 11 years, and thus we only compare outcomes for children in this age range, the relative youthfulness of the US parents is not a serious problem for this analysis. Moreover, while the range of parental age is greater for Canada and Norway than for the US, mean age of mother is nearly identical. We choose to focus on the full samples for Canada and Norway since this gives the best information about child outcomes in these countries.²

In the case of the Norwegian data, the survey was again designed with the population of principal interest being adults who, if they had children, were asked a limited set of questions about the health and happiness of their children. In this case, there was no restriction on the age of the adult respondent, though, of course, for comparability we restrict our attention to 0 to 11

² Also, we have performed sensitivity tests involving restricting the Canadian sample to match the US sample. Results of these experiments are still being typed, but will be reported in later versions of the paper.

year old children.

In the Canadian survey, the person answering the questions is the `person most knowledgable about the child' (PMK) -- the mother in 97.7 percent of cases for the Child Questionnaire. For the US survey, only female respondents with children were asked about their children. Thus, the child sample consists of all children born to NLSY female respondents who were living in their mother's household at the survey date (several surveys have been carried out -- we use the 1995 survey). In Norway, the respondent to the health survey would answer the child-related questions, regardless of the sex of the respondent.

For each data set, a small number of individuals did not answer particular questions about children's well-being. These observations are excluded as appropriate for the reporting of levels of child outcomes. For the econometric work, we also exclude cases of non-response to explanatory variables. Sample size is much the largest for Canadian children, with 18,387 observations for children aged 0 to 11. In contrast, we have only 3675 observations for the US and 1201 observations for Norway. And, in fact, we most often analyse even fewer observations since many questions were only relevant for sub-sets of the population (e.g., the 4 to 11 year-old group -- `cries a lot' means something quite different for an 8 year-old than for a newborn.)

III Comparison of Levels of Child Well-being

The goal of this paper is to compare levels and determinants of children's economic wellbeing across three affluent countries. As pointed out in the introduction, we already know more children are poor in Canada and especially the US than in Norway. For example, Phipps, 1998b reports, using microdata from the Luxembourg Income Study, that 18 percent of children living with two parents are poor in the US versus 5 percent in Norway. Canada is on `middle ground' with 13 percent poor. Rates of poverty for children living with lone mothers is much higher everywhere, but particularly in Canada (43 percent poor) and the US (60 percent poor). This contrasts with the Norwegian experience where 16 percent of children living with lone mothers are poor.³

But, when defining economic well-being, we do not need to restrict our attention to the <u>income</u> available to children. In fact, as a growing literature on the distribution of well-being within families points out, `family income' is probably not the best measure of the well-being of individual family members. Since children have so little direct access to income of their own, they may not always share equally in the benefits associated with family income (e.g., see Phipps and Burton, 1994). An approach to understanding economic well-being advocated by Sen (1993) seems better-suited for studying the well-being of children, since it focuses on the direct personal experiences of children.⁴ Sen suggests that we think about economic well-being as a set of `functionings' or `beings and doings.' Examples of basic `functionings' are: `being adequately nourished'; `being in good health'; `avoiding escapable morbidity/premature mortality.' Examples of more complex `functionings' are: `having self-respect'; `being happy'; `taking part in the life of the community' (Sen, 1993). I find this an extremely reasonable approach to understanding the well-being of children, and use it to motivate the choice of variables in the remainder of this section. Unfortunately, data comparability/availability issues have severely

³ A child is designated as poor if he or she lives in a household with income less than 50 percent of median equivalent after-tax income. OECD equivalence scales are employed.

⁴ See Phipps, 1998a for a more complete conceptual discussion of how we might think about the economic well-being of children.

constrained the functionings which we can examine, so what follows is very far from ideal or complete.

The first `functioning' examined seems a very basic one -- `being happy.' In the context of measuring the well-being of children, it would be difficult to ask infants or very young children to answer this question themselves, but it is possible to ask parents to make this assessment about their children. Table 1 summarizes parental reports of children's `general happiness' levels for 4 to 11 year-old children. Fortunately, it is clear that nearly all parents regard their children as generally happy. Of course, it is also true that few parents would want to admit that their child `was so unhappy that life is not worthwhile,' (a category of responses provided by the Canadian questionnaire). Parents will clearly not be entirely objective assessors. However, it is similarly true with adult self-assessments of general happiness that very few people do not claim to be happy (94.4 percent of adult respondents to the Statistics Canada 1990 General Social Survey claim to be somewhat or very happy).

Unfortunately, it is not straightforward to compare answers to a question of this type across countries. Language/translation issues aside, the questions are not asked in quite the same way, nor are the allowable categories of response quite the same. First, Norway asks about how much of the time the child is happy. The US asks about how much of the time the child is unhappy. Canada includes the happiness and unhappiness words in the answer categories. Canada allows 5 categories, Norway allows 4 while the US allows only 3 categories of response. If we calculate the percentage of the time that *no unhappiness* is mentioned for each country, it appears that children are better-off in Canada and Norway (98.8 percent of Canadian children are reported to be happy or somewhat happy; 97.5 percent of Norwegian children). On the other

hand, only 80 percent of children in the US are `not unhappy' at all. Given that the country which phrases the question in the negative reports more unhappiness, there could be an association between the way the question is asked and the answers which are given. On the other hand, the US is not particularly generous in programmes for children⁵, so it is possible these numbers reflect a true difference in well-being.

As well as happiness, 'health' seems a key functioning to study. We consider 3 dimensions of physical health. First, we present information about height and weight. In the development economics literature, weight for height/height for weight are often used as basic indicators of `being adequately nourished.' We might not expect much variation in such measures for affluent developed countries such as the ones studied here, and Table 2 indicates an amazing correspondence in height by age across the countries. However, Table 3 reveals an interesting pattern: while the US starts off with more low birth-weight babies, by age 8 or 9, children in the US are much heavier than their counterparts elsewhere. In the context of very poor countries, more is taken to be better. But, for affluent countries, it isn't clear that this is appropriate. Being heavier may be an indication of obesity in the US, presumably a negative outcome for US children.

Table 4 reports on `general health indicators' -- that is, parent's subjective assessments of their child's health, over-all.⁶ For example, Canadian parents were asked `In general, would you say (your child's) health is: Excellent, Very good, Good, Fair, Poor? Norwegian parents were

⁵ See Phipps, 1998b.

