Family Poverty and Intense Work during High School:
Do Children of Immigrants Face Unique Challenges?

Lisa Kaida
Department of Sociology
Memorial University of Newfoundland

Introduction

For over five decades, youth employment has attracted scholarly interest, reflective of its wide implications for the youth's transition to adulthood (Entwisle et al. 2005). Working during school is generally seen as favorable in North America, as it often has a positive impact on youths' subsequent career, socialization, and economic independence. However, working long hours during high school may have negative consequences for their life course, leading to lower school grades, higher chances of school drop out, drug abuse, and teen pregnancy (Bozick 2007; Staff et al. 2011).

The employment among lower income youth is particularly an important topic in research. Youths from low-income families may work longer hours to support their family, rather than to spend on entertainment and luxuries, unlike higher-income youths. Employment also may have a long-term consequence for the life chances of low-income youths, possibly leading to cumulative disadvantage and intergenerational transmission of poverty (Entwisle et al. 2000). As a short-term strategy, lower income youths may work longer hours to alleviate their family economic hardships, which may have a longer-term consequence for their life course, such as high school drop-out, the lack of college education, and low-paid low-skill employment as adults.

Intense work among children of immigrants is an understudied but important issue in youth employment research, as immigrants are particularly vulnerable to poverty (Picot and Hou 2003). Immigrant parents' disadvantageous positions due to their limited language skills, lack of job-related networks, and unfamiliarity with the host country work cultures may drive their

children to work long hours to support their families. However, existing research has two limitations. First, there is limited interest in the employment of children of immigrants *per-se* in the youth employment literature (Bauder 2001; Lauer et al. 2012; Perreira et al. 2007). Second, while there is extensive qualitative research on the experience of low income working immigrant youths and their challenging transition to adulthood in the immigration literature, a quantitative assessment of the association between family poverty and employment for children of immigrants is limited.

This study fills these gaps by quantitatively evaluating the impact of family poverty on the employment during high school for children of immigrants, compared to their non-immigrant counterparts. I address two questions: First, how does family poverty influence the prevalence of work and intense work of children of immigrants, compared with their non-immigrant counterparts? Second, for children of low income immigrants, to what extent does their family's immigration experience influence their employment and intense work? I answer these questions using data from the Youth in Transition Survey (YITS) Cohort A, a nationally representative survey of high school students aged 15 in 2000.

This study will contribute to research by bridging the literatures on youth employment and immigrant integration. Arguably, a quantitative analysis of the employment experience of children of low income immigrants remains limited in either literature to date. The study also makes a methodological contribution by considering the possibility of selection into employment among high school students. The use of Heckman probit models will allow me to estimate intense work among working high school students in a robust way.

Background

Implications of intense work for youth's transition to adulthood

Traditionally, research has acknowledged educational, economic, and social benefits of employment during high school for the youth's transition to adulthood. Working during high school has both short- and long-term benefits for education. It may help youths gain "skills and knowledge that increase future productivity and complement in-class learning" (Ruhm 1997: 736). Through work, youths can also gain valuable job networks, references, skills that may help with their subsequent jobs. As human capital, early work experience may facilitate youth's career development (Steel 1991). In the long run, youth employment is associated with greater wealth accumulation in adulthood (Painter 2010). Further, working youths can develop personal responsibility and social skills through interaction with coworkers and customers (Ruhm 1997).

However, since the 1980s research has highlighted the possibilities of negative consequences of work, especially intense work, during high school (Entwisle et al. 2000). Two perspectives are proffered in this scholarship. First, the zero-sum perspective posits more work hours mean less time for the youths' school-related activities, negatively affecting their educational performance and school-to-work transition (Bozick 2007). Second, the selection-to-work perspective rejects the negative consequences of youth work, arguing it is academic disengagement that drives youths to work long hours, not the other way around. It stresses the differences in the youth's ability, academic engagement, socioeconomic resources and other pre-existing characteristics between working and non-working students (Bozick 2007).

Findings from the quantitative analyses of the effects of work during high school are in fact mixed. Whether the zero-sum or selection-to-work perspective holds may depend on the outcome of interest (e.g. high school performance, postsecondary education, subsequent

employment, substance use, teenage pregnancy). Or related to the selection-to-work perspective, the negative consequence of work may be conditional on the social location of youths, including race, gender, and socioeconomic status (Entwisle et al. 1999, 2005). For example, Steel (1991) finds a negative impact of work hours on school enrolment for white and Black students, but not Hispanics in the U.S. And the negative impact of long work hours is greater for Black students; each additional hour worked per week is associated with an enrolment reduction of 0.1 months (2 days), as opposed to 0.05 months (one day) for whites (Steel 1991). Steel (1991) also shows work during high school has a positive impact on school enrolment for female students (2 days increase for each hour worked) but has a negative impact on male students. Working more than 20 hours a week during the high school senior year has a greater negative impact on the four-year college completion of females.

The present study focuses on the intense work among high school students from low income families and considers how family poverty influences their propensity of employment prevalence and intense work. Studies suggest low income high school students often work intensely out of family necessity, as they are under greater pressure to "support their families, pay for personal expenses, or save for college," whereas youth from higher income families are likely to work to pay for their own entertainment and luxuries (Perreira et al. 2007; Entwisle et al. 2000, 2005; Sánchez et al. 2010). Even though the benefit (or cost) of intense work during high school remains inconclusive as reviewed above, it is imperative to examine whether youths from different family income and immigrant backgrounds follow different work patterns in Canada, where income inequality has been on the rise over the past three decades.

