

Promoting Access to Post-Secondary Education among Youth from Low-Income Families: An
Outcome Evaluation of the Youth Futures Program

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ABSTRACT

Youth Futures is a community-based intervention intended to improve post-secondary education (PSE) access rates among high school youth from low-income families, who tend to be under-represented in higher education (Berger, Motte, & Parkin, 2009; Norrie & Zhao, 2011). The bilingual (French and English) program spans seven months and consists of mentoring by university students, leadership training, workplace training and skill development activities, paid summer employment, and exposure to college and university settings. This thesis examined the outcomes of the Youth Futures program through three distinct studies.

First, a quasi-experimental study was conducted to investigate short-term outcomes among program participants ($N = 44$, mean age of 16 years old at baseline) in comparison to a group of their peers ($N = 40$, mean age of 16 years old at baseline). Second, a qualitative study was conducted with a purposeful sample of program participants ($N = 20$, mean age of 17 years old) to explore their first-hand experiences through semi-structured, open-ended interviews. Third, program alumni ($N = 79$, mean age of 19 years old) were briefly interviewed via telephone to investigate longer-term outcomes, including employment experience and enrolment and persistence in PSE.

Overall, no evidence was found to suggest that exposure to the Youth Futures program contributed to increased access to PSE among participants. Some characteristics of the Youth Futures sample recruited in the three studies raised questions about whether participants were at risk of not accessing PSE in the absence of the intervention (Berger et al., 2009; Childs, Finnie & Mueller, 2015; Finnie, Childs, & Wismer, 2011). Findings indicated several program improvement strategies that may be useful in modifying the Youth Futures program to ensure that students in need of the intervention receive tailored programming and that the timing of the

intervention is effective. Experts have called for a stronger evidence base in this area to facilitate sound decision-making about which potential program models to establish or expand and how to match students to the programs that best address their particular needs (Barnett et al., 2012; Brock, 2010; Le, Mariano, & Faxon-Mills, 2016; Shultz & Mueller 2006; Tierney & Hagedorn, 2007).

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INTRODUCTION¹

Structure and Scope of the Thesis

Post-secondary education (PSE) occupies an increasingly important role in Canadian society. Over the next decade, about two-thirds of job openings in Canada are expected to be in occupations requiring PSE (Department of Finance Canada, 2014). PSE graduates experience improved employment opportunities, increased earning potential, and improved health and well-being (Canadian Council on Learning, 2006). Most young people in Canada are pursuing PSE. In 2012, 75 percent of people in Canada aged 25 to 44 had post-secondary experience of some kind (Statistics Canada, 2016c). However, there are concerns that access to PSE is not equitable. Youth from low-income families, youth whose parents did not pursue PSE, youth who identify as Aboriginal, youth in out-of-home care, youth from rural areas, and youth with disabilities are all significantly less likely to attend PSE (Norrie & Zhao, 2011).

To address these inequalities, innovative interventions aimed at increasing PSE attendance amongst marginalized youth have been developed (Swail, 2012). The Youth Futures program constitutes one such intervention. Youth Futures participants are high school youth from low-income families living in Ottawa. The bilingual (English and French) program spans seven months and consists of mentoring by university students, leadership training, workplace training and skill development activities, paid summer employment, and exposure to college and university settings. The purpose of the program is to increase PSE access rates among participants.

This thesis examines the outcomes of the Youth Futures program and addresses the following overarching research question: Do youths who participate in the Youth Futures

¹ Note that the reference list for the Introduction and Chapters One through Six can be found at the end of the thesis, beginning on Page 318.

program experience increased access to college and/or university? This thesis is presented as a series of three manuscripts. The three-fold design allows for an examination of both shorter- and longer-term outcomes, using quantitative and qualitative methods that lend breadth and depth to the findings.

The first manuscript presents the findings of a quasi-experimental study used to investigate short-term outcomes among a cohort of participants in the Youth Futures program in 2014. A quantitative survey was administered to Youth Futures participants immediately prior to the onset of the program and again seven months later, immediately following completion of the program. The survey was also administered twice, seven months apart, to a comparison group of youths who did not participate in Youth Futures. This comparison group was recruited using two different methods: (1) half of the comparison group participants were recruited with the help of Youth Futures participants, who were asked to refer a friend (of the same age and gender, who was attending the same high school, at the same grade level), to complete the survey online, and (2) the remaining half of the comparison group participants were recruited in-person from drop-in and recreational programs at local community organizations. The survey administered to all participants in the study consisted of quantitative measures of a number of shorter-term outcomes – including self-efficacy, self-mastery, intrinsic and extrinsic motivation, perceived social support, and conscientiousness – that previous research has shown to be predictive of positive educational outcomes.

The second manuscript presents the findings of a qualitative study conducted with a subsample of 20 youths who completed the Youth Futures program in 2014. Semi-structured, open-ended interviews were conducted with the youths who were recruited using a purposeful sampling procedure during the final week of program activities. The interview guide contained

questions about participants' educational and career aspirations, their educational journey or pathway, their experiences in the Youth Futures program, and their perceptions of how they may or may not have changed as a result of their involvement in the program. A general inductive approach to qualitative data analysis was used.

The third and final manuscript presents the findings of a mixed-method study conducted with alumni of Youth Futures. Program alumni who participated in the program in 2012 or 2013 were contacted during a data collection period that spanned from 18 to 30 months after their graduation from the program. A brief questionnaire was administered via telephone. This questionnaire contained quantitative questions about educational and employment outcomes, as well as an open-ended qualitative question about alumni's perceptions of how they may or may not have changed or been impacted as a result of their involvement in the program.

In selecting the design and methodology to be applied in this thesis, consideration was given to the stage of program development and the previous evaluation work that had been conducted. The Youth Futures program was established in 2008. At the time that this thesis was developed, over 270 youth had participated in the program. A formative evaluation of the Youth Futures program was conducted in 2013. The evaluation was used to document current program activities, determine which aspects of the program were important to meeting program goals, and gauge participant satisfaction with the program (Runnels, 2013). Also in 2013, program stakeholders successfully applied for a three-year Social Sciences and Humanities Research Council Partnership Development Grant to evaluate the development of the partnership responsible for delivering the program, including the University of Ottawa, the City of Ottawa and Ottawa Community Housing. Part of the funding received through this grant was allocated

toward conducting a pilot outcome evaluation of the Youth Futures program – the genesis of this thesis.

This thesis constitutes the first outcome evaluation to be conducted on the Youth Futures program. Previously, program staff and partners collected anecdotal evidence in the form of informal feedback from youth, parents, and mentors. Program staff had also previously administered a follow-up survey to youths in the 2012 and 2013 cohorts of the program, six months after their graduation. Aside from these evaluation efforts, no outcome evaluation had been conducted prior to this thesis.

Urban, Hargaves and Trochim (2014) have emphasized the importance of situating each evaluation cycle within the broader context of the stage of development of the program and its evaluation history. The authors introduced the concept of *Evolutionary Evaluation*, a perspective that recognizes that programs, just like organisms, develop and evolve over the span of a unique life course. Evaluation decisions should account for the evolutionary phase of the program, and evaluation should be used to push the program along to the next natural phase. The hypothetical sequence of program evolution phases includes *Initiation*, *Development*, *Maturity* or *Stability*, and *Implementation* or *Dissemination*.

For any of these given phases, Urban and colleagues (2014) identify a corresponding and appropriate evaluation phase. They argue that it is critical for program and evaluation phases to be well-aligned to ensure that the program receives the information that is most needed in its current state of development and to prevent limited program and evaluation resources from being used inefficiently or sub-optimally. Misalignment of program and evaluation phases can be detrimental. If a late-stage evaluation is applied prematurely to an early-stage program there is a risk of a promising program being abandoned because of a lack of detectable evidence of its

effectiveness. If an early-stage evaluation is applied to a late-stage program there is a risk of an ineffective program being continued without making important or necessary changes.