⁶ We exclude the US in this case, since the subjective health question was only asked of 10 and 11 year-old children, resulting in a very small sample size.

asked "how would you describe his/her general health? Would you say it is: Very good, Good, Neither good nor bad, Poor, Very Poor. Each country phrased this question in a slightly different way (to say nothing of the fact that the questions and responses for Norway have been translated into English). This again illustrates a basic problem with comparative research of this type. While the questions seems very similar, it is not always entirely obvious how we compare responses. Does a `good' mean the same thing, for example, in Canada and Norway, for example, when Canada has two categories which would be deemed `better' than `good' while Norway has only one? Taking this approach, 98.3 percent of Canadian children aged 4 to 11 have health which is labelled by their parents as `good or better' while 97.2 percent of Norwegian children have health status which is `good or better.' On the other hand, since both countries use five categories, perhaps we should we just compare the top categories, regardless of label? In this case, 58.9 percent of Canadian children are placed in the `best' health category; 72.3 percent of Norwegian children are in the `best' category.

As a general conclusion about all children aged 4 to 11 living in Canada or Norway, it is clear that parents find their children to be basically healthy. In comparing the two countries, we can say that the health of Norwegian children over-all is at least as good as that of Canadian children, perhaps significantly better, depending upon how we wish to interpret the information.

Tables 5 focuses on the incidence of injuries for all children (0 to 11 years) in Canada, Norway and the US. In the past twelve months, 10.6 percent of children in the US have experienced an accident (requiring medical attention); 10.2 percent of Canadian children have been injured; 7.9 percent of Norwegian children have had an accident/injury requiring medical attention. Of those experiencing an injury, the modal frequency was one in all countries. However, children in Canada and the US are more likely to experience two or more accidents (15.2 percent of children in Canada; 11.8 percent in the US⁷) than in Norway (8.1 percent). Thus, Norwegian children are both less likely to have any accidents and to have fewer accidents.

Tables 6 through 11 focus on selected problem behaviours which may signal lower levels of emotional well-being for children. These include both `acting out' and `withdrawing' sorts of behaviours: being destructive of property; being cruel or a bully; being restless or overly active; crying a lot; being anxious or frightened; worrying. In each case, attention is restricted to children aged 4 to 11, for whom these behaviours seem more relevant (most newborns `cry a lot'). With the exception of fear/anxiety, this information is only available for children living in Canada or the US. We choose to study individual behaviours rather than aggregating to some index of problem behaviours in order that we can point out subtle differences across the countries in how questions were asked which might otherwise become buried. In the econometric work, it turns out that this has the advantage of teasing out some subtle differences in the effects of control variables on particular child outcomes.

Table 6 compares destructive behaviour in Canada and the US. It is important to note, though, that Canadian parents were asked two separate questions about whether their children ever destroy their own property and whether they ever destroy anyone else's property. US parents were asked one question about whether their children ever destroy either their own or anyone else's property. For the purposes of comparison, we have created a new variable for

⁷ Since the question for the US stipulates that the accident required `medical attention,' this might cause a bias in cross-country reporting. To the extent that some lower-income families would not have adequate health coverage in the US, it is possible that only the most serious accidents receive medical attention. In Canada and Norway, parents might be more likely to have things looked at `just to be safe.'

Canada equalling one if any destruction was mentioned and equalling 0 otherwise. We have similarly aggregated the `sometimes' and `frequently' categories for the US. Results reported in Table 6 suggest that Canadian children are more likely to engage in destructive behaviour (22.7 percent) than are their counterparts in the US (12.8 percent). No indication of what should constitute destructive behaviour was given in either survey.

Children (aged 4 to 11) in the US are much more like to be cruel or to bully others than are children in Canada (see Table 7). Over one quarter of children in the US engage in such behaviour while only about 10 percent of children in Canada do.

Children in Canada are more likely to be restless/overly active than those in the US (see Table 8). Only 42.2 percent of Canadian children are `never' restless/overly active; 58.7 percent of children in the US are `never' restless/overly active.

Children aged 4 to 11 in Canada are more likely to `cry a lot' than children in the US (39.5 percent versus 22.7 percent in the US (see Table 9). Again, though, slight differences in wording may or may not be important here. The Canadian survey asks how often the child `cries a lot' while the US survey asks how often he or she `cries too much.'

We find that Norwegian children are much less likely to be anxious/frightened than are children in the other countries under study (see Table 10). For 4 to 11 year old children, 35.9 percent of Canadian children are sometimes or often anxious/frightened; 31.8 percent of US children are sometime/often anxious frightened; but only 11.3 percent of Norwegian children are anxious frightened.

Finally, children in Canada are more likely to worry than are children in the US. Again, this result could be connected to the slight difference in wording of the question. Canadian

parents are asked how often their child worries while US parents are asked if their child `worries too much.'

In thinking about these results, a general point to make is that parental responses will be mediated by social norms. On the one hand, if, for example, all children in the US `cry a lot,' then a parent might not feel that his/her child is out of the ordinary. On the other hand, if, for example, there is a more `macho' norm for children in the US, then parents may not wish to admit that their child `cries a lot,' especially if the child is male. Similarly, parents asked about whether their child `destroys property' will respond relative to what they know -- given the standards of their community. This point means that international comparisons of subjective responses will always be at least somewhat problematic.

To sum up, children in the US may be less happy than those in Canada or Norway, and Norwegian children may have better general health than Canadian children, though these questions are not particularly easy to compare across countries. Older children are significantly heavier in the US than in Canada or Norway which may indicate a problem of obesity. Children in Norway experience fewer injuries than those in Canada or the US. In terms of `emotional well-being,' only the experience of `fear/anxiety' is available for all three countries, and in this case it is clear that children in Norway fare better than those in either North American country. With respect to other behaviours which may indicate poor emotional health, it seems that Canadian children in general fare worse than those in the US. Children in Canada or more likely to be destructive, to be restless/overly active, to cry a lot and to worry. Children in the US are more likely to be bullies.

IV. Determinants of Child Outcomes -- An Econometric Investigation

In addition to comparing differences in outcome levels, we want to compare determinants of these outcomes across countries. Of particular interest is the effect of family structure (i.e., does the child live in a lone-parent household or with two parents), since results available in single-country studies of Canada and the US indicate that these factors are important determinants of child well-being (see, for example, Dooley, et.al., 1998 for Canada and McLanahan and Sandefur, 1994 for the US).⁸

To study the determinants of child outcomes, a series of probit models were estimated (with one OLS regression for weight/height). Given the limitation that the 3 data sets do not contain identical information, an attempt was made to make both dependent and independent variables as comparable as possible. For the dependent variables, number of response categories often differed across countries, so we aggregated to two categories for each outcome except weight/height. For example, in the case of `happiness,' as previously discussed, 5 categories were available for Canada, 4 for Norway and 3 for the United States. For each country, we created one category in which `no unhappiness' was mentioned, and another category in which `any unhappiness' was mentioned (see Table 13). (Details of each aggregation are provided at the top of each table presenting regression results.)