This study focuses on the impact of family low income, rather than parental SES (e.g. combining income and parental education) in studying the employment of children of

immigrants in Canada, as parental education and current income may not go hand in hand especially among recent cohorts of immigrants. Poverty among recent immigrants with university education has risen more than 40% in the past two decades (Picot and Hou 2003). It is possible that children of middle-class immigrant parents are at greater risk of experiencing poverty, and this may have a unique impact on their employment.

Family poverty and youth work

How does family poverty influence youth employment? Two perspectives, the family need and family resource perspectives, help answer this question.

The family need perspective states that historically, economic deprivation has driven youths to engage in paid work, which is expected as a family economic strategy (Keithly and Deseran 1995). This perspective is considered to explain the increased labor force participation of youths from low income families during the Great Depression. Thus, it suggests that family poverty has a positive impact on engagement in paid work among youths.

By contrast, the family resource perspective states family's low economic status may disadvantage youths' access to jobs. Family poverty constrains parents' investment in children, which may negatively influence children's educational attainment (Bozick and DeLuca 2011; Corcoran and Adams 1997; Haveman and Wolfe 1995). The same logic possibly can apply to youth employment in contemporary Western societies; the lack of family resources may lead to lower employment rates among youths from low income families (Duncan et al. 1998; Maloney 2004; Peters and Mullis 1997).

Evidence suggests either the family need or family resource perspective has been applicable to the youths' intense work. Whether the former or latter perspective holds may

depend on the cohort of youths under study. As mentioned earlier, the family need perspective is more likely to apply to the work behavior of earlier cohorts of youths, especially those growing up during the Great Depression, whereas contemporary cohorts of youths are likely to follow the latter. Moreover, which aspect of employment is under study may matter. Entwisle et al. (2000) stress the distinction between the prevalence of work and intensity of work; low income youths are less likely to work due to the lack of family resources, but if they are employed, they work longer hours out of family need. In other words, the family need perspective may apply to the employment prevalence of youths, while the family resource perspective is more likely to apply to intense work among working youths.

Recent evidence corroborates Entwisle et al.'s (2000) view. Gong (2009) finds youths (age 14-15) from low parental incomes are less likely to be working than their higher income counterparts. Low income college students are found to be more likely to work more than 20 hours a week to pay for college education (Bozick 2007). While these studies are based on U.S. evidence, the findings possibly apply to Canada, given the institutional similarities between the two countries. As liberal democratic countries, the states offer relatively limited social safety net/ support to low-income families in both countries. Children in low income families in these two countries similarly may be feeling the pressure to work longer hours to compensate for their parents' limited incomes.

This study examines whether the family need or resource perspectives applies to the employment prevalence and work intensity of children of immigrants, in comparison to their non-immigrant counterparts. It is important to shed light on this understudied youth population, as children of immigrants, particularly foreign born youths, often have lower employment rates than children of non-immigrants (Bauder 2001; Yan et al. 2012). Qualitative studies have shown

earlier entries to the labor market and intense work of low income immigrant adolescents often negatively affect their subsequent education and career (Sánchez et al. 2010; Zhou et al. 2008). However, quantitative assessments are limited to date. If the impact of poverty on the employment patterns between children of immigrants and non-immigrants significantly differ, it may be explained by their family migration experience. A greater sense of family obligation among children of low income immigrants (e.g. Latino youths) drive youths to prioritize family's well being over their own individuals', prioritizing work over education to support their families and alleviate the short-term economic hardships (Sánchez et al. 2010). Whether or not intense work leads to withdrawal from school, students from low income immigrant families may be more likely to juggle work, household choirs, and schooling, reflective of their strong sense of family obligation. Such balancing act may be stressful for the youth of immigrant backgrounds, reaching "emerging adulthood" earlier than other youths (Sánchez et al. 2010).

Children of immigrants and family poverty

How does the impact of family poverty on children of immigrants compare with their non-immigrant counterparts? The impact of poverty among children of immigrants may be partly explained by the characteristics unique to their family immigration experience, including parents' and their birthplaces and recency of arrival in Canada.

Children of recently arrived immigrant parents may face greater difficulty finding jobs than their more established counterparts in North America, where family's job networks often play a role in youth employment (Lauer et al. 2012). Immigrant families, especially recent arrivals, may have limited bridging ties that give them access to resources in the mainstream society, which may disadvantage their children's job search (Yan et al. 2012). Recently arrived

immigrant parents also may be less likely to endorse a common North American idea that employment during high school is beneficial for youth's career and therefore discourage them from working during school (Lauer et al. 2012).

Immigrant families' recency of arrival may also influence the probability of intense work among youths. Immigrant parents tend to have limited host country language skills and are unfamiliar with host country workplace cultures. This may make it difficult for them to find well paid jobs despite their highly educated backgrounds. It is then their children, who are more linguistically and culturally adept than their parents, that are expected to work longer hours and contribute to their family financially (Yan et al. 2012).

Given the above arguments, along with the strong association between recency of arrival and poverty established in previous research, for youths of immigrants, the impact of family poverty on their probability of employment will decrease if parental recency of arrival is taken into account (Picot and Hou 2003).

The diversity of parental birthplaces among children with immigrant backgrounds may influence the relationship between family poverty and their socioeconomic outcomes. Admittedly, immigrant source countries may represent a number of factors (Picot and Hou 2012), including contexts of reception by the host government, society, and community (e.g. discrimination) and cultural attitudes towards education and employment and family obligation (Bachmeier and Bean 2011; Estrada and Hondagneu-Sotelo 2011; Picot and Hou 2012; Portes and Zhou 1993). Yet research shows that non-white children of immigrants have a harder time securing jobs than their white counterparts (Entwisle et al. 2002; Lauer et al. 2012). Given that the immigrant source country is also associated with family poverty levels, it is expected that the

impact of family poverty on the youth's employment experience will be altered if the parental birthplace is taken into account (Picot and Hou 2003).