At the time that work on this thesis began, the Youth Futures program was most closely aligned with the Stability phase of development, characterized by consistent implementation, formal written protocols, procedures or process guides in place, and clearly-stated expectations. The Youth Futures program had been carried out several times and had achieved implementation success as evidenced by the number of participants and graduates of the program. The program structure and activities had begun to remain relatively stable from one year to the next (Runnels, 2013). According to Urban and colleagues (2014), a program that has reached a stable state should generally be conducting evaluations that focus on effectiveness, using *Comparison and Control* designs that examine the strength of causal relationships between programs and outcomes, and emphasizing internal validity and generalizability. However, this thesis was slated to be the first outcome evaluation of the Youth Futures program, and was intended to serve as a pilot study. In this context, some elements of a *Change* evaluation were appropriate. Change evaluations examine the association between the program and changes in outcomes in a more limited and specific context and include a greater focus on verifying the reliability and validity of outcome measures.

The design of the thesis incorporates some features of both a Change evaluation and a later-stage Comparison and Control evaluation. A quasi-experimental design was selected, rather than a more rigorous, costly and lengthy experimental (i.e., randomized controlled trial [RCT]) design. An experimental design was considered premature. Imposing such a design risked compromising the natural evolution of the program and consuming scarce resources without producing the kind of information that the program stakeholders needed at that time. The type of

evaluation knowledge that had been established to date was not sufficient to support an experimental design. Stakeholders required clarification around key constructs, including which outcomes to measure and how. It is not advisable to pursue experimentation when the nature of the program and its measurement have not been adequately established (Urban et al., 2014). A quasi-experimental design was also strongly preferred by program stakeholders.

Although the current prevailing standards of evidence emphasize the importance of an experimental design, experts argue that such designs should be situated within a broader multi-phase system of evaluation (Trochim, 2005). By adopting an earlier-stage design, this thesis was poised to provide valuable information appropriate for the current state of program development. Using a mixed-method approach, the thesis was intended to establish participant recruitment and measurement procedures, explore outcomes, and provide timely feedback to the program stakeholders to support the growth of the program toward the next stage of its natural development.

Contribution to the Literature

It is critical for interventions like Youth Futures to be developed and implemented to address barriers to higher education, so as to promote equality of opportunity and ensure the strength of the Canadian economy and society in general. Although a great deal of planning, effort and resources are dedicated to developing and implementing such interventions, their outcomes are rarely evaluated (Le, Mariano & Faxon-Mills, 2016). Clear evidence about the effectiveness of innovative programs and services is needed. Although comprehensive reviews of the literature in this area have been conducted, they have not focused directly on interventions aimed at increasing PSE access. For example, a systematic review by Wilson, Tanner-Smith, Lipsey, Steinka-Fry and Morrison (2011) focused on the effectiveness of high school drop out programs in increasing high school completion rates, but did not address PSE access. Similarly, a systematic review and meta-analysis by Dietrichson, Bog, Filges and Jorgensen (2017) focused on the effectiveness of academic interventions for at-risk elementary and middle school students in improving standardized test scores in mathematics or reading, but did not examine longer-term outcomes in older students, or address PSE access. Few rigorous studies of community-based interventions promoting PSE access exist, especially within the unique Canadian PSE context. As Brock (2010) states, currently "there is very little research that demonstrates the efficacy of most higher education interventions" (p. 19). Experts have called for a stronger evidence base in this area to facilitate sound decision-making about which potential program models to establish or expand and how to match students to the programs that best address their particular needs (Barnett et al., 2012; Tierney & Hagedorn, 2007; Shultz & Mueller 2006). More research is necessary to draw conclusions about the overall effectiveness of the broad range of PSE

interventions that have been developed and to determine the variation in effectiveness for different intervention types or groups of students.

Experts have similarly called for further research on the effectiveness of youth programs that specifically adopt a Positive Youth Development (PYD) philosophy, as Youth Futures does. Although PYD programs are growing in popularity, “PYD is a young science,” and there is still a need for clarity about “what programs are useful for achieving what kind of results for what participants” (Durlak et al., 2007; p. 270, 271). There is a distinct need for more experimental or quasi-experimental evaluations of PYD programs (Roth & Brooks-Gunn, 2003a; Roth & Brooks-Gunn, 2003b). Key gaps in the evidence base for PYD programs have been identified: program effectiveness is variable, gains are modest rather than transformational, and long-term effects remain unknown (Dubois et al, 2011).

Policy makers and advocates concerned with the health and welfare of youth are focused on identifying evidence-based, community-level efforts that can enhance young people’s individual and contextual resources to maximize their chances of thriving across the adolescent years (Lerner et al., 2010; Lerner et al., 2011). The fundamental goal of the PYD perspective – to apply research to enhance youth development – is particularly significant amid contemporary societal and cultural changes, including growing globalization, trends toward individualization and pluralization of the life course, and an aging population. Experts argue that the range of competencies promoted by the PYD perspective will be instrumental in ensuring that today’s youth are able to thrive and succeed (Silbereisen & Lerner, 2007). The PYD field recognizes the importance of changing the social systems that affect young people. Many PYD programs target social system change outcomes at the family, school and community level and achieve positive

results (Durlak et al., 2007). Thus, there is a great deal of interest in exploring effective PYD programs.

There is also growing interest in the field about the role of so-called “non-cognitive factors” – representing sets of behaviors, skills, attitudes, feelings, thoughts and strategies – in fostering youth development and positive outcomes (Farrington et al., 2012; Garcia, 2014). Experts recognize that success in life depends on traits and attributes that go beyond the measures of cognitive or intellectual ability that have previously been the focus of research and practice (Heckman & Kautz, 2012). A large body of evidence has established an association between non-cognitive factors and positive outcomes for young people, including educational achievement (Gutman & Schoon, 2013). Youth Futures aims to promote access to higher education for youths by nurturing various socio-emotional and behavioral characteristics which encompass non-cognitive factors.

Evidence of the effectiveness of programs like Youth Futures indicates that interventions addressing non-cognitive factors are successful to different degrees for different factors at different ages (Heckman & Kautz, 2013). There is still much to learn about the impact of non-cognitive factors and how best to foster them (Garcia, 2014). There is a lack of evidence to support clear intervention strategies or guidelines and directions for practice remain unclear (Farrington et al., 2012). More evidence is needed to better understand the extent to which targeted interventions can serve to develop non-cognitive factors and whether such changes lead to improved outcomes for youth, especially in the long-term (Gutman & Schoon, 2013).

Youth Futures appears to be a timely program that is addressing the important issue of unequal access to PSE and is informed by an approach with a growing literature base. However, prior to this thesis, the effectiveness of the Youth Futures program had not yet been evaluated.

This thesis constituted an important first step in evaluating outcome changes associated with the Youth Futures program. The findings of this thesis were intended to contribute new knowledge on the outcomes of interventions promoting positive educational outcomes for youth using a PYD framework aimed at enhancing non-cognitive factors.

The use of a mixed-method approach in the thesis provided a comprehensive view of outcomes among Youth Futures participants. The thesis included a quasi-experimental study with a comparison group. This design allowed for a preliminary understanding of any outcome changes that may or may not be associated with the program. The thesis also included an in-depth qualitative study, which allowed for the voices of the youths to be heard, offering rich insights into their experiences in the program. Lastly, the thesis included a study of program alumni, which offered an indication of some of the longer-term outcomes that Youth Futures participants may experience.

Findings from this thesis were intended to be a valuable source of information for program stakeholders, who may use the evaluation findings to identify areas for program improvement, inform further evaluation efforts, or apply for on-going program funding or partnership support. Stakeholders had expressed interest in scaling up and/or expanding the program to additional municipalities across Canada. Robust evidence of the effectiveness of the program, however, would be needed before such efforts would be advisable. Program stakeholders have expressed their intentions to apply for a grant to support a longitudinal outcome study in the future. This thesis served as a pilot test: the first phase in a series of outcome evaluations that could ultimately determine whether the program is having the desired effect on access to PSE.