There are, of course, also many differences across the data sets in the availability/phrasing of questions for explanatory variables. For the purpose of 3-way comparability, this forced us to a `lowest common denominator' strategy. Nonetheless, the specification employed for these

⁸ This draft of the paper is missing a discussion of the literature -- both theoretical and empirical.

regressions essentially follows the excellent work of Dooley, et.al., 1998 using the Canadian data and seems reasonable by comparison with the literature. Thus, in addition to a dummy variable indicating that the child is currently living with a lone mother, we include variables to indicate the gender and age of child, the number of siblings he or she has, the age of the mother at the time of the child's birth and household equivalent income and poverty status.⁹ The major limitation of this specification is that we have no indication of mother's level of education for Norway, and so cannot include this variable in any of the comparisons which include Norway (though we can include education for the Canada/US comparisons). However, we can include for all countries an indication of whether or not the mother smokes daily, occasionally, or never. Since this variable is highly correlated with education in Canada and the US, we hope the same is true for Norway and include it as a rather weak proxy for an important missing variable.

Table 12 reports means and frequencies for explanatory variables for the 4 to 11 year old sample most commonly used for the econometric work. While basic patterns are quite similar across the countries, it is worth pointing out a few significant differences. First, mothers are more likely to smoke daily in Norway (32 percent) than in Canada or the US (25 percent). Second, children are most likely to live in single-parent families in the US (23.5 percent); least likely to live with single parents in Canada (14.8 percent). Children are most likely to be poor in the US (21 percent) and least likely to be poor in Norway (7.4 percent). Only children are somewhat more common in Canada and Norway (about 20 percent) than in the US (15.7

⁹ A child is designated as poor if she or she lives in a household with less than 50 percent of median equivalent income for the full sample. The equivalence scale employed is the OECD scale. We include both a dummy variable to indicate poverty status and household equivalent income to allow for the possible non-linear effects of income on child well-being.

percent).

Table 13 reports estimated coefficients for probit models of the determinants of children's happiness in Canada, Norway and the US (for children aged 4 to 11). The dependent variable takes a value of `1' if `no unhappiness' is mentioned; a value of `0' otherwise. Results for Canada and the US are very similar. Children are reported to be less happy if they live with a single mother (with the magnitude of this effect strikingly similar across the countries). Happiness increases with household equivalent income, though it is not affected by poverty status. In both countries, children's reported happiness is lower if the mother smokes daily, or if she was less than 25 years of age at the time of the child's birth. The only differences between the two countries are that female children are reported to be significantly happier than male children in Canada (with no significant difference for the US) and children with siblings are significantly less happy.

Results for Norway look rather different. Living with a single mother does not have any significant impact on the probability of happiness. In fact, almost nothing is statistically significant. Exceptions are that children are happier if they have siblings, but <u>less</u> happy as household equivalent income increases. (Both results directly contradict the basic predictions of Becker and Tomes, for example, that children should be better off with higher family income and worse off with extra siblings, though of course this prediction is about income as an adult rather than happiness as a child.)

Table 14 reports ordinary least squares estimates of the determinants of children's weight/height (in this case we add extra controls for age of child and extra dummy variables indicating the child's age range). Children living with single mothers are significantly heavier

for their height in both Canada and Norway, but not in the US. Weight/height falls with household equivalent income in Canada, but in neither of the other countries. Poverty status is again insignificant in all cases. Female children are less heavy than male children in Canada and Norway (and the magnitude of this effect is nearly identical); there is no significant effect in the US (a surprising result which may suggest a weight problem among female children in the US?). Children are also heavier for their height in Canada and the US if their mother smokes daily.

As indicated in Table 15, to compare the determinants of subjective health, we chose to isolate the top category, regardless of label and combine all categories with less than the `best' health. (Recall that the general health question was not asked for all children in the US, hence this comparison is just for Canada and Norway.) Children living with single parents are reported to have <u>better</u> health in Norway; there is no statistically significant effect for Canadian children. In both countries, general health is reported to improve as household equivalent income increases. Otherwise, results are rather different. Health is also worse in Canada for children who currently live in poverty (this effect is not present for Norway). In Canada, children with mothers who smoke daily have worse health; female children have better health. In Norway, children with younger mothers have better health; older children have worse health.

Table 16 reports probit estimates of the factors influencing the probability of a child experiencing physical injury. In both Canada and the US, children living with single mothers are more likely to be injured; this is not true in Norway. In Norway, children are less likely to experience injury if household equivalent income is higher; this variable is not statistically significant for the other countries. In Canada, poor children are <u>less</u> likely to experience injury. Female children are less likely to be injured in Canada and the US; more likely to be injured in Norway. Children whose mother's smoke daily are more likely to be injured in Canada and the US; no statistically significant effect is observed for Norway.

Tables 17 through 22 focus on the characteristics associated with higher probabilities of observing `problem' behaviours. Table 17 involves a two-way comparison between Canada and the US and focuses on the probability of the child engaging in any `destructive behaviour.' In both countries, destructive behaviour is more likely for children living with lone mothers, with the size of the effect somewhat larger in Canada. Higher household equivalent income reduces the probability of destructive behaviour in both countries; poverty status increases it for the US but not for Canada. Children with mothers who smoke daily are more likely to be destructive in both countries; in Canada, mothers with lower levels of education are also more likely to be destructive. Female children are less likely to engage in destructive behaviour than male children, with the size of the effect nearly identical across countries. Older children (aged 8 to 11) are less likely to be destructive. This makes sense, since given the age of the children under study, it seems likely that we are talking about breaking toys and dropping dishes rather than engaging in vandalism.

Table 18 focuses on the probability of `bullying or being cruel.' Again, in both Canada and the US, children are more likely to engage in this behaviour if they currently live in a lonemother household. They are less likely to do so if they have higher household equivalent income; more likely to do so if they are poor in Canada but not in the US. Children with mothers who smoke daily are more likely to be cruel or to bully; Canadian children whose mothers have low education are more likely to do so. Children with younger mothers are more likely to be bullies as are children with siblings (presumably this provides a perfect opportunity for bullying behaviour). Female children are less likely to bully in the US; there is no significant gender difference in Canada.

Table 19 indicates that in both Canada and the US, children are more likely to be reported `restless/overly active' if they live with single mothers. They are less likely to be restless if household equivalent income is higher; poverty status is not statistically significant in either country. Smoking daily is once again associated with greater incidence of this problem behaviour. Female children are less likely to be reported `overly active' than male. Interestingly, children with more siblings are <u>less</u> likely to be overly active. Perhaps this is because they have someone else to romp and `burn off steam' with; perhaps this indicates that parents with other children have lower standards in terms of what `overly active' behaviour actually means. In any case, it is a contradiction to the usual notion that since having siblings necessarily divides parental resources in terms of both time and money that this is bad for children's outcomes (see, for example, Becker and Tomes; Leibowitz, 1974).

Table 20 focuses on the determinants of `crying a lot.' Once again, living with a single parent increases the reported probability of this behaviour in both Canada and the US. Higher household income reduces the probability of crying; poverty status <u>reduces</u> the probability of crying in the US (an unexpected result). Children with mothers who smoke daily are more likely to be reported as `crying a lot' as are mothers with lower education. Female children are significantly more likely to engage in this behaviour than male children in both countries.