Finally, for children of immigrants, their own nativity may influence the relationship between family poverty and their employment. The second generation (the native born of immigrants) are expected to face less barriers to employment than the 1.5 generation (those who immigrated as children) because they are culturally and linguistically more adapted to the host countries.

The following analysis compares the impact of family poverty on the employment prevalence and intense work between children of immigrants and non-immigrants when their demographic and family characteristics are taken into account. While this study builds on the existing youth employment research by using commonly used measures of employment prevalence and intense work, it departs from it by shedding a light on youths with immigrant backgrounds, as their employment behaviour may differ from their non-immigrant counterparts for aforementioned reasons.

Data and Methods

Data and samples

The analysis uses data from the Youth in Transition Survey (YITS) Aged 15 Reading Cohort A Targeting high school students aged 15, the YITS is designed to study major transitions of youths, including the transition from high school to post-secondary education and from education to labor market participation (Tomokowicz and Bushnik 2003). The first cycle took place in May – June 2000, interviewing approximately 29,700 students. Subsequent interviews

were conducted every two years, with the response rates of 78%, 66%, and 55% in Cycles 2, 3, and 4 respectively (Statistics Canada 2006a, 2006b, 2007).

In the present analysis, I limit the sample to high school students aged 15 whose parent(s) also participated in the Cycle 1 survey, providing their information, including annual income, education, and immigrant status (N=26,000) (Finnie and Mueller 2008). Parents' data were collected only in Cycle 1. Therefore, the information on the respondent's detailed parental characteristics is available only in this cycle.

The aforementioned sample is further divided into two sub-samples: the children of immigrants and non-immigrants. The former are defined as those who were born either abroad (the 1.5 generation) or in Canada (the second generation) and living with at least one foreign-born parent in 2000. The latter are classified as those living with two native-born parents (for two-parent families) or one native-born parent (for lone parent families).

Dependent variables

I use two dichotomous dependent variables indicating the youth's employment experience during the current high school year in Cycle 1 (1999-2000): employment prevalence and work intensity. First, the employment prevalence variable is coded 1 if the youth worked for pay at least an hour during the school year in 2000, and 0 otherwise (the reference group). The intense work variable is coded 1 if the youth worked more than 20 hours in a typical week (including a weekend) during the 1999-2000 school year, and 0 otherwise. I choose 20 hours as the threshold of intense work following the previous research of youth employment (Bozick 2007; Lee and Staff 2007; Staff et al. 2010; 2011; Staff and Schulenberg 2010; Warren and Lee 2003). This research often

finds detrimental impacts of working 20 hours or more per week on the high school students' academic achievements and transition to adulthood.

Independent variable

The independent variable indicates the youth's family poverty status in Cycle 1. While poverty measures vary between studies, I use Statistics Canada's low income measure (LIM), set at 50% of the median household income adjusted for family size (Statistics Canada 2009). Given the lack of household income data in the YITS, I use data on the annual income of the respondent's parent(s) as the closest proxy of a household income, although admittedly, it overestimates the number of youths in family poverty.[1]

Control variables

The analysis also controls for other variables that are expected to influence the high school students' employment experience: their individual characteristics (gender, overall grade-average in 1999-2000, and educational aspiration); parental characteristics (highest education, employment status, and educational expectation for their children); family characteristics (family structure and number of children under 15 in the household); and contextual characteristics (urban/rural residence and province of residence).

I control for gender because parents' expectation for the activities of their adolescent children still vary by their children's gender in post-industrial countries like Canada (Cohen

[1] An examination of the lagged effect of family poverty status on the youth employment would be possible using data from subsequent cycles to consider the time order and causal relationships between family poverty and youth employment. However, this study analyzes the association between the youth's family poverty status and employment during the same period (1999-2000) using the Cycle 1 data, as the youth's current family situation is more likely to influence their employment decision than their prior financial situation (Purtell and McLoyd 2011). As a result, it explores the association between the two factors, rather than the causal relationship.

2001). Female high school students may be expected to stay at home and contribute to housework, rather than to work outside home, more than their male counterparts. Such gendered parental expectation may be pronounced more among immigrant families, as they tend to maintain traditional patriarchal arrangements (Bachmeier and Bean 2011; Estrada and Hondagneu-Sotelo 2011).

The youth's educational achievements are represented by their overall grade-average in the current academic year (1999-2000), while their aspiration is proxied by the highest level of education they think will / would like to attain. Students with lower grades and educational aspirations may be more likely to work intensely as they perceive employment as "a more fruitful way to spend their time and energy" and a more promising avenue for success than education (Warren et al. 2000: 963). By contrast, children with higher grades and educational aspiration may be less likely to work because they are more driven to pursue postsecondary education after graduating from high school (Bozick and DeLuca 2011).

Previous research has provided varied explanations to the relationships between parental education / expectation for their children's education and the youth's employment. In general, parents with higher education are considered to have greater expectations for their children's pursuit of higher education, discouraging them from working while in school (Bozick and DeLuca 2011; Schoenhals et al. 1998). However, highly educated parents may have more useful social networks and resources than their less educated counterparts that may help their children find work easily (Perreira et al. 2011). Empirically, a study of American children from different immigrant generations finds the negative impact of parental education on the youth employment prevalence only among the first generation children (Perreira et al. 2011). Parental human capital has no impact on the employment prevalence of the second and third-plus generation children.