Further, the results of the thesis may be used to inform other programs providing comparable interventions to similar groups of youth. Small-scale programs like Youth Futures do not frequently attract the attention of evaluators (Dubois et al., 2011). External evaluations of community-based programs are particularly scarce, likely due to limited availability of resources and less demand for evidence and accountability compared to government or institution-based programs (Le et al., 2016). The lessons learned from this thesis may be used to plan and refine the implementation and scope of Youth Futures and other community-based programs. The evaluation findings can inform program decision-making and help program stakeholders take steps to maximize the effectiveness of the intervention in promoting equitable access to higher education for all youth.

CHAPTER ONE

Overview of Access to Post-Secondary Education in Canada

Access to higher education is critical to the economic prosperity of our nation. In a competitive global economy, it is necessary to have "well-trained, well-educated and highly productive workers to sustain our advantage" (Cabinet Committee on Poverty Reduction, 2008; p. 8). Over the next decade, about two-thirds of job openings in Canada are expected to be in occupations requiring PSE (Department of Finance Canada, 2014). Acquiring PSE is becoming increasingly necessary for Canadians who wish to find secure employment with promising earning potential. Indeed, the 2006 Census confirmed that "higher education is a gateway to higher earnings": young Canadian men and women aged 25 to 34 with a university degree reported median annual earnings that surpassed those of their counterparts who did not have a high school diploma by about \$20,000 (Statistics Canada, 2008a; p. 17).

Research has established that adults in Canada who have a Bachelor's degree experience a 21 percent increase in weekly wage earnings, relative to those who have completed high school alone (Ferrer & Riddell, 2002). The past several decades have seen major changes in the Canadian wealth structure. Many of these changes are tied to education. For example, the overall median wealth of families has stayed roughly the same between 1984 and 2005, yet the wealth of families headed by a university graduate has increased by 40 percent (Morissette & Zhang, 2006; p. 8).

Canadian society benefits in many ways from the increased earning potential associated with PSE. As Baum, Ma, and Payea (2013) explain, not only is increased access to PSE associated with decreased rates of poverty and unemployment; it also produces increases in tax revenues and decreases dependence on social safety net programs. The financial return on

investments in PSE can also be seen in the form of reduced costs incurred by the health care system, justice system, child protection system, and social assistance system (Cabinet Committee on Poverty Reduction, 2008).

Beyond the benefits to Canada as a whole, access to PSE has enormous implications for the health and well-being of individuals in Canada. Education provides individuals with a means to increase their access to societal and economic resources, resulting in improved health and well-being. Longitudinal studies suggest that poor school performance is causally related to psychosocial problems, unemployment, criminality and suicide (Forsman, Braanstrom, Vinnerljung, & Hjern, 2016). Research has shown that people with more years of formal education are more likely to access preventative healthcare, have improved health statuses, and have lower rates of obesity, smoking, and mortality (Baum et al., 2013; Levin, Belfield, Meunnig, & Rouse, 2007). Those with higher levels of education are also more likely to participate in positive forms of civic engagement. For example, they are more likely to vote and volunteer and are less likely to be incarcerated (Baum et al., 2013; Baum & Payea, 2005; Pennington, 2004).

Further, Gilens (2012) emphasizes that it is affluent people who are most likely to enjoy political power and to successfully impact government policy. In contrast, people with less formal education experience diminished social growth, a reduced sense of personal control, and less personal satisfaction (Canadian Council on Learning, 2009b). A lack of financial resources is associated with a host of negative effects on an individual's mental and physical health, including psychological stress, depression, anxiety, and health-threatening coping behaviours (such as smoking) (Mikkonen, & Raphael, 2010). The value of education cannot be understated.

Educational Attainment in Canada

Promisingly, many young people in Canada are pursuing PSE. Almost 80 percent of youth attend college or university by their mid-twenties (Shaienks & Gluszynski, 2007). Berger and colleagues (2009) report that 57 percent of youth aged 18 to 24 were enrolled in or had completed some form of PSE in 2006: 28 percent were enrolled in or had completed university studies (including some who had also studied at the college level), and 28 percent were enrolled in or had completed community college/CEGEP/trade studies. Provincially, Norrie and Zhao (2011) found that 46 percent of Ontario youth will access university by the age of 21, and 36 percent of all youth will access college by age 21.

By examining these figures in more detail, a picture emerges of the educational pathways that various youth may take. To begin, it is fair to say that most youth are successful in graduating from high school. For example, Gilmore (2010) found that only about 9 percent of youth in Canada aged 20 to 24 had not completed high school. However, this rate does vary across different regions. In Ottawa, specifically, data reveal that 76 percent of students are graduating from high school on time (i.e. within five years of having started Grade 9), and 17 percent of students are dropping out of high school (OCDSB, 2013).

It is increasingly becoming the norm for high school students to apply to PSE upon graduation. In Toronto, Brown (2010) determined that almost all high school graduates (89 percent) who started Grade 9 in 2004 applied to PSE over the 2008 and 2009 application cycle, and over three quarters (78 percent) confirmed an offer of admission from an Ontario college or university. Given that additional students confirm an offer to a college or university outside of Ontario, and that some students will go on to apply over the 2010 and 2011 application cycle, Brown (2010) estimates that the proportion of Toronto high school graduates accessing PSE is about 85 percent.

Most of the students who access PSE are likely to have completed a University-Preparation Ontario Secondary School Diploma (OSSD), which is achieved by taking *Academic* level courses throughout high school. Taking Academic courses is a requirement for university participation but can also be used for admission into college programs. Contrarily, *Applied* level courses, which result in a College-Preparation OSSD, cannot be used for admission into university programs (Dooley, Payne & Robb, 2016). In Ontario, 46 percent of all students attain a University-Preparation OSSD (King, 2009). Of these students, at least 90 percent attend some form of PSE within one year of leaving high school. About 26 percent of all students attain a College-Preparation OSSD. Of these students, only 45 percent register in college right after high school (King, 2009).

While pursuing PSE is now common for high school graduates, many students do not take a direct pathway through higher education. Berger and colleagues (2009) found that only one in three young people in Canada attended PSE immediately after high school and either remained in PSE or successfully graduated by the age of 22 to 24. This line of research underscores the importance of not only examining PSE access but also PSE retention and persistence. Parkin and Baldwin (2009) provide a useful review of Canadian research on persistence rates and determinants of student success. They concluded that the Canadian post-secondary drop-out rate is among the best of the OECD countries, with only about 15 percent of those who begin post-secondary studies abandoning PSE altogether.

Most students ‘drop out’ only temporarily, transferring to other programs or institutions or taking a break before re-enrolling again. In-depth examination of patterns of switching, leaving, and re-entering PSE indicates that about 58 percent of college students and 55 percent of university students graduate from their original program within five years (Finnie & Qiu; 2008;

Childs, Finnie, & Martinello, 2016). Total persistence rates, which account for switching programs or institutions and for temporary drop-outs who then re-enroll, indicate that 82 percent of college students and 90 percent of university students persist in PSE to graduation (Finnie & Qiu, 2008). Thus, most students graduate, but many take circuitous pathways to get there. Students are at the highest risk of leaving PSE (switching programs or institutions, or dropping out) during their first year of studies (Childs et al, 2016; Finnie, Childs, & Qiu, 2012; Mueller, 2007).

The relatively high rate of PSE access and persistence among young people in Canada is encouraging. However, it should not distract from examining important questions about the gaps that continue to exist. Given its importance, both to individuals and to the overall prosperity of the country, it is imperative to investigate which students do not successfully pursue higher education, and why.

CHAPTER TWO

Social and Economic Predictors of Educational Attainment among Youth

There are long-standing concerns that access to PSE is not equitable and that certain groups of youth are under-represented in higher education in Canada. Youth from low-income families, youth whose parents do not have any PSE experience (referred to as "first-generation" youth), youth who are Aboriginal, youth in out-of-home care, youth from rural areas, and youth with disabilities are all significantly less likely to enrol in PSE (Berger et al., 2009; Norrie & Zhao, 2011; Provincial Advocate for Children and Youth, 2012).