Table 21 involves a 3-way comparison since `anxiety/fright' is the one behavioural outcome we have available for Norway. This means that we are unable to directly control for

mother's level of education.¹⁰ In this case, the effect of single-parent status is different in each country. In Canada, children living with single mothers are more likely to be anxious. In the US, there is no statistically significant effect. In Norway, children living with single mothers are significantly less likely to be reported anxious. This is a surprising finding, since one would expect the experience of parental divorce/separation to be anxiety-inducing even if social programmes eliminate the associated financial worries. Smoking daily is not, in this case, statistically significant for any of the countries. Female children are more likely to be reported anxious/fearful than male children in the US, but there are no gender differences elsewhere. Finally, an interesting pattern for Canada and the US is that children with siblings are less likely to be reported anxious/fearful. Again, this is a potential indication of the complicated role played by siblings in the lives of young children. On the one hand, they take away precious time and money, on the other hand, they can serve as emotional supports for one another.

Finally, Table 22 reports on the determinants of children's worrying. For Canada, children living with a single mother are more likely to worry. There is no statistically significant effect observed for the US. Household income level and/or poverty status are not significant, nor is having a mother who smokes daily (though these variables have, in general, played an important role). Children with younger mothers are more likely to worry in both Canada and the US; children whose mothers have low education are more likely to worry in Canada. Female children are more likely to worry in Canada. In the US, additional siblings reduce the probability of worrying; in Canada, the results are mixed.

¹⁰ We also ran the US and Canadian equations including the education variables, for comparison with the other equations discusses thus far. There are no substantive differences, though low education is a statistically significant predictor of anxiety for Canada.

V. Conclusions

We already know that child poverty is lower in Norway than in Canada or especially the US (e.g., see Phipps, 1998b). This paper attempts to compare other outcomes for children across Canada, Norway and the US. While many limitations have been noted throughout, it nonetheless appears that other outcomes may also be better for children in Norway (e.g., incidence of injury, experience of fear/anxiety). On the other hand, In terms of Canada/US comparisons, while rates of poverty are lower for Canadian children, it is not obvious that other outcomes are better, particularly in terms of what might be labelled `problem behaviours' (e.g., destructive behaviour, restless/overly active behaviour, worrying, crying).

The paper also begins econometric work to compare determinants of child outcomes across countries. Some basic patterns are evident: 1) income plays a central role; 2) children with mothers who smoke daily are often worse off; 3) children with mothers who have relatively low levels of educations are often worse off; 4) the role of siblings is complicated, but not always negative.

Given the very different programmes available for single-parent families across the countries studied, a very interesting question is the effect of family structure on child outcomes in the different countries. To summarize the effects of the `lone mother' variable, we present Table 23. In Canada, children currently living with a single parent have consistently worse outcomes than other children. For 9 of the 10 outcomes studied (health being the one exception where single-parent status is not statistically significant), children living with single mothers fare worse. In the US, this general pattern is consistent, though there are 3 cases of statistical insignificance

(3 - weight/height, anxiety and worrying). Thus, children living with lone mothers in the US have worse outcomes than other children in 6 of 9 cases. While we were not able to study as many outcomes for Norway, those results which we have are definitely more mixed. Living with a lone mother is detrimental to child outcomes in only one case (weight for height). Lone-mother status is insignificant for 2 of the 5 outcomes studied (happiness and injury). Living with a lone mother actually appears to be <u>beneficial</u> in terms of health and anxiety levels.

I am not yet certain how to interpret the relative lack of negative consequences associated with lone-mother status observed in Norway. On the one hand, it is what we should expect if we think that extremely supportive policies for single-parent families can really make a difference. As pointed out in the introduction, Norway does provide much more generous programmes for single mothers than either Canada or the US, both financially and in terms of things such as, for example, paid sick days for children who are ill. On the other hand, these findings are not consistent with the US and Canadian literature. A second point is that I am not as familiar with the Norwegian data (which has a relatively small sample size). While we have checked and rechecked our numbers, more work is certainly needed to explore what might be an extremely strong policy conclusion.

Table 1 General Happiness Indicators					
	Actual Question Asked	Possible Responses	Response Frequency (percent)		
Canada 1994 - 95	Would you describe (your child) as being usually: Note: Ages 4 to 11 inclusive.	 Happy and interested in life? Somewhat happy? Somewhat unhappy? Unhappy with little interest in life? So unhappy that life is not worthwhile? 	89.8 9.0 1.1 0.1 0.0		
Norway 1995	How much of the time during the past 14 days has s/he been happy and satisfied? Note: Ages 4 to 11 inclusive.	 All the time. Most of the time/a large part of the time. Some of the time/a little of the time. None of the time. 	46.8 50.7 2.3 0.2		
United States 1994	He/she is unhappy, sad or depressed? Note: Ages 4 to 14 inclusive (ages 4 to 11 only for this study).	 Not true. Sometimes true. Often true. 	81.3 17.7 1.0		
Source:					

Table 2Average Height in Feet by Age												
						A	ge					
	0	1	2	3	4	5	6	7	8	9	10	11
Canada 1994 - 95	2.1	2.5	2.9	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8
Norway 1995	-	2.6	3.0	3.3	3.5	3.7	3.9	4.1	4.4	4.5	4.7	4.9
United States 1994	2.0	2.6	2.9	3.2	3.5	3.7	3.9	4.1	4.3	4.5	4.7	4.9
Note: - indicates no data available. Source:												

Table 3 Average Weight in Pounds by Age												
						A	ge					
	0	1	2	3	4	5	6	7	8	9	10	11
Canada 1994 - 95	17.4	26.3	31.5	35.5	39.8	43.8	49.6	56.7	63.6	71.8	81.0	90.0
Norway 1995	-	24.7	30.4	35.4	39.2	44.5	49.9	56.4	63.3	68.3	76.6	89.8
United States 1994	16.3	25.3	29.2	32.5	37.8	42.7	49.1	55.2	65.1	73.6	83.6	97.7
Note: - indicates no data available. Source:												

Table 4 General Health Indicators				
	Actual Question Asked	Possible Responses	Response Frequency (percent)	
Canada 1994 - 95	In general, would you say (your child's) health is: Note: Ages 4 to 11 inclusive.	 Excellent? Very good? Good? Fair? Poor? 	58.9 28.7 10.7 1.5 0.3	
Norway 1995	How would you describe his/her general health? Would you say it is: Note: Ages 4 to 11 inclusive.	 Very good. Good. Neither good nor bad. Poor. Very poor. 	72.3 24.9 2.3 0.6 0.0	
Source:				