Once employed, the second and third-plus generation children with more highly educated parents work fewer hours than their counterparts with less educated parents (Perreira et al. 2011). Further, immigrant parents' high educational expectation may discourage their children from working more because of their greater sense of family obligation – a sense of repaying parents for the sacrifice and investment to their higher education (Perreira et al. 2011).

Presence of working parents, especially mothers, may have a positive impact on the employment prevalence and work intensity of youths, as they see their working parents as role models for their employment experiences (Perreira et al. 2011; Schill et al. 1985). Working parents may also help their children find jobs through their job networks (Perreira et al. 2011; Keithly and Desran 1995).

This study also controls for the youth's family structure. Youths from two-parent families may be more likely to be working than their lone-parent counterparts, as the former have greater access to the social networks that can help with their job search (Perreira et al. 2011; Rothstein 2001).

The youth's family size, represented by the number of children under age 15, is also taken into account. Larger family is seen as a factor propelling the youth into the labor force, as paid work reduces the family's economic burden per member (Keithly and Desran 1995)

Finally, geographic contexts can be an important factor explaining youth employment, as adolescents are unlikely to move for job opportunities compared to adults (Keithly and Desran 1995). The analysis controls for the youth's urban versus rural residence and province of residence to consider the variations in regional labor markets across Canada (Gong 2009).

For the models of children of immigrants only, I include two additional variables, the characteristics related to their family immigration experience. First, I control for parents' source

country. Admittedly, immigrant source countries may represent a number of factors (Picot and Hou 2012), including contexts of reception (e.g. discrimination) by the host government, society, and community (Estrada and Hondagneu-Sotelo 2011; Portes and Zhou 1993) and cultural attitudes towards education and employment (Bachmeier and Bean 2011; Picot and Hou 2012) and family obligation (Estrada and Hondagneu-Sotelo 2011). This study expects there will be variation in the youth's employment by the origin countries of their parents.

Second, parents' recency of arrival is controlled as a proxy of their acculturation in the host society (Bachmeier and Bean 2011). Children with recently-arrived immigrant parents (in Canada less than 10 years) may have less job-related networks in the host society which would help the youths find jobs. The youths whose parents are recent arrivals may also be less likely to be working, as their parents are less likely to adopt the North American norm emphasizing the value of paid work during school.

Analytical Techniques

I use two analytical techniques to predict the youth's probability of employment prevalence and intense work: probit regression and Heckman probit models.

First, to estimate the youth's probability of employment in 1999-2000, I use the probit model. This regression model is suited to predict dichotomous dependent variables (i.e. employed vs. not employed).

Second, to estimate the youth's probability of intense work, I use the Heckman probit model. This model allows estimating the dichotomous outcome (i.e. working intensely or not) and sample selection (i.e. selection into employment) simultaneously while controlling for

sample selection bias associated with unobserved heterogeneity between the subsample (i.e. employed high school students) and entire sample (i.e. high school students). This is beneficial for the present study, as employed high school students may not be a randomly selected sample (Fiori et al. 2013; Huysse-Gaytandjieva. 2013). If unobserved characteristics (e.g. motivation, talent, health) influencing the youth's decision to work are correlated with the characteristics affecting their intense work, coefficients estimated in standard regression techniques may be biased.

Using mathematical notations, the Heckman probit model can be described as follows:

$$Y_1 = X_1\beta_1 + U_1$$

$$Y_2^* = X_2\beta_2 + U_2$$

The first equation predicts the probability of working intensely (Y_1) for the employed youths, whereas the second equation estimates the probability of being in the subsample of employed youths (Y^*_2). Y_1 can be observed only if Y_2=1 (employed). X_1 and X_2 represent the covariates of Y_1 and Y^*_2; β_1 and β_2 are probit coefficients of X_1 and X_2; and U_1 and U_2 are error terms, respectively. I use urban/rural residence and province of residence as the exclusion restrictions – the variables affecting the sample selection but not the outcome.

The correlation coefficient (ρ) between the error terms, U_1 and U_2, indicates the presence/ absence of sample selection. If ρ is significantly different from 0, there is selection into the subsample associated with unobserved heterogeneity, and the Heckman probit model should be used over a standard regression model as the former can control for unobserved heterogeneity (Melzer 2013). For ease of interpretation, I calculate discrete change coefficients for the probability of intense work given that one is employed (*pr*[intense work = 1 | employed=1] .

For each set of probit and Heckman probit models, I analyze children of immigrants and non-immigrants separately. For each sub-sample, I include the independent variable (family poverty) and the control variables in Model 1. For the models of children of immigrants, I further add parental birthplace and recency of arrival to evaluate whether these factors mediate the poverty consequence (Model 2). Based on probit coefficients, I calculate marginal effects to report results.

Results

Family Poverty and Employment of Youths

How and to what extent does growing up in poverty influence the employment of youths with immigrant backgrounds, compared to their non-immigrant counterparts? Figure 1 shows unadjusted percentages of the high school students aged 15 in 2000 who worked at least one hour per week during the current school year by their family poverty status and parental immigrant status. The results suggest poverty has a greater negative impact on the employment of the youths of immigrants. Thirty-seven percent of high school students of poor immigrants worked in 1999-2000, which is 17 percentage points (or 32%) lower than their non-poor counterparts. By contrast, the percentage gap between the poor and non-poor youths with Canadian-born parents is smaller. The youths of poor Canadian-born families (61.2%) have only six percentage points lower employment rates than their non-poor counterparts (66.9%).