What follows is an examination of the degree to which several groups of youth are accessing PSE, and why. Specifically, this chapter will address PSE access according to parental income level, parental education level, Aboriginal background, child welfare system involvement, and immigration background. These five factors were selected for further investigation because they pertain to the group of participants being targeted by the Youth Futures program at the time this thesis was developed.

Parental income level. There is general agreement within the existing literature that students from high-income families are more likely to access PSE, particularly university (de Broucker, 2005). In Ontario, the biggest disparity exists between students from families in the lowest income quartile (income less than \$25 000 per year), 72 percent of whom attend some form of PSE, compared to students from families in the highest income quartile (income more than \$100 000 per year), 93 percent of whom attend some form of PSE (Norrie & Zhao, 2011). Nationally, roughly half of students who come from families in the lowest income quartile will graduate from high school and proceed directly to PSE. This is in contrast to students from families in the highest income quartile, of whom 77 percent access PSE immediately following

high school (Berger et al., 2009). The relationship between parental income and access to PSE is most evident in the case of university participation: students from high-income families are two to three times more likely to go to university than are students from low-income families (de Broucker, 2005).

The relationship between family income and educational outcomes can also be explored by investigating the influence of living in a given neighbourhood. In Toronto, 66 percent of youth who live in the neighbourhood with the lowest average income graduate from high school, compared to 87 percent of the youth living in the neighbourhood with the highest average income (Brown, 2010). Similar findings have been documented in the city of Ottawa. For youth living in one low-income social housing neighbourhood in the west-end of the city, the high school drop-out rate was 49 percent (Pathways to Education Ottawa, 2013). PSE completion rates in this neighbourhood were also low: 14 percent of adults aged 25 to 64 had a Bachelor's degree, compared to 40 percent of this age same group in the municipality as a whole (Pathways to Education Ottawa, 2006).

Many would assume that the effects of family income on access to PSE are simply the result of financial considerations and a lack of ability to fund higher education. However, this is not the case. As de Broucker (2005) states, financial considerations matter, but they operate alongside other factors and are not the most directly important. For example, de Broucker (2005) points out that the impact of family income is observed to the same degree even in provinces with lower tuition costs and in countries with drastically different approaches to tuition fees.

Research suggests that part of the problem may be that students from low-income family backgrounds overestimate the financial burden that tuition will impose on them, while at the same time underestimating the financial pay-off associated with earning a PSE credential. Usher

(2005) found that youth from low-income backgrounds estimated that average annual tuition for PSE programs cost \$6,834 in 2004, when, in fact, it cost \$3,749. They also estimated that the average annual income differential between high school and university graduates was \$4,885, when, in fact, it was in the range of \$20,000. There is also evidence that parental expectations play a role. Eighty percent of parents whose income is below \$30,000 have aspirations for their children to attend PSE, compared to 95 percent of parents whose income is \$80,000 or more (Statistics Canada, 2001).

Frenette (2007) explains the gap in PSE attendance, particularly at the university level, by suggesting that families with more financial resources are better able to support their children's learning from an early age. For example, high-income parents are better able to purchase learning materials for their children, invest in quality day care, and enrol their child in top-tier schools in good neighbourhoods, where the child is also likely to join peer groups that have a positive influence on his or her development. Frenette (2007) argues that this type of support for learning from an early age results in higher academic abilities, thus increasing the chance that the child will go on to pursue PSE.

Ultimately, while the relationship between income and PSE attendance has been well-documented, Norrie and Zhao (2011) acknowledge that the effect of income is markedly less than is commonly believed. A recent study by Frenette (2017), which used personal income tax data from students and their parents, found that overall PSE enrolment rates have been steadily increasing, and that the largest gains have occurred at the bottom of the income distribution. Other researchers have determined that the effect of family income on PSE access is greatly reduced when other student characteristics are factored in. Eighty-four percent of the gap in university attendance that exists between low- and high-income youth can be accounted for by

factors such as better test scores and marks, parental influence, and high school quality. Only 12 percent of the gap is attributable to financial constraints (Frenette, 2007). Similarly, Finnie and Mueller (2007) find that the relationship between parental income and university attendance is largely diminished once parental education level, high school grades, academic participation, and standardized reading test scores are accounted for. These findings underscore the complexity of the relationship between parental income and PSE access and should serve to caution those who believe that inequalities in higher education could be solved by reduced rates of tuition alone.

Parental education level. Parental income is closely related to parental education. However, as de Broucker (2005) argues, the two factors do not correlate perfectly, and when it comes to determining whether a child will pursue PSE, the educational background of their parents remains the most influential factor. “Parents with PSE – even those who don’t have high incomes – are significantly more likely to see their children go to college or university” (de Broucker, 2005; p. 34). Norrie and Zhao (2011) concluded that a low level of parental education is one of two factors that represent the largest negative effects on PSE participation, the other being Aboriginal background.

The higher the level of education of a child's parents, the higher the probability that he or she will pursue PSE (de Broucker & Underwood, 1998). First-generation students are those whose parents do not have any college or university experience. First-generation students are significantly less likely to access PSE than are students whose parents have some degree of PSE exposure (Malatest, 2007). Eighty percent of young people in Canada whose parents completed a university education enrol in PSE, as do 66 percent of those whose parents completed a college certificate or diploma. These rates stand in contrast to those of youth whose parents are not educated beyond high school, of whom only half pursue PSE (Berger et al., 2009). Overall, first-

generation students are two-and-a-half times more likely to not participate in any form of PSE, compared to students whose parents have a higher education (Norrie & Zhao, 2011). The effects of being a first-generation student are strongest when it comes to university, rather than college, attendance. Students with a university-educated parent are more than twice as likely to attend university, compared to youth whose parents did not attend college or university (Finnie, Laporte & Lascelles, 2004).

As with parental income, there are varied explanations of the factors that may underlie the relationship between parental education and the PSE achievements of youth. Parents with more formal education experience are more likely to expect that their children will acquire PSE credentials: 97 percent of university-educated parents want their children to complete PSE, compared to only 70 percent of parents who have not completed high school (Statistics Canada, 2001). Also, first-generation students are themselves less likely to aspire toward PSE when they are in high school (Cheung, 2007). Fewer first-generation students prepare themselves for PSE by taking Academic-level high school courses. In Ontario, 81 percent of Grade 10 students with at least one university-educated parent are enrolled in Academic-level courses, compared to only 57 percent of students with parents who do not have a university education (Krahn & Taylor, 2007).

These trends with regard to PSE expectations and preparation could be explained by the fact that first-generation students doubt the benefits or pay-off of higher education and also tend to have worse high school grades than their peers (Cheung, 2007; Prairie Research Associates, 2005). The observed patterns may also be due to a tendency for parents with more formal education experience to have higher incomes and to live in urban areas – two factors that have been shown to independently predict PSE attendance (Krahn & Taylor, 2005). First-generation

students often encounter financial barriers when funding college or university. The parents of first-generations students are less likely to have saved for their child's education (Finnie, Childs, Wismer, 2010; Statistics Canada, 2001). First-generation students are less likely to receive financial support from their parents and are more likely to rely on student loans (Malatest, 2007). First-generation students may also be disadvantaged because "parents with PSE credentials may provide greater levels of parental involvement, increased expectations, attitudes and values for academic success, and increased familiarity with the PSE process and experience" (Cheung, 2007, p 37).

Whatever the underlying cause of the relationship between PSE access and parental education, research shows that low levels of parental education have persistently contributed to gaps in student achievement over time. Turcotte (2011) explains that in 1986, students whose parents were university graduates were 3.8 times more likely to achieve a university degree than those whose parents were not university graduates. In 2009, the gap was smaller. Children of university graduates were 2.4 times more likely to themselves hold a university degree, compared to the children of parents who were not university graduates. So, while the disparity may be decreasing over time, the gap continues to exist: students whose parents have a university or college degree maintain a considerable advantage over first-generation students when it comes to accessing PSE (Turcotte, 2011).