Table 5 Accident/Injuries Indicators					
	Actual Question Asked	Possible Responses	Response Frequency (percent)		
Canada 1994 - 95	Was the child injured in the past 12 months? Note: Ages 0 to 11 inclusive.	1. No. 2. Yes.	89.8 10.2		
Norway 1995	(Has your child had medical attention) due to treatment for an injury or accident that occurred during the past 12 months? Note: Ages 0 to 11 inclusive.	1. No. 2. Yes.	92.1 7.9		
United States 1994	During the past 12 months, has your child had any accidents or injuries that required medical attention? Note: Ages 0 to 11 inclusive.	1. No. 2. Yes.	89.4 10.6		
Source:					

	Table 6 Destroys Own and/or Other's Things Indicators				
	Actual Question Asked	Possible Responses	Response Frequency (percent)		
Canada 1994 - 95	How often would you say that your child destroys his/her own things? Note: Ages 4 to 11 inclusive.	 Never or not true. Sometimes or somewhat true. Often or very true. 	81.0 16.7 2.3		
	How often would you say that your child destroys things belonging to his/her family, or other children? Note: Ages 4 to 11 inclusive.	 Never or not true. Sometimes or somewhat true. Often or very true. 	88.8 10.5 1.0		
	How often would you say that your child destroys things of his/her own or things belonging to others?* Note: Ages 4 to 11 inclusive.	 Never or not true Sometimes or somewhat true/often or very true 	77.3 22.7		
United States 1994	He/She breaks things on purpose or deliberately destroys his/her own or another's things? Note: Ages 4 to 14 inclusive (ages 4 to 11 only for this study).	 Not true. Sometimes true. Often true. 	87.2 11.7 1.2		

Source:

Note: *Response was created by combining above two questions. Thus, children were entered into the "never or not true" category only if they fell into this category on both of the above questions, they otherwise fell into the "sometimes or somewhat true/often or very true" category.

Table 7 Cruel/Bullies Indicators					
	Actual Question Asked	Possible Responses	Response Frequency (percent)		
Canada 1994 - 95	How often would you say that your child is cruel, bullies or is mean to others? Note: Ages 4 to 11 inclusive.	 Never or not true. Sometimes or somewhat true. Often or very true. 	89.0 10.4 0.7		
United States 1994	He/She bullies or is cruel to others? Note: Ages 4 to 14 inclusive (ages 4 to 11 only for this study).	 Not true. Sometimes true. Often true. 	73.6 24.7 1.7		
Source:					

	Table 8 Restless/Overly Active Indicators					
	Actual Question Asked	Possible Responses	Response Frequency (percent)			
Canada 1994 - 95	How often would you say that your child can't sit still, is restless, or hyperactive? Note: Ages 4 to 11 inclusive.	 Never or not true. Sometimes or somewhat true. Often or very true. 	42.2 38.2 19.6			
United States 1994	He/She is restless or overly active, cannot sit still? Note: Ages 4 to 14 inclusive (ages 4 to 11 only for this study).	 Not true. Sometimes true. Often true. 	58.7 33.1 8.3			
Source:						

Table 9 Cries A Lot Indicators				
	Actual Question Asked	Possible Responses	Response Frequency (percent)	
Canada 1994 - 95	How often would you say that your child cries a lot? Note: Ages 4 to 11 inclusive.	 Never or not true. Sometimes or somewhat true. Often or very true. 	61.4 32.9 5.6	
United States 1994	He/She cries too much? Note: Ages 4 to 14 inclusive (ages 4 to 11 only for this study).	 Not true. Sometimes true. Often true. 	77.3 20.1 2.6	
Source:				

	Table 10 Anxious/Frightened Indicators					
	Actual Question Asked	Possible Responses	Response Frequency (percent)			
Canada 1994 - 95	How often would you say that your child is too fearful or anxious? Note: Ages 4 to 11 inclusive.	 Never or not true. Sometimes or somewhat true. Often or very true. 	64.1 31.6 4.3			
Norway 1995	Has s/he been constantly frightened or anxious? Note: Ages 4 to 11 inclusive.	 Not at all. A little troubled. Quite troubled. Extremely troubled. 	88.8 9.5 1.5 0.3			
United States 1994	He/she is too fearful/anxious? Note: Ages 4 to 14 inclusive (ages 4 to 11 only for this study).	 Not true. Sometimes true. Often true. 	68.2 28.9 2.9			
Source:						

Table 11 Worried Indicators					
	Actual Question Asked	Possible Responses	Response Frequency (percent)		
Canada 1994 - 95	How often would you say that your child is worried? Note: Ages 4 to 11 inclusive.	 Never or not true. Sometimes or somewhat true. Often or very true. 	51.3 43.5 5.3		
United States 1994	He/sheworries too much? Note: Ages 4 to 14 inclusive (ages 4 to 11 only for this study).	 Not true. Sometimes true. Often true. 	64.2 31.5 4.3		
Source:					

Table 12 Means & Frequencies of Explanatory Variables Child Age 4-11					
	Canada	Norway	United States		
Mother smokes daily	25.6	32.3	25.7		
Mother smokes occasionally	4.8	9.9	6.9		
Mother never smokes	69.6	57.8	67.3		
Mother was 25 years of age or less at time of child's birth	22.9	23.5	22.8		
Child is female	48.9	51.8	49.1		
Child is between 8 & 11 years of age	33.3	28.7	34.4		
Child is only child	19.9	21.2	15.7		
Child has one sibling	47.2	47.4	42.1		
Child has two siblings	22.6	26.1	27.8		
Child has three or more siblings	10.3	5.3	14.4		
Child lives with single mother	14.8	17.0	23.5		
Household Equivalent Income (In Country Currency)	18419.49	105581.65	17230.71		
Poor ¹	17.0	7.4	21.0		
Mother has less than high school education	16.1		13.6		
Mother has high school diploma	18.2		38.8		
Mother has greater than high school education	65.7		47.6		
Number of Observations	20810	3765	1356		

Table 13Probit Estimates of the Determinants of Children's HappinessAges 4-11			
	Canada	Norway	United States
	Would you describe your child as being usually:	How much of the time in the last 14 days has s/he been happy and satisfied?	He/she is unhappy, sad or depressed?
1	1. Happy and Interested in Life	1. All the time	1. Not true
0	 Somewhat Happy Somewhat Unhappy Unhappy with Little Interest in Life So Unhappy that Life is not Worthwhile 	2. Most of the time/a large part of the time3. Some of the time/a little of the time4. None of the time	 Sometimes true Often true
Count 0 1	1309 11422	480 425	503 2173
Intercept	1.60* (0.06)	-0.18 (0.16)	1.05* (0.09)
Dummy = 1 if mother smokes daily	-0.20* (0.03)	0.07 (0.09)	-0.24* (0.05)
Dummy = 1 if mother smokes occasionally	0.07 (0.07)	0.02 (0.14)	-0.08 (0.08)
Dummy = 1 if mother was 25 years of age or less at time of child's birth	-0.12* (0.03)	0.08 (0.10)	-0.15* (0.05)
Dummy = 1 if child is female	0.17* (0.03)	0.01 (0.08)	0.02 (0.04)
Dummy = 1 if child is between 8 & 11 years of age	-0.38* (0.03)	0.10 (0.08)	-0.32* (0.05)
Dummy = 1 if child has one sibling	-0.13* (0.05)	0.34* (0.13)	0.03 (0.07)