[Figure 1 about here]

Another noteworthy finding from Figure 1 is that overall, the employment rates of the youths of immigrants are much lower than their non-immigrant counterparts. While over 60% of the youths of non-immigrants worked for pay in 1999-2000 regardless of their family poverty status, 35-55% of their immigrant counterparts did so. This echoes previous research on the employment of the children of immigrants in North America, which highlights the lower employment rates among immigrant youths (Lauer et al. 2012; Perreira et al. 2007).

How will the results change when the youth's individual, parental, family, and contextual characteristics are adjusted? Table 1 displays results from the probit models estimating the probability of paid work for children of immigrants (Models 1 and 2) and non-immigrants (Model 3). The results indicate for both immigrant and non-immigrant families, having low family incomes negatively influences the youth's employment prevalence when their other characteristics, such as gender, family structure, and province of residence, are taken into account, as the negative probits of the low family income status indicate (Models 1 and 3). Notably, this negative impact is observed when the youth's parental human capital (proxyed by highest level of education) is controlled. Admittedly, parental human capital may have a positive (or negative) impact on youth employment as the literature suggests. Yet, its impact may be absorbed by the strong impact of family low income. This suggests that the youth's more immediate economic disadvantage of low family income in 1999, rather than their parental human capital or social class disadvantage, has a more direct, negative impact on the youth's chance of working during high school.

[Table 1 about here]

Moreover, the marginal effects of probits indicate that family poverty has a greater negative impact on the employment for the youths of immigrants than their non-immigrant counterparts (Table 1). While family poverty reduces the probability of paid work during the school year for the youths of immigrants by 14% (column 1), it does so only by 4% for the youth of non-immigrants (column 3).

This noticeably greater negative impact of poverty for the youths of immigrants is partly explained by their migration-related characteristics. As Model 2 shows (column 2, Table 1), the negative probit of family poverty becomes no longer significantly different from 0 ($p > 0.05$) once the characteristics related to their family immigration experience (the youths' nativity and their parents' recency of arrival and birthplaces) are controlled. The statistically significant negative probits of parental origins from Asia (e.g. China, India, other East/Southeast Asia) and Central/South America suggest that the notably negative impact of family poverty among the youths with immigrant backgrounds can be explained by the possibility that the youths of Asian and Central/South American origins are more vulnerable to family poverty and that they are less likely to work during the school year. Their lower employment rates may be due to their family cultural orientation (e.g. emphasis on education) and discrimination in hiring (Bachmeier and Bean 2011; Lauer et al. 2012).

The results for control variables are also worth reporting. The youth's gender, place and province of residence similarly influence their employment regardless of their parents' immigrant status. For both children of immigrants and the Canadian born, female students are more likely to be working than their male peers during the academic year, which contradicts what the literature suggests. The analysis also shows the youths in urban areas are less likely to work than their rural counterparts. Some regional variations also exist. For children of

immigrants, those in Quebec and British Columbia are less likely to be working, whereas those in Atlantic Canada and Quebec are less likely to be employed for children of non-immigrants. Additionally, the youth's overall grade-average and parental expectation influence the employment prevalence of children of non-immigrants only. Children who have higher educational aspiration, parents with higher expectation, and younger siblings are more likely to be working.

Family Poverty and the Youth's Intense Work

Table 2 presents results from Heckman probit models, which estimate the selection of employed youths and probability of intense work (working 20 hours or more per week in the 1999-2000 academic year) within this subsample. The rho coefficients in all the three models are negative and significantly different from 0 ($p > 0.001$), which suggests that the high school students are negatively selected into employment. In other words, unobserved characteristics negatively associated with employment are positively associated with intense work. It may be that highly talented, motivated students are less likely to be working during the school year, focusing on school activities (e.g. study, extracurricular and volunteer activities). But if they worked, they would work more intensely, yet they would be able to balance paid work and school activities well. The results thus suggest the Heckman probit model is preferred to correct selection into employment.

[Table 2 about here]

Among the employed youth with immigrant backgrounds, poor youths are more likely to work intensely than their non-poor counterparts. The results suggest conditional on selection into employment and net of individual and family characteristics, family poverty has a positive impact ($p < .001$) on the intense work among employed youths with immigrant backgrounds. This is in stark contrast to their non-immigrant counterparts; family poverty has no significant impact on the probability of working intensely among employed youths with non-immigrant backgrounds. Although poor children of immigrants are least likely to work among different youth groups, once they work, they work more intensely than their non-poor counterparts – a pattern unique to the children of immigrants. This unique impact of family poverty is explained to some extent by their family immigration experience; once the youth's nativity, parental characteristics and birthplace are controlled (column 2), the probit for family poverty declines from Model 1 to 2. Yet the negative probit of family poverty remains significantly different from 0, which suggests other (umeasured) factors (e.g. sense of family obligation, collective effort to succeed as family) may drive economically constrained children of immigrants to work intensely for their families.

To put the probit results in perspective, I further calculate the discrete change in dummy variables (Table 3) (Fullerton and Borch 2008). The results show that family poverty raises the predicted probability of intense work by 7 to 9 percentage points. Moreover, being foreign born raises the predicted probability of intense work by six percentage points. This suggests that despite the barriers to employment, children of immigrants may be working longer hours out of family obligation. Or it may be a reflection of their school disengagement due to language or cultural barriers faced in host country schools.

[Table 3 about here]

Similar sets of control variables are found to influence the probability of intense work to employment prevalence (Table 1). For both children of immigrants and non-immigrants, the youth's gender and overall grade average influence the probability of intense work. Within employed children, female and higher achieving students are less likely to work intensely than their male and lower achieving counterparts. Interestingly, for both children of immigrants and non-immigrants, those whose parents hold university or higher degrees are less likely to work intensely. This meaning that parents' postsecondary degrees have a negative impact on the children's intense work, independent of their income. These highly educated parents may thus be passing the value of advanced education on to their children, discouraging them from working longer hours during high school.