Aboriginal background. As previously stated, Aboriginal background has a negative impact on access to PSE, to an extent comparable to the effects of parental education (Norrie & Zhao, 2011). In 2006, the Canadian Census determined that 44 percent of Aboriginal people aged 25 to 64 had a PSE qualification, compared to 61 percent of the general Canadian population. Notably, only 8 percent of Aboriginal people had a university degree, which stands

in marked contrast to the 23 percent reported for the general Canadian population (Statistics Canada, 2008). The high school completion rate is also vastly different between the two groups. Aboriginal people are twice as likely as non-Aboriginal people to have discontinued their education before completing high school (Berger et al., 2009).

Some Aboriginal groups have higher educational achievement than others. For example, the Métis population has a greater high school completion rate than the First Nations and Inuit populations and furthermore, the off-reserve Aboriginal population accesses PSE at a higher rate than the on-reserve Aboriginal population. (Berger et al., 2009; Gilmore, 2010; Hull, 2005; Shaienks, Gluszynski & Bayard, 2008). Yet, regardless of the specific group being measured, the overall disparity remains. The Aboriginal population is growing at a faster rate than the general Canadian population, and the gap in education levels between the two groups is widening (Berger et al., 2009; Statistics Canada, 2008).

Even for those Aboriginal students who do pursue higher education, educational pathways tend to be more circuitous: Aboriginal students take longer than average to complete high school, enrol in PSE, and complete postsecondary programs (Hull, 2005). These patterns are undoubtedly due to the number and scale of the obstacles facing Aboriginal students. Such obstacles include socio-economic factors such as poverty and unemployment, as well as barriers such as inadequate high school preparation, discrimination and racism, low self-concept, and institutional insensitivity to Aboriginal cultures, including forced assimilation (Malatest, 2004).

Child welfare system involvement. In 2012 there were 11, 000 Crown Wards and 17, 000 children in out-of-home care in Ontario. This amounts to one in every 182 children (Provincial Advocate for Children and Youth, 2012). The educational outcomes for these youths are poor (Snow, 2009). Crown Wards are three times more likely to drop out of high school than

other youth (Cabinet Committee on Poverty Reduction (2008). Only 44 percent of in-care youth in Ontario graduate from high school, compared to provincial rates of 81 percent (OACAS, 2012). Nationally, only 30 percent of youth in care complete high school. Of those that do attend PSE, only 16 percent attend university (Provincial Advocate for Children and Youth, 2012).

Youth in care are rarely able to follow a conventional educational pathway, as many experience frequent disruptions in their education. A survey of Crown Wards in Ontario determined that at any given time, over 20 percent of children in care are not enrolled in any type of school (Provincial Advocate for Children and Youth, 2012). A comprehensive review of the literature revealed that children in care are consistently performing in the low- to low-average range on academic achievement measures, scoring below grade level (Trout, Hagaman, Casey, Reid, & Epstein, 2008).

A multitude of risk factors facing youth in care have been identified and have been shown to affect academic functioning. This long list of factors includes high absenteeism rates, high rates of mental illness, maladaptive behaviour and behavioural difficulties, special education needs and developmental disabilities, frequent disciplinary action, such as suspension and expulsion, high rates of grade retention, low scores on standardized tests, frequent school changes associated with changes in home placements, and pre-care experiences of abuse, neglect and poverty (Flynn, Tessier & Coulombe, 2013; Flynn, Marquis, Paquet & Peeke, 2011; Snow, 2009; Trout et al., 2008).

While researchers have determined the many academic risk factors that youth in care are facing, there is less research available to suggest how best to intervene and which academic strengths and weaknesses to target (Trout et al., 2008). Forsman and Vinnerljung (2012) conducted a review of evaluations of interventions aimed at improving school achievement in

youth in care, but found only 11 relevant studies across the entirety of the field, spanning 35 years. The authors found the strongest empirical evidence for tutoring interventions, but they concluded that there was a definitive need for further research in this area. A more recent systematic review by Evans, Brown, Rees and Smith (2017) found 15 studies reporting on 11 interventions. However, methodological weaknesses of the available studies prevented the authors from drawing conclusions about effectiveness of the interventions (Evans et al., 2017). Some evidence of the effectiveness of tutoring interventions has emerged from randomized controlled trial (RCT) studies. An RCT by Flynn, Marquis, Paquet, Peeke, and Aubry (2012) found that an individualized direct-instruction tutoring intervention delivered by foster parents produced gains in sentence comprehension, reading, and math among primary-school children. An RCT by Harper and Schmidt (2016) similarly found support for the effectiveness of the same direct-instruction small-group tutoring intervention for primary-school children in foster care.

Experts point to the need for better coordination between the child welfare and educational systems (Jackson & Cameron, 2012; Snow, 2009). To improve educational outcomes, it is important to increase the level of permanency that youth in care experience, as well as to foster positive adult connections, offer educational support like tutoring and strengths-based assessment, and identify and treat mental health problems (Jackson & Cameron, 2012; Pecora, 2012).

Youth in care are also particularly disadvantaged because in their late teen years, they are being discharged from care at the same time that they are finishing high school and facing the decision to attend PSE. For many, transitioning out of care constitutes a major, life-disrupting event that results in housing, income and situational instability (Snow, 2009). Youth require ongoing personal, financial, and housing support if they are to be expected to persist in their

education past high school (Jackson & Cameron, 2012). From an early age, youth in care would benefit from life skills preparation, encouragement to plan for PSE, and support in applying to PSE and identifying local programs and resources that are available (Pecora, 2012).

Encouragingly, new financial and social supports were recently introduced to ease the transition into adulthood for youth in care in Ontario (Ministry of Children and Youth Services, 2013). Eligible youth up to age 24 may receive monthly financial support, tuition grants, and reimbursements for applications to PSE. Funding was also dedicated to hiring additional workers to support young people transitioning out of care. One targeted initiative is the development of 21 Crown Ward Education Championship Teams (CWECTs) across the province. These teams are intended to directly support youth in their pursuit of PSE by providing peer mentorship, experiential learning opportunities in employment and education settings, and a variety of on-campus activities and presentations. A formative evaluation of two CWECTs was recently conducted, involving interviews with CWECT team members, caregivers, community partners, and youth (Weegar, Hickey, Shewhuck, Fall, & Flynn, 2016). Findings indicated that youth in care or transitioning out of care had high intentions of pursuing PSE, and rated the importance of PSE highly. However, youth reported a lack of awareness of and access to PSE-related information and resources; similarly, caregivers also indicated a need for more information about how best to support youth in their pursuit of PSE. The evaluators recommended one-on-one support for youth in navigating educational and employment pathways and recommended that CWECTs provide services not only to youth, but to caregivers and community agencies as well, because of the important role they play in promoting PSE access (Weegar et al., 2016).

Immigration. Canada is a country well-known for its cultural diversity. Around 20 percent of the population are first-generation immigrants (born outside of Canada) and 15

percent are second-generation immigrants (born in Canada to parents born outside of Canada) (Corak, 2008). New Canadians are sometimes assumed to be an under-represented group in PSE, but this is largely a misconception (Norrie & Zhao, 2011). In fact, on many measures of educational attainment, immigrants outperform non-immigrants. Immigrants are less likely to drop out of high school and are more likely to pursue PSE, especially at the university level (Finnie & Mueller, 2009; Gilmore, 2010; Norrie & Zhao, 2011).

A recent study by Dooley and colleagues (2016) determined that across income levels, first-generation immigrant youth are more likely to access PSE, and more likely to access university than Canadian-born students. The effect of income on PSE access differs dramatically depending on whether a student is Canadian-born or a first-generation immigrant. Overall, the authors found a 10 percentage point difference in PSE access between students living in lower- versus higher-income neighbourhoods. However, they determined that it is Canadian-born students living in lower income neighbourhoods who are the least likely to access PSE. First-generation immigrant youth living in low-income neighbourhoods enrol in PSE at rates that are comparable to those of Canadian-born students living in high-income neighbourhoods (Dooley et al., 2016).