Dummy = 1 if child has two	-0.19*	0.37**	0.08
siblings	(0.05)	(0.15)	(0.08)
Dummy = 1 if child has three or	-0.13**	0.16	0.21**
more siblings	(0.06)	(0.21)	(0.09)
Dummy = 1 if child lives with single mother	-0.29*	0.04	-0.26*
	(0.04)	(0.13)	(0.06)
Household Equivalent Income	5.01*E-6	-1.37E-6**	8.78E-6*
(In Country Currency)	(1.60E-6)	(5.34E-7)	(2.51E-6)
$Dummy = 1 if poor^1$	-0.06	-0.09	0.07
	(0.04)	(0.19)	(0.06)
Concordant	64.1%	55.8%	64.8%
Discordant	34.8%	43.1%	34.5%
Tied	1.1%	1.1%	0.7%

Table 14 Ordinary Least Squares Estimates of Weight/Height Indicators Child Age 0-11			
	Canada	Norway	United States
Number of Observations	18387	1201	3675
Intercept	8.46* (0.08)	7.84* (0.24)	7.01* (0.24)
Adjusted R ²	0.58	0.57	0.52
Dummy = 1 if mother smokes	0.31*	0.17	0.40*
daily	(0.04)	(0.14)	(0.12)
Dummy = 1 if mother smokes	0.14 (0.09)	-0.07	-0.34
occasionally		(0.22)	(0.21)
Dummy = 1 if mother was 25 years of age or less at time of child's birth	-0.02 (0.05)	0.02 (0.15)	0.19 (0.16)
Dummy = 1 if child is female	-0.27*	-0.30**	-0.15
	(0.04)	(0.13)	(0.10)
Dummy = 1 if child has one sibling	-0.14*	-0.01	-0.44*
	(0.05)	(0.18)	(0.16)
Dummy = 1 if child has two	-0.10***	-0.09	-0.60*
siblings	(0.06)	(0.20)	(0.17)
Dummy = 1 if child has three or	-0.13***	0.13	-0.88*
more siblings	(0.08)	(0.32)	(0.20)
Dummy = 1 if child lives with single mother	0.32*	0.55*	-0.08
	(0.06)	(0.19)	(0.14)
Household Equivalent Income	-3.96E-6**	1.67E-7	-4.96E-6
(In Country Currency)	(1.62E-6)	(5.40E-7)	(4.34E-6)
Dummy = 1 if poor ¹	0.04	0.11	0.02
	(0.06)	(0.27)	(0.16)
Age of Child	1.02*	0.96*	1.28*
	(0.01)	(0.04)	(0.04)
Dummy = 1 if child is between 0	0.51*	0.57** (0.24)	2.04*
and 1	(0.07)		(0.20)
Dummy = 1 if child is greater than or equal to 5	-1.19*	-0.90*	-1.57*
	(0.07)	(0.24)	(0.20)

Table 15Probit Estimates of the Determinants of Children's HealthAges 4-11			
	Canada	Norway	
	In general, would you say your child's health is:	How would you describe his/her health? Would you say it is:	
1	1. Excellent	1. Very Good	
0	2. Very Good 3. Good 4. Fair 5. Poor	 Good Neither Good nor Bad Poor Very Poor 	
Count 0 1	5370 7365	237 668	
Intercept	0.06 (0.04)	-0.80* (0.16)	
Dummy = 1 if mother smokes daily	-0.14* (0.03)	0.08 (0.10)	
Dummy = 1 if mother smokes occasionally	0.02 (0.05)	0.24 (0.15)	
Dummy = 1 if mother was 25 years of age or less at time of child's birth	0.03 (0.03)	0.22** (0.10)	
Dummy = 1 if child is female	0.12* (0.02)	-0.03 (0.09)	
Dummy = 1 if child is between 8 & 11 years of age	0.00 (0.02)	-0.15*** (0.09)	
Dummy = 1 if child has one sibling	-0.02 (0.03)	0.01 (0.14)	
Dummy = 1 if child has two siblings	0.04 (0.04)	0.03 (0.15)	
Dummy = 1 if child has three or more siblings	0.01 (0.05)	-0.19 (0.24)	

Dummy = 1 if child lives with single mother	-0.04 (0.03)	0.37* (0.13)
Household Equivalent Income	8.58E-6*	6.87E-7**
(In Country Currency)	(1.07E-6)	(3.27E-7)
$Dummy = 1 if poor^1$	-0.10* (0.03)	-0.06 (0.20)
Concordant	56.4%	56.4%
Discordant	42.6%	42.5%
Tied	1.0%	1.1%

Note: * indicates significant at the 1% level; ** indicates significant at the 5% level; *** indicates significant at the 10% level. ¹ 'A child is designated as poor if he/she lives in a household with less than 50% of median equivalent income. The equivalence scale employed is the OECD scale.'

Table 16 Probit Estimates of the Determinants of Children's Accidents/Injuries Age 0-11			
	Canada	Norway	United States
	Was the child injured in the past 12 months?	Has your child had medical attention due to treatment for an injury or accident that occured during the past 12 months?	During the past 12 months, has your child had any accidents or injuries that required medical attention?
1	1. Yes	1. Yes	1. Yes
0	2. No	2. No	2. No
Count 0 1	18485 2101	1249 107	3394 332
Intercept	-1.39*	1.42*	-1.32*
	(0.04)	(0.14)	(0.08)
Dummy = 1 if mother smokes daily	0.10*	0.05	0.11**
	(0.03)	(0.11)	(0.05)
Dummy = 1 if mother smokes	0.09***	-0.06	-0.18***
occasionally	(0.06)	(0.17)	(0.09)
Dummy = 1 if mother was 25 years of age or less at time of child's birth	0.10* (0.03)	-0.14 (0.12)	-0.04 (0.06)
Dummy = 1 if child is female	-0.14*	0.20**	-0.28*
	(0.02)	(0.10)	(0.04)
Dummy = 1 if child is between 8	0.18*	0.07	0.07
& 11 years of age	(0.03)	(0.11)	(0.05)
Dummy = 1 if child has one sibling	0.06***	-0.07	0.15**
	(0.03)	(0.13)	(0.07)
Dummy = 1 if child has two siblings	0.04	-0.01	0.13***
	(0.04)	(0.16)	(0.07)
Dummy = 1 if child has three or	0.11**	0.45	0.16**
more siblings	(0.05)	(0.33)	(0.08)
Dummy = 1 if child lives with single mother	0.11*	-0.07	0.15*
	(0.04)	(0.15)	(0.06)
Household Equivalent Income	7.44E-7	-6.80E-7**	1.29E-6
(In Country Currency)	(1.05E-6)	(3.21E-7)	(1.76E-6)