Conclusion

While far-reaching consequence of family poverty for the children's life changes are well known in research, little is known about how poverty influences the employment experience of children of immigrants. My analysis of data from the Youth in Transition Survey Cohort A finds high school students from low-income families are less likely to work during the academic year regardless of their parental nativity. This is consistent with the US research on contemporary youths, supporting the economic resource perspective. That is, growing up in low-income families constrains the opportunities of the youth to gain work experience during high school. The finding that children of low income immigrant families are least likely to work suggests that having immigrant parents, in addition to living in low income families, further put them in

disadvantages in their employment prevalence. This echoes existing qualitative studies that document the notable employment challenges faced by immigrant youths in Canada (Lauer et al. 2002).

However, once employed, these low income students with immigrant backgrounds are more likely to work intensely, supporting the economic need perspective. Given the possibility of negative consequences of longer work hours for academic performance, this finding has an important implication for the socioeconomic attainments of children of low-income immigrants. Their immigrant parents' economic disadvantage in Canada may have a lingering impact; poverty may persist across generation. By contrast, there is no such positive impact of family poverty on the probability of intense work among children of non-immigrants.

Such negative and positive impacts of family poverty on the employment prevalence and work intensity are greater for children of immigrants than their non-immigrant counterparts. This is partly explained by their family immigration experience. The impacts of family poverty decline once their nativity and parental recency of arrival and national origins are taken into account. In conclusion, this study finds a unique impact of family poverty on the employment prevalence and intense work among children of immigrants - a unique impact related to their family immigration experience.

Overall, the findings quantitatively substantiate the experience of second generation adolescents with economically disadvantaged backgrounds, which has been documented in qualitative research. Given that poverty has not been an uncommon experience for recent immigrants to Canada, this study illuminates the grave consequences of poverty for transition to adulthood among children of immigrants who mature in the host country. This is underexplored in the existing Canadian research on the socioeconomic attainment of the second generation

(including the 1.5 generation), which is characterized by optimism of educational success among children of immigrants on the whole.

Finally, although this study makes a contribution to youth employment and immigrant integration research, it has some limitations. First, it considers only the cross-sectional aspect of the youth's family poverty status due to data limitations. Admittedly, family's poverty status may fluctuate over time, and the timing of family low income may also matter in its impact on the youth's transition to adulthood (Bane and Elwood 1986; Duncan et al. 2010; Page et al. 2009). Use of Canadian data with multiple years of annual family incomes (e.g. administrative data linked with tax records) would be a promising possibility.

Second, the present study does not empirically einvestigate the possible mechanisms explaining why family poverty has a negative and positive impact on the employment prevalence and intense work among children of immigrants respectively. The possible mechanisms explaining the negative impact of family poverty on employment prevalence may include neighborhood disadvantages; low-income immigrant families may be more likely to live in lower income neighborhoods where job opportunities are scarce (Jenkins et al. 2007). Or their residence in lower income neighborhoods may be associated with a greater chance of facing discrimination in hiring. A survey data on youths with detailed residential information, beyond province, will allow researchers to further explore how having low family incomes cumulatively disadvantage the employment experience of children of low-income immigrants.

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Tables & Figures

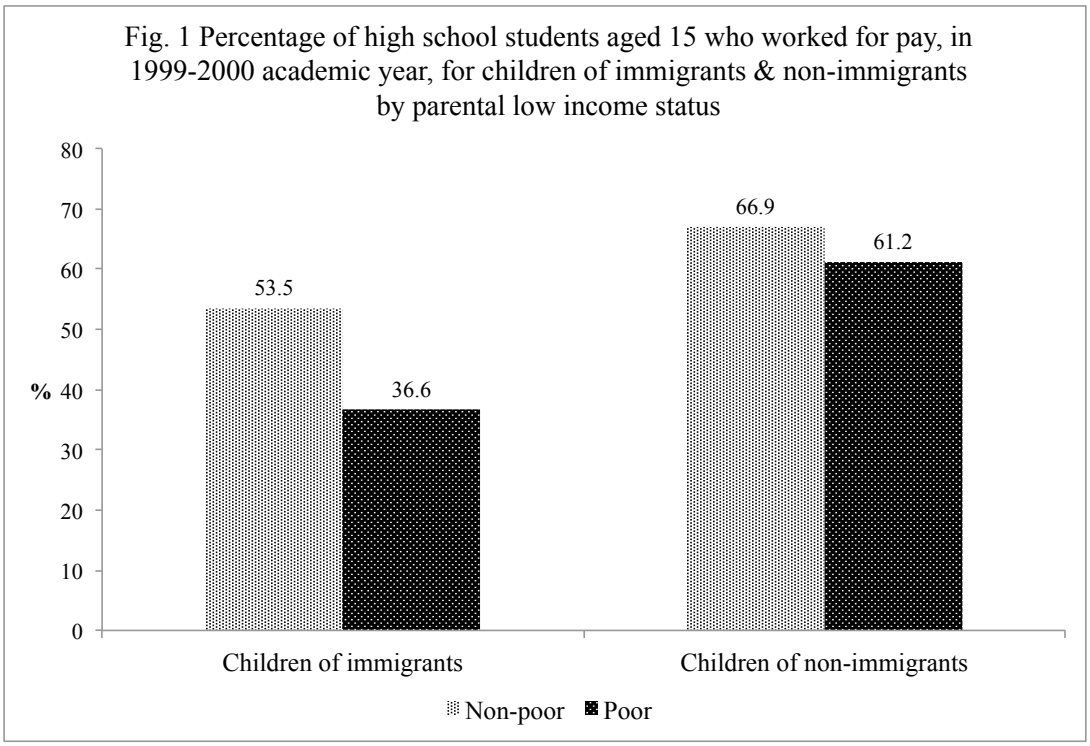

Table 1: Probit estimates of paid work, 1999-2000 academic year, for high school students of immigrants and non-immigrants, aged 15 (1 = worked, 0=did not work)