Exploring the educational attainment of second-generation Canadians is also important. The extent to which new Canadians can engage in and benefit from mainstream society, in comparison to other Canadians, is a clear indicator of the level of inclusiveness that our nation has achieved (Corak, 2008). It is heartening, then, to find that research shows that second-generation Canadians achieve educational outcomes that are comparable to – and in some cases exceed – that of their peers whose parents were born in Canada (Corak, 2008; Finnie & Mueller, 2009).

The educational success of new Canadians has been at least partially attributed to the high value placed on education in immigrant families (Gilmore, 2010), or what Finnie and Mueller (2009) describe as "cultural factors, including a strong pro-PSE ethos" (p. 20). The effects of this cultural orientation toward education can be observed even if other factors are controlled for, including geography (urban/rural), parental education level, high school grades, literacy scores, and high school engagement (Finnie & Mueller, 2009). Immigrant families appear to be able to resist the negative impacts of low parental education on their children's PSE outcomes. As Corak (2008) has found, educational disadvantage does not pass from parent to child in immigrant families in the same way that it does in non-immigrant families. Children of immigrant parents with no PSE experience go on to pursue PSE at rates that are much higher than those observed for children of Canadian-born parents with no PSE experience. Corak (2008) states that immigrant parents are "education inclined", regardless of their own education level (p. 14).

While there is widespread research documenting the educational successes of immigrants, Berger and colleagues (2009) stress that new Canadians are not a homogenous population and that some groups experience more deleterious outcomes than others. Researchers have identified immigrants from certain countries of origin that appear to face particular challenges. These include those from the Americas (excluding the United States), particularly the Caribbean and some Latin American countries, as well as West Africa (Corak, 2008; Finnie & Mueller, 2009). In Toronto, students born in the English-speaking Caribbean and Central/South America/Mexico were found to have the lowest high school graduation rates, while those born in South and Western Europe, South Asia, and East Asia had the highest (Brown, 2010). The same study found that youth who were born in the English-speaking Caribbean or in Central/South

America/ Mexico, or spoke Portuguese, Spanish or Somali at home, were all facing higher academic risks than their classmates (Brown, 2010).

In addition to country of origin, the education outcomes of a child can differ depending on the age at which they migrated to Canada. Corak (2012) found that the risk of not graduating from high school is about 15 percent for boys and 11 percent for girls who come to Canada before nine years of age. This risk increases by one percent for every year past the age of nine, reaching 20 percent to 25 percent for those youth who arrive in Canada after the age of 13. Gilmore (2010) found similar results when examining educational outcomes by period of landing. The researcher determined that 20 to 24-year-olds who had come to Canada more than ten years earlier were less likely to have dropped out of high school than those who had arrived within the previous ten years. These types of patterns may be at least partially attributable to the challenges of learning a second language past a certain developmental stage, though Corak (2012) suggests that more analysis is needed, and that the trends may also be the result of an education system that is not attuned to the needs of immigrant children in their later years.

Education and the Intergenerational Cycle of Poverty

In exploring which groups of youth are accessing PSE and which are not, it becomes increasingly evident that current educational attainment rates are problematic because they are contributing to an intergenerational cycle of poverty among youth from certain family backgrounds. A society that sees "the rich raising children who grow up to be rich, the poor seeing their children becoming the next generation of poor" is troubling morally as well as economically, leading to compromised levels of innovation, efficiency and productivity (Corak, 2013; p.25). Ensuring that all youth in Canada – regardless of their family background – are able to access PSE is critical if we wish to effectively combat the intergenerational transmission of

poverty (Jacobson & Mokher, 2009). "The poverty cycle will not be broken until all Ontario children are given the opportunity to go, stay and thrive in school. A good education levels the playing field, ensuring that each and every child has the opportunity to live up to his or her potential" (Cabinet Committee on Poverty Reduction, 2008; p. 13).

The notion that children from non-privileged backgrounds deserve an equal opportunity to pursue a higher education and the positive life prospects associated with it is consistent with the concept of social mobility. Social mobility can be defined as a "weakening of the link between family background and children's outcomes" (Boston Consulting Group, 2010; p. 8). A society that lacks social mobility is fundamentally undesirable, as it suggests that luck and historical circumstances, not hard work, talent or merit, are responsible for an individual's life outcomes (Lammam, Karabegovic, & Vedhuis, 2012). Improving the life chances of the 872 000 children that currently live in poverty in Canada – amounting to 13 percent of the children in the country – is also critical to ensuring an educated, healthy and employable workforce for the future of the nation (Cabinet Committee on Poverty Reduction, 2008; Family Service Toronto, 2013; Fleury, 2008). Promoting a high degree of social mobility across the generations is conducive to improved societal well-being, productivity, and a shared sense of fairness (Corak, 2013).

There is broad consensus that ensuring equality of opportunity when it comes to accessing higher education is a powerful means of increasing social mobility (Corak, 2013). This notion is embraced by governmental bodies who seek to end the intergenerational cycle of poverty by focusing on programs and policies that assist children from disadvantaged backgrounds in pursuing education. An example is Ontario's Poverty Reduction Strategy, which introduces a series of PSE grant programs for students from low-income families, first-

generation students, students with disabilities, Crown Wards, and Aboriginal youth (Cabinet Committee on Poverty Reduction, 2008).

Encouragingly, there is evidence to suggest that ours is a relatively dynamic society and that social mobility is possible. Canada ranks well on measures of mobility, indicating a considerably weaker link between parents' and children's earnings compared to other OECD countries like the United Kingdom, Italy, France and the United States (Causa & Johansson, 2009). Similarly, Canada ranks well on the "socioeconomic gradient", which measures the link between parental socio-economic background and children's cognitive abilities (studied using the Programme for International Student Assessment test scores) (Causa & Johansson, 2009). The evidence suggests that Canada has been relatively effective in introducing policies and programs that offset the effect of family background on educational and labour market outcomes.

Lammam and colleagues (2012) studied income changes across the lifecycle from 1990 to 2009. The researchers found that over the 20-year period, 87 percent of people in Canada whose incomes were in the bottom 20 percent in 1990 moved up at least one income group by 2009. Further, 70 percent from the second lowest income group moved up at least one income group, as did 52 percent of those from the third lowest income group. However, the underlying factors that propel or inhibit mobility are not well understood, and more needs to be done to determine why some people in Canada are more or less mobile than others (Lammam et al., 2012). There is also a need to explore the history and politics that contributed to unequal opportunity in the first place. The educational system itself appears to replicate and contribute to social inequalities through structural factors like educational quality, school segregation, and place of education (Walsemann, Gee, & Ro, 2013). Bedolla (2010) warns that until we have

carefully considered the historical legacy of educational inequality and determined how best to promote real political change, the problem will not be overcome.

CHAPTER THREE

Interventions to Promote Educational Attainment

Thus far, I have described the problem of unequal access to higher education in Canada, and have discussed the importance of finding a way to ameliorate this problem. Promisingly, there are many programs and policies currently in place across North America that are intended to narrow the gap in educational achievement associated with family background. I will now briefly examine the conclusions made by experts in the field who have identified the barriers to PSE that marginalized youth are facing and have made recommendations for effective intervention approaches to counter them. I will also highlight a handful of Canadian programs that are tackling the issue of educational disparity using new and innovative strategies.

Expert recommendations for effective interventions. There is a growing body of literature that identifies the needs of marginalized youth as they pursue access to higher education in their teenage years. Researchers have proposed key strategies to effectively meet these needs. Informational needs are one such example. De Broucker (2005) recommends that students be offered information and counselling from an early age to help them make the right PSE decisions. Students need program activities that inform them about career prerequisites, tuition costs, the returns of higher education, and the resources available to help fund their studies (de Broucker, 2005). They also benefit from information and encouragement to take academically challenging courses in high school and to prepare themselves for PSE (Choy, 2001). De Broucker (2005) acknowledges that low-income students are particularly in need of these supports, because they are typically not exposed to accurate information about PSE at home, frequently carry distorted views about PSE, and are likely to be overwhelmed by the massive amount of information available and the complexity of the PSE system. Increased access

to clear, reliable information can help youth from low-income backgrounds come to consider PSE as a valid option for their future (de Broucker, 2005).