$Dummy = 1 if poor^{1}$	-0.12*	0.19	-0.07
	(0.04)	(0.22)	(0.06)
Concordant	56.9%	58.6%	57.9%
Discordant	40.5%	38.6%	40.1%
Tied	2.6%	2.8%	2.0%

Table 17 Probit Estimates of the Determinants of Children's Destructive Behaviour Towards His/Her Own and/or Other's Things Ages 4-11			
	Canada	United States	
	How often would you say that your child destroys his/her own things, or others things?	He/she breaks things on purpose or deliberately destroys his/her own or another's things?	
0	1. Never or not true	1. Not true	
1	 Sometimes or somewhat true Often or very true 	2. Sometimes true 3. Often true	
Count			
0 1	9779 2933	2323 353	
Intercept	-0.58* (0.06)	-1.11* (0.11)	
Dummy = 1 if mother smokes daily	0.23* (0.03)	0.21* (0.06)	
Dummy = 1 if mother smokes occasionally	0.09 (0.06)	0.19** (0.09)	
Dummy = 1 if mother was 25 years of age or less at time of child's birth	0.11* (0.03)	0.09 (0.06)	
Dummy = 1 if mother has less than high school education	0.17* (0.04)	-0.02 (0.07)	
Dummy = 1 if mother has greater than high school education	0.05 (0.03)	0.05 (0.06)	
Dummy = 1 if child is female	-0.47* (0.02)	-0.56* (0.05)	
Dummy = 1 if child is between 8 & 11 years of age	-0.26* (0.02)	-0.20* (0.06)	
Dummy = 1 if child has one sibling	0.06 (0.04)	0.05 (0.09)	
Dummy = 1 if child has two siblings	0.11* (0.04)	0.27* (0.09)	
Dummy = 1 if child has three or more siblings	0.02 (0.05)	0.13 (0.10)	

Dummy = 1 if child lives with single mother	0.27* (0.04)	0.12*** (0.05)
Household Equivalent Income	-5.97E-6*	-5.46E-6**
(In Country Currency)	(1.25E-6)	(2.68E-6)
Dummy = 1 if poor ¹	0.03 (0.04)	0.33* (0.07)
Concordant	66.4%	66.2%
Discordant	33.1%	33.1%
Tied	0.5%	0.7%

Table 18 Probit Estimates of the Determinants of Children's Cruelty/Bullying Behaviour Ages 4-11			
	Canada	United States	
	How often would you say that your child is cruel, bullies, or is mean to others?	He/she bullies or is cruel to others?	
0	1. Never or not true	1. Not true	
1	 Sometimes or somewhat true Often or very true 	2. Sometimes true 3.Often true	
Count 0 1	9627 3074	1982 683	
Intercept	-1.07* (0.05)	-1.01* (0.09)	
Dummy = 1 if mother smokes daily	0.19* (0.03)	0.31* (0.05)	
Dummy = 1 if mother smokes occasionally	0.08 (0.06)	0.31* (0.08)	
Dummy = 1 if mother was 25 years of age or less at time of child's birth	0.05*** (0.03)	0.10** (0.05)	
Dummy = 1 if mother has less than high school education	0.11** (0.04)	0.04 (0.06)	
Dummy = 1 if mother has greater than high school education	0.18* (0.03)	0.06 (0.05)	
Dummy = 1 if child is female	-0.01 (0.02)	-0.17* (0.04)	
Dummy = 1 if child is between 8 & 11 years of age	0.17* (0.02)	0.00 (0.05)	
Dummy = 1 if child has one sibling	0.14* (0.04)	0.23* (0.07)	
Dummy = 1 if child has two siblings	0.13* (0.04)	0.42* (0.08)	
Dummy = 1 if child has three or more siblings	0.00 (0.05)	0.50* (0.09)	
Dummy = 1 if child lives with single mother	0.23* (0.04)	0.16* (0.05)	

Household Equivalent Income	-2.76E-6**	-3.14E-6***
(In Country Currency)	(1.12E-6)	(2.03E-6)
$Dummy = 1$ if $poor^1$	0.07** (0.04)	-0.08 (0.06)
Concordant	58.4%	61.7%
Discordant	40.5%	37.6%
Tied	1.1%	0.7%

Table 19Probit Estimates of the Determinants ofChildren's Restless/Overly Active BehaviourAges 4-11			
	Canada	United States	
	How often would you say that your child can't sit still, is restless, or hyperactive?	He/she is restless or overly active, cannot sit still?	
0	1. Never not true	1. Not true	
1	 Sometimes true Often or very true 	 Sometimes true Often true 	
Count		1.405	
0 1	5145 7569	1487 1186	
Intercept	0.66* (0.05)	0.46* (0.08)	
Dummy = 1 if mother smokes daily	0.18* (0.03)	0.28* (0.05)	
Dummy = 1 if mother smokes occasionally	0.02 (0.05)	-0.06 (0.08)	
Dummy = 1 if mother was 25 years of age or less at time of child's birth	0.01 (0.03)	0.11** (0.05)	
Dummy = 1 if mother has less than high school education	0.06 (0.04)	0.22* (0.06)	
Dummy = 1 if mother has greater than high school education	-0.12* (0.03)	-0.04 (0.04)	
Dummy = 1 if child is female	-0.34* (0.02)	-0.43* (0.04)	
Dummy = 1 if child is between 8 & 11 years of age	-0.22* (0.02)	-0.30* (0.04)	
Dummy = 1 if child has one sibling	-0.13* (0.04)	-0.36* (0.07)	
Dummy = 1 if child has two siblings	-0.21* (0.04)	-0.47* (0.07)	
Dummy = 1 if child has three or more siblings	-0.33* (0.05)	-0.45* (0.08)	

Dummy = 1 if child lives with single mother	0.19* (0.03)	0.12** (0.05)
Household Equivalent Income	-2.66E-6*	-0.00*
(In Country Currency)	(9.58E-7)	(1.92E-6)
$Dummy = 1 if poor^{1}$	0.01 (0.04)	0.07 (0.06)
Concordant	61.8%	65.2%
Discordant	37.7%	34.4%
Tied	0.5%	0.4%

Note: * indicates significant at the 1% level; ** indicates significant at the 5% level; *** indicates significant at the 10% level. ¹ 'A child is designated as poor if he/she lives in a household with less than 50% of median equivalent income. The equivalence scale employed is the OECD scale.'