	Children of Immigrants				Children of Non-Immigrants	
	Model 1		Model 2		Model 3	
	Probit	Marginal Effect	Probit	Marginal Effect	Probit	Marginal Effect
Parent(s)' Cycle 1 income below Low Income Measure (ref.=above LIM)	-0.375 ***	-0.143	-0.167	-0.060	-0.103 *	-0.035
Youth's individual characteristics						
Female (ref. = male)	0.298 ***	0.113	0.283 ***	0.102	0.403 ***	0.138
Overall grade-average, 1999-2000 (ref. = below 60%)						
80% or above	0.024	0.009	0.112	0.040	0.346 ***	0.119
70-79%	-0.076	-0.029	0.009	0.003	0.285 ***	0.098
60-69%	-0.149	-0.057	-0.072	-0.026	0.082	0.028
Not stated	-0.222	-0.085	-0.099	-0.036	-0.152 *	-0.052
Highest education child thinks he/she will get/would like to get (ref. = high school or less)						
Don't know	-0.105	-0.040	0.033	0.012	0.030	0.010
Some postsecondary education	0.221	0.084	0.241	0.087	0.252 ***	0.087
University	0.099	0.038	0.196	0.071	0.252 ***	0.086
Parent(s)' characteristics						
Highest level of education (ref. = high school or less)						
Some postsecondary education	0.004	0.001	-0.071	-0.026	0.009	0.003
Bachelor's or higher	-0.061	-0.023	-0.069	-0.025	-0.031	-0.011
At least one parent worked in past 12 months (ref. = did not work)						
Yes	0.205	0.078	0.164	0.059	0.054	0.018
Highest education parent(s) thinks their child will get/would like to get (ref. = high school or less)						
Don't know	1.005	0.383	1.020	0.368	-0.093	-0.032
Some postsecondary education	0.253	0.096	0.290	0.104	0.059	0.020
University	0.244	0.093	0.430	0.155	0.029	0.010
Any postsecondary education	0.434	0.165	0.508	0.183	0.011	0.004
Family characteristics						
Lone parent family (ref. = two-parent family)	-0.024	-0.009	-0.034	-0.012	-0.049	-0.017
Number of children under 15 in household	0.029	0.011	0.040	0.014	0.113 ***	0.039
Contextual characteristics						
Urban residence (ref. = rural)	-0.438 ***	-0.167	-0.319 **	-0.115	-0.107 **	-0.037
Province of residence (ref. = Ontario)						
Atlantic provinces	0.152	0.058	-0.041	-0.015	-0.199 ***	-0.068
Quebec	-0.280 ***	-0.107	-0.274 ***	-0.099	-0.187 ***	-0.064
Prairie provinces	0.005	0.002	-0.022	-0.008	0.050	0.017
British Columbia	-0.195 **	-0.074	-0.130	-0.047	0.025	0.009
Family's immigration-related characteristics						
Child born abroad (ref. = born in Canada)			-0.162	-0.059		
Parent(s) arrived in Canada in the last 10 years (ref. = arrived earlier)			-0.126	-0.046		
Parent(s)' birthplace (ref. = US)						
Central & South America			-0.477 ***	-0.172		
UK			-0.077	-0.028		
Northern & Western Europe			0.082	0.030		
Other Europe			-0.125	-0.045		
China			-0.651 **	-0.235		
Other East & Southeast Asia			-0.765 ***	-0.276		
India			-0.701 ***	-0.253		
Other Asia			-0.616 ***	-0.222		
Africa and other			-0.544 ***	-0.196		
Intercept	-0.117		-0.096		-0.300 *	
Log pseudolikelihood	-2898.2		-2476.1		-11906.7	
Pseudo R2	0.043		0.088		0.051	

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

Table 2: Heckman probit estimates of working 20+ hours/week, 1999-2000 academic year for high school students of immigrants and non-Immigrants aged 15 (1=worked 20+ hrs/wk; 0=worked less)