Information and counselling is important from an early age and continues to be important once a student is attending PSE. Jacobson and Mokher (2009) examined the experiences of low-income students who were high achievers upon entering PSE but were unsuccessful in earning a PSE credential. The main impediments that these students encountered included informational, financial, experiential, motivational, and institutional barriers. The authors concluded that informational deficits were particularly pronounced and that students commonly lacked information about topics ranging from the relative returns of PSE to the availability of financial aid. They suggested several low-cost methods — including high-quality assessment, counselling services and informational services — to eliminate these deficits and effectively provide students with the support they need to increase course completion and credential attainment.

Brock (2010) agrees that students have important informational needs to be addressed both before and during PSE. For example, high school students need guidance to determine which courses to take and in what sequence, how to add or drop courses, how to apply for financial aid, and what resources and supports are available to ease the transition into campus life. Once students have begun to attend PSE, they need information about how to fulfill their major course requirements, file for transfer programs, and resolve personal or academic problems that they encounter.

The transition between the largely separate high school and PSE systems is difficult for many youths to navigate, and some students "are lost as they progress through the pipeline" (Pennington, 2004; p.10). Hoffman, Vargas and Santos (2008) suggest that one way to circumvent these challenges is to integrate high school and PSE by offering accelerated learning

options to students during their high school years. These types of programs include dual enrolment programs (students enrol in PSE-level course work and earn credit for it while they are still in high school), dual enrolment pathways (students participate in a pre-selected sequence of college courses during their traditional high school years to familiarize them with the demands of PSE and the campus environment) and early college schools (high schools partner with local PSE institutions to allow at-risk students to simultaneously earn a high school diploma and PSE credentials, tuition free). The authors note that students in these programs start to feel like a college/university student from an early age and feel invested in the pursuit of higher education. Kuh and colleagues (2006) also endorse these types of dual enrolment and concurrent enrolment programs, pointing out that they afford participants the opportunity to familiarize themselves with the physical, social, and cultural aspects of the campus environment. Additional resources to support youth during the high school-to-PSE transition include dependable financing programs and information about the PSE application process, admissions, and financial aid (Hoffman et al., 2008).

In her assessment of effective intervention programs, Cunningham (2002) reports that positive outcomes are associated with programs that start early, are age-appropriate, and consist of multiple-component interventions, including academic support (such as tutoring, mentoring, and academic enrichment), on-going and consistently positive contact with supportive adults, and coordination among different programs and services. These recommendations are in line with the findings of Dietrichson and colleagues (2017), whose systematic review of academic interventions for younger students (elementary and middle school age) from low socioeconomic backgrounds indicated that tutoring, feedback and progress monitoring, and cooperative learning

programs all produce positive academic outcomes. The authors suggested that programs that combine multiple intervention components addressing different domains may be most effective.

Swail (2012) similarly discussed the importance of offering an array of supports to students from an early age. He suggested that effective higher education interventions offer financial assistance coupled with additional support, such as exposure to college or university environments, information about higher education opportunities, activities aimed at improving students' academic achievement and self-esteem, and a means of engaging parents to support their children's education. Swail (2012) also stressed the importance of individual, one-on-one contact between youth and a supportive adult. A similar list of supports was advocated for by Brock (2010), who advised that it is important to offer youth tutoring and counselling, as well as various resources to bolster their personal motivation; improve their time management, note-taking and test-taking skills; and shape their PSE expectations.

Programs intended to enhance the personal and social growth of youth have also been deemed valuable. In their meta-analysis, Durlak, Weissberg, and Pachan (2010) explored the effectiveness of after-school programs, hypothesizing that youth would experience positive outcomes if they participated in programs which met recommended training practices considered "SAFE": that is, practices that featured a coordinated Sequence of activities, Active forms of learning, a clear Focus, and Explicit learning objectives. Findings revealed that SAFE after-school programs were indeed associated with improved academic performance and achievement, reduced problem behaviours, improved positive social behaviours, and increased self-confidence and self-esteem. The authors concluded that this analysis adds to the growing body of literature suggesting that programs aimed at promoting personal and social skill development can also produce positive academic outcomes.

Kuh and colleagues (2006) offered a review of “pre-college encouragement programs” and the extent to which they improve access to PSE for low-income and first-generation students. The authors' findings were consistent with many of the recommendations made by other experts in the field. The most effective programs were determined to be those that provide participants with information (including information about financial aid) and offer family support, counselling, tutoring, and financial support.

In his comprehensive review of existing PSE encouragement programs in the United States, Swail (2012) surveyed 374 programs and found that many programs were offering the types of services that experts have recommended. Survey results revealed that most existing programs offer academic services (e.g. study skills training, critical thinking skill development), PSE awareness services and campus visits, career counselling, academic advising, mentoring, tutoring, and a parental engagement and information-sharing component.

Examples of innovative Canadian intervention programs. Innovative intervention programs are being developed and implemented to encourage PSE access and retention among Canadian youth. What follows is a description of several examples of such programs that have been the focus of research and program evaluation efforts. These programs are of particular relevance to this thesis, given that they are comparable to the Youth Futures program either because they target similar groups of youth (e.g. low-income, Aboriginal, Crown Wards), or because they include similar intervention activities (e.g. leadership training, mentorship, on-campus exposure).

Hindes, Thorne, Schwean and McKeough (2008) investigated the success of the Rapport's Teen Leadership Breakthrough Program. This hands-on program is offered to Grade 10 and 11 students over a two and-a-half day period. Youth receive training that is focused on

program goals and criteria, in support of social, emotional, and personal growth development.

An outcome evaluation of the program was conducted using an RCT design. Variables of interest were assessed at four time points: prior to, immediately after, six weeks following, and six months following the intervention. Findings revealed that emotional intelligence and self-concept abilities can indeed be enhanced through short-term leadership training: the program met its objectives in increasing youths' intrapersonal and interpersonal skills.

Snow (2013) reported on the Voyager project, a multi-year/multi-level intervention aimed at increasing access to and retention in PSE for former Crown Wards in Toronto. The program began as a pilot project that paired former Crown Wards with undergraduate students for tutoring and also offered a two-week summer experience in a campus environment that allowed participants to experience hands-on university and college curricula. The youths who participated in this original pilot continued to regularly meet to discuss their educational goals. These discussions eventually led to the development of the Voyager project model. This youth-to-youth model recognizes the importance of offering targeted supports (academic advising, PSE application supports, individualized education plans), engagement measures (such as on-campus exposure, community outreach activities), research activities, and an advocacy agenda. The Voyager project has not been the subject of controlled research and evaluation.

As reported by Malatest (2009), The Foundations for Success program is a pilot project that has been implemented at three Ontario colleges. The purpose of this project is to increase the number of students who succeed in persisting through college to graduation. In-coming students are screened using a language proficiency test and a survey that measures constructs relating to career clarity and confidence in making friends. This screening is used to identify high-risk students, who then receive case management, tutoring, career clarification workshops,

mentoring, and/or student engagement activities, depending on their needs. To evaluate the efficacy of offering financial incentives to students, a fellowship of \$750 was also offered to one group of youth. To receive this fellowship, the youth were obliged to participate in the Foundations program for a minimum of 12 hours per semester. An outcome evaluation of the program involved an RCT design with over 3,000 participants from the three participating colleges who were randomly assigned to either of the two treatment groups or a control group. Findings revealed that program participation had a positive influence on student outcomes. Students who participated in 12 hours or more of tutoring, mentoring, or career clarification workshops during their first two semesters of college were about twice as likely to graduate. The fellowship program demonstrated that offering a financial incentive was an effective means by which to increase program participation. Students who accessed the financial fellowship showed more commitment to their program, better academic performance, and increased retention in college. The evaluation findings also suggested that youth from low-income family backgrounds were significantly more likely to participate in the Foundations program, and to benefit from it.