Table 20Probit Estimates of the Determinants of Children Crying A LotAges 4-11			
	Canada	United States	
	How often would you say that your child cries a lot?	He/She cries too much?	
0	1. Never or not true	1. Not true	
1	 Sometimes or somewhat true Often or very true 	 Sometimes true Often true 	
Count 0 1	7908 4796	2025 650	
Intercept	-0.42* (0.05)	-0.95* (0.10)	
Dummy = 1 if mother smokes daily	0.09* (0.03)	0.09*** (0.05)	
Dummy = 1 if mother smokes occasionally	-0.03 (0.05)	-0.00 (0.09)	
Dummy = 1 if mother was 25 years of age or less at time of child's birth	0.08* (0.03)	-0.11** (0.05)	
Dummy = 1 if mother has less than high school education	0.11* (0.04)	0.29* (0.06)	
Dummy = 1 if mother has greater than high school education	0.10* (0.03)	0.06 (0.05)	
Dummy = 1 if child is female	0.09* (0.02)	0.23* (0.04)	
Dummy = 1 if child is between 8 & 11 years of age	-0.16* (0.02)	-0.22* (0.05)	
Dummy = 1 if child has one sibling	0.10* (0.03)	0.27* (0.08)	
Dummy = 1 if child has two siblings	0.07*** (0.04)	0.39* (0.08)	
Dummy = 1 if child has three or more siblings	-0.10** (0.05)	0.26*** (0.09)	
Dummy = 1 if child lives with single mother	0.06*** (0.03)	0.10*** (0.06)	

Household Equivalent Income	-1.66E-6***	-0.00*
(In Counrty Currency)	(9.80E-7)	(2.29E-6)
$Dummy = 1$ if $poor^1$	0.05 (0.03)	-0.13** (0.06)
Concordant	55.1%	60.8%
Discordant	43.8%	38.5%
Tied	1.1%	0.7%

Table 21 Probit Estimates of the Determinants of Children's Anxiety/Fright Ages 4-11			
	Canada	Norway	United States
	How often would you say that your child is too fearful or anxious	Has s/he been constantly frightened or anxious	He/she is too fearful anxious
0	1.Never or not true.	1.Not at all.	1.Not true.
1	2.Sometimes or somewhat true 3.Often or very true.	2.A little troubled.3.Quite troubled.4.Extremely troubled	2.Sometimes true. 3.Often true.
Count 0 1	8139 4563	811 94	1802 862
Intercept	-0.25*	1.31*	-0.32*
	(0.04)	(0.22)	(0.08)
Dummy = 1 if mother smokes daily	-0.01	-0.12	0.05
	(0.03)	(0.12)	(0.05)
Dummy = 1 if mother smokes occasionally	-0.08	-0.08	0.16**
	(0.05)	(0.18)	(0.08)
Dummy = 1 if mother was 25 years of age or less at time of child's birth	0.09* (0.02)	-0.05 (0.13)	-0.02 (0.05)
Dummy = 1 if child is female	-0.01	0.11	0.14*
	(0.02)	(0.11)	(0.04)
Dummy = 1 if child is between 8	0.09*	0.08	0.13*
& 11 years of age	(0.02)	(0.11)	(0.05)
Dummy = 1 if child has one sibling	-0.12	-0.20	-0.18*
	(0.03)	(0.18)	(0.06)
Dummy = 1 if child has two siblings	-0.20*	-0.05	-0.32*
	(0.04)	(0.20)	(0.07)
Dummy = 1 if child has three or	-0.38*	0.30	-0.46*
more siblings	(0.05)	(0.34)	(0.08)
Dummy = 1 if child lives with single mother	0.20*	-0.39**	-0.05
	(0.03)	(0.16)	(0.05)
Household Equivalent Income	-3.41E-6*	9.44E-7	-4.81E-6**
(In Country Currency)	(1.01E-6)	(8.79E-7)	(1.88E-6)

$Dummy = 1 if poor^{1}$	0.09*	-0.06	0.11***
	(0.03)	(0.23)	(0.06)
Concordant	56.1%	59.8%	56.2%
Discordant	42.8%	38.6%	42.8%
Tied	1.1%	1.6%	1.0%

Table 22Probit Estimates of the Determinants of Children's WorryAges 4-11			
	Canada	United States	
	How often would you say that your child is worried?	He/she worries too much?	
0	1. Never or not true	1. Not true	
1	 Sometimes or somewhat true Often or very true 	 Sometimes true Often true 	
Count 0 1	6612 6085	1778 902	
Intercept	-0.48* (0.05)	-0.57* (0.08)	
Dummy = 1 if mother smokes daily	0.01 (0.03)	0.06 (0.05)	
Dummy = 1 if mother smokes occasionally	-0.05 (0.05)	0.18** (0.08)	
Dummy = 1 if mother was 25 years of age or less at time of child's birth	0.05** (0.03)	0.18* (0.05)	
Dummy = 1 if mother has less than high school education	0.09** (0.04)	0.02 (0.06)	
Dummy = 1 if mother has greater than high school education	0.15* (0.03)	0.06 (0.04)	
Dummy = 1 if child is female	0.11* (0.02)	0.01 (0.03)	
Dummy = 1 if child is between 8 & 11 years of age	0.42* (0.02)	0.35* (0.04)	
Dummy = 1 if child has one sibling	0.11* (0.03)	0.04 (0.06)	
Dummy = 1 if child has two siblings	0.05 (0.04)	-0.17** (0.07)	
Dummy = 1 if child has three or more siblings	-0.08** (0.05)	-0.25* (0.08)	
Dummy = 1 if child lives with single mother	0.16* (0.03)	-0.04 (0.05)	

Household Equivalent Income	-6.18E-7	-7.97E-7
(In Country Currency)	(9.58E-7)	(1.81E-6)
$Dummy = 1$ if $poor^1$	-0.06 (0.03)	0.00 (0.06)
Concordant	59.6%	61.6%
Discordant	39.4%	37.7%
Tied	1.0%	0.7%

Table 23 Summary of the Impact of Living in a Lone Mother Household on Current Outcomes for Children					
Canada Norway United States					
Happiness	-	n/s	-		
Weight/Height	+	+	n/s		
Injury	+	n/s	+		
Anxiety	+	-	n/s		
Health	n/s	+			
Destroys Property	+		+		
Cruel	+		+		
Restless	+		+		
Cries	+		+		
Worried	+		n/s		

Appendix Table 1 Sources of Data Used For Child Outcomes			
Country: Source: Unweighted Sample Si			
Canada	Statistics Canada. <i>National Longitudinal Survey of Children and Youth</i> . Cycle 1, Release 2. 1994-95.	13,439 households 22,831 children age 0-11	
Norway	Statistics Norway Health Survey, 1995.	2300 children	
United States	Bureau of Labor Statistics, US Department of Labor. <i>The National Survey of Children</i> , 1994.	6509 children born to mothers in survey	

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