	Model 1		Model 2		Model 3	
	Children of Immigrants		Children of Immigrants		Children of Non-immigrants	
	Selection into Employment Probit	Worked 20+hrs/wk Probit	Selection into Employment Probit	Worked 20+hrs/wk Probit	Selection into Employment Probit	Worked 20+hrs/wk Probit
Parent(s)' Cycle 1 income below Low Income Measure (ref.=above LIM)	-0.375 ***	0.470 ***	-0.164 *	0.286 **	-0.104 *	0.059
Youth's individual characteristics						
Female (ref. = male)	0.298 ***	-0.300 ***	0.285 ***	-0.329 ***	0.404 ***	-0.319 ***
Overall grade-average, 1999-2000 (ref. = below 60%)						
80% or above	0.024	-0.562 ***	0.109	-0.574 ***	0.351 ***	-0.420 ***
70-79%	-0.077	-0.186	0.005	-0.232	0.287 ***	-0.329 ***
60-69%	-0.148	-0.033	-0.076	-0.080	0.083	-0.117 *
Not stated	-0.217	-0.286	-0.088	-0.306	-0.148 *	-0.023
Highest education child thinks he/she will get/would like to get (ref. = high school or less)						
Don't know	-0.098	-0.216	0.042	-0.400	0.027	-0.169 **
Some postsecondary education	0.232	-0.084	0.246	-0.138	0.244 ***	-0.258 ***
University	0.110	-0.027	0.215	-0.149	0.244 ***	-0.321 ***
Parent(s)' characteristics						
Highest level of education (ref. = high school or less)						
Some postsecondary education	0.003	-0.150	-0.069	-0.081	0.014	-0.010
Bachelor's or higher	-0.059	-0.321 **	-0.065	-0.243 *	-0.024	-0.171 ***
At least one parent worked in past 12 months (ref. = did not work)	0.204	0.159	0.166	0.039	0.034	-0.084
Highest education parent(s) thinks their child will get/would like to get (ref. = high school or less)						
Don't know	0.982	-0.822	1.045	-0.811	-0.077	0.101
Some postsecondary education	0.241	-0.483	0.283	-0.411	0.035	-0.085
University	0.226	-0.385	0.413	-0.425	0.004	-0.104
Any postsecondary education	0.420	-0.484	0.507	-0.457	-0.013	-0.062
Family characteristics						
Lone parent family (ref. = two-parent family)	-0.021	0.044	-0.024	0.101	-0.048	0.075
Number of children under 15 in household	0.029	0.016	0.040	0.016	0.108 ***	-0.049 ***
Contextual characteristics						
Urban residence (ref. = rural)	-0.439 ***		-0.318 ***		-0.085 ***	
Province of residence (ref. = Ontario)						
Atlantic provinces	0.067		-0.124		-0.192 ***	
Quebec	-0.292 ***		-0.271 ***		-0.227 ***	
Prairie provinces	0.012		0.002		0.075 *	
British Columbia	-0.190 ***		-0.108		-0.087 *	
Family's immigration-related characteristics						
Child born abroad (ref. = born in Canada)			-0.154	0.236 *		
Parent(s) arrived in Canada in the last 10 years (ref. = arrived earlier)			-0.133	-0.013		
Parent(s)' birthplace (ref. = US)						
Central & South America			-0.465 ***	0.094		
UK			-0.076	0.021		
Northern & Western Europe			0.082	-0.203		
Other Europe			-0.116	0.134		
China			-0.653 ***	0.226		
Other East & Southeast Asia			-0.768 ***	0.484 **		
India			-0.701 ***	0.301		
Other Asia			-0.610 ***	0.361		
Africa and other			-0.537 ***	0.281		
Intercept	-0.110	0.753	-0.114	0.969 **	-0.248	1.032 ***
rho	-0.629 ***		-0.798 ***		-0.9637 ***	
Log pseudolikelihood	-4103.1		-3545.1		-19461	
Wald test of indep. eqns. (rho = 0): chi2(1)	5.55		5.29		106.93 ***	
Prob > chi2	0.0185		0.021		0	

*p < .05; **p < .01; ** p <.001

Table 3: Discrete changes in predicted probabilities of working 20+ hours/week in 1999-2000 academic year, high school students of immigrants and non-immigrants aged 15 (1=worked 20+ hrs/wk; 0=worked less)

	Children of Immigrants		Children of Non-immigrants
Variables (binary unless noted)	Model 1	Model 2	Model 3
Parent(s)' income below Low Income Measure	0.087	0.068	-0.004
Youth's individual characteristics			
Female (0 = male)	-0.044	-0.060	-0.023
Overall grade-average, 1999-2000 (0 = below 60%)			
80% or above	-0.194	-0.229	-0.103
70-79%	-0.051	-0.071	-0.062
60-69%	-0.025	-0.040	-0.029
Not stated	-0.079	-0.102	-0.056
Highest education child thinks he/she will get/would like to get (0 = high school or less)			
Don't know	-0.058	-0.106	-0.065
Some postsecondary education	0.004	-0.007	-0.045
University	0.006	-0.014	-0.086
Parent(s)' characteristics			
Highest level of education (0 = high school or less)			
Some postsecondary education	-0.031	-0.032	0.000
Bachelor's or higher	-0.099	-0.094	-0.080
At least one parent worked in past 12			
months (0 = did not work)	0.074	0.044	-0.030
Highest education parent(s) thinks their child will get/would like to get (0 = high school or less)			
Don't know	-0.086	-0.101	0.025
Some postsecondary education	-0.078	-0.081	-0.028
University	-0.090	-0.084	-0.049
Any postsecondary education	-0.066	-0.067	-0.032
Family characteristics			
Lone parent family (0 = two-parent family)	0.009	0.033	0.022
Number of children under 15 in household (continuous)	0.033	0.054	0.017
Family's immigration-related characteristics			
Child born abroad (0 = born in Canada)		0.061	
Parent(s) arrived in Canada in the last 10 years (0 = arrived earlier)		-0.028	
Parent(s)' birthplace (0 = US)			
Central & South America		-0.054	
UK		-0.007	
Northern & Western Europe		-0.052	
Other Europe		0.026	
China		-0.049	
Other East & Southeast Asia		0.019	
India		-0.034	
Other Asia		0.008	
Africa and other		-0.005	

Notes: These are the changes in the predicted probability of working 20+hours/wk when a continuous variable (e.g. the number of children under 15) increases one standard deviation (centered around the mean) or a dummy variable increases from 0 to 1. To estimate the predicted probabilities, the sample modes are assigned to the control dummy variables and the sample mean is assigned to the continuous variable. Models 1-3 in this table correspond to the results of Models 1-3 in Table 2.