As described in two reports released by the University of Victoria (2008, 2010), the LE,NONET Project is a program that was developed by the Canada Millennium Scholarship Foundation in partnership with the University of Victoria. The program was intended to determine the most effective strategies to support the success and retention of Aboriginal students in PSE. The program was comprised of six unique components, including bursaries and emergency relief funds, a preparation seminar, research apprenticeships, community internships, peer mentoring and faculty-led Aboriginal cultural training. A mixed-method outcome evaluation of the program was conducted. The quantitative component of the evaluation compared three groups of participants: a pre-program historical comparison group, current

participants, and non-participants comprised of Aboriginal students who chose not to take part in the program. The qualitative component of the evaluation involved interviews and focus groups with program participants. The results of the evaluation suggested that LE,NONET participants experienced lower PSE withdrawal rates and increased graduation and retention rates. However, no significant change in participant GPA was observed.

The Future to Discover pilot program was developed in 2004 by the Canada Millennium Scholarship Foundation in partnership with the provincial governments of Manitoba and New Brunswick. The program was intended to improve access to PSE by providing a combination of substantial financial support and workshops offering information about academic and career options, skills development, and support for career exploration and planning (Social Research and Demonstration Corporation [SRDC], 2012). Evaluations of the program conducted by SRDC included a methodologically rigorous RCT outcome evaluation that demonstrated that the combination of interventions had a persistent (over 6 years), positive impact on PSE application and attendance rates, as well as on rates of receipt of student aid (Social Research and Demonstration Corporation, 2012; Ford & Kwakye, 2016). No differences in dropping out or switching PSE programs were found between the treatment and control groups.

CHAPTER FOUR

The Youth Futures Program

The Youth Futures program is a multi-faceted, complex intervention aimed at promoting PSE attendance among high school youth from low-income family backgrounds living in Ottawa, Ontario. A comprehensive overview of the program is contained within the program logic model (PLM), which is presented below. The version of the PLM presented here was completed in 2013. It was developed collaboratively by various program stakeholders and was based on the work of Runnels (2013), who previously conducted a formative evaluation of the program.

Youth Futures Program Logic Model

Student Need for the Program	Inputs	Program Activities	Outputs	Outcomes	
High school students from low-income families who have little or no PSE experience need opportunities and exposure to PSE in order to become familiar with and enter PSE.	Funding Sources: i) University of Ottawa Work Study Program ii) University of Ottawa Office of the Vice President iii) University of Ottawa Faculty of Social Sciences iv) City of Ottawa Social Housing envelope (Ottawa Community Housing coordinator) v) City of Ottawa employers Other Staffing: i) Professional support (teaching) ii) Advanced Leadership Program instructors iii) Technical support	i) Recruitment ii) Information & orientation sessions iii) PSE program: academic, classroom & lecture experience iv) PSE program: research experience v) PSE program: introduction to financial services & budgeting & other services vi) Advanced Leadership Program, job readiness skills vii) Employment experience & skill development & other training processes associated with job placements. viii) Employment mentoring	i) # of English & French, male and female students commencing program ii) # of hours of participant employment iii) # of job placements iv) # of hours of on-campus academic activities (lectures) v) # of hours on-campus in supporting activities vi) # of hours of organized social activities vii) # of training activities for counsellors viii) # of certificates earned (CPR, WHMIS, HIGH-FIVE, ALP, etc.)	Shorter-Term outcomes: i) Increased knowledge and awareness of PSE opportunities and resources ii) Increased familiarity and confidence with PSE styles of teaching/learning iii) Increased familiarity and confidence with PSE environments iv) Confirmed expressions of intentions to go to college/university v) Increased social connections & development of social support with peers & mentors vi) Increased sense of social support from parents	Longer-Term Outcomes i) Access and persistence in PSE ii) Improved employment, health, and life chances outcomes

	Other Resources & In-Kind Contributions: i) All professors' time (classroom & on research) ii) Administrative staff support & services iii) Job placements (i.e. # of placements) Time: i) Workplace mentors ii) Student volunteer mentors Other time inputs: i) Governance activities (steering committee & partners' committees) Physical space: i) University of Ottawa classroom & program office space Supplies: i) Transportation (bus tickets) ii) Organized social activities	ix) Counselling, guidance, mentoring, etc. x) Graduation xi) Follow-up	ix) # of participants gaining high school community service hours (over March Break) x) # of participants participating in optional activities Other student outputs i) Acquisition of Police Check ii) Student program evaluations completed iii) Students placed in employment iv) % of students completing the whole program & attendance at training sessions v) Student retention Other outputs i) # & % attendance of parents at meetings ii) # of University students gaining Community Service Learning hours and experience	vii) Improved self-confidence, self-mastery, and sense of competence viii) Increased academic motivation x) Improved leadership xi) Increased sense of optimism about the future xii) Increased conscientiousness xiii) Employment experience gained, practice of workplace skills in employment	
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The Youth Futures program was developed in 2008 by Dr. Elizabeth Kristjansson and Dr. Caroline Andrew, two professors at the University of Ottawa who received funding in the form of an anonymous donation to support the program. The program began as "Youth University": a two-week educational experience for high school youth from low-income family backgrounds, offered by the University of Ottawa. The program was loosely based on the work of the Sutton Trust, an educational charity in the United Kingdom which develops and evaluates programs to promote educational equality, including programs intended to ensure university access for academically-talented youth from under-privileged backgrounds (The Sutton Trust, n.d.).

The program has since evolved into its current format as Youth Futures, a seven-month-long program that provides participants with mentoring by university students, leadership training, workplace training and skill development activities, paid summer employment, and exposure to college and university settings. The program is jointly implemented by three main partners: the University of Ottawa, Ottawa Community Housing, and the City of Ottawa. Additional community partners from a variety of different sectors contribute to the planning and implementation of the program. All five post-secondary institutions in Ottawa, including Algonquin College, Carleton University, La Cité, Saint-Paul University and the University of Ottawa, host on-campus program activities. The program is funded in part by the City of Ottawa's Housing and Poverty Reduction Investment Plan.

Program Participants

The program is offered at no cost to high school students aged 16 to 21 from low-income families. No explicit income cut-off has been developed to determine program eligibility. However, the program deliberately targets youths who live in publicly-funded social housing or

low-income neighbourhoods, and/or have a parent who is receiving social assistance in the form of Ontario Works (OW) or the Ontario Disability Support Program (ODSP). These youths are recruited into the program through community partners' websites, OW and ODSP workers, and local schools, neighbourhoods and community centres.

Interested youths are required to submit an application to the program. Applicants are screened for eligibility on the basis of age/grade level in school and family income (postal code is used to identify applicants living in social housing or in low-income neighbourhoods). In-person interviews with program stakeholders are conducted with roughly twice as many eligible applicants as there are spaces available in the program. Offers to participate in the program are made on the basis of these interviews. The interviews serve to identify the youths who are most suitable for the program – generally speaking, those applicants with academic potential who express a reasonable degree of interest and motivation in participating in Youth Futures. Emphasis is also placed on ensuring that youths who face multiple barriers to education are offered a chance to participate in the program. Thus, first-generation students, as well as youths from minority backgrounds, recent-immigrant families and Aboriginal backgrounds, are all frequently accepted into the Youth Futures program. In 2014, Youth Futures partnered with local community organizations to increase the number of Aboriginal youths and youths in out-of-home-care that participate in the program.

A total of approximately 375 youths have participated in the Youth Futures program to date. In 2014, the program received applications from approximately 200 youths, conducting 120 interviews with eligible applicants. The program targeted mostly Grade 11 students for recruitment. Seventy-seven successful applicants were invited to participate in Youth Futures. To participate in the program, youths are required to have two pieces of government-issued

identification, a social insurance card, and a bank account. Youths must also pass a police background records check.

Program Activities

Each annual cohort of youths begins the program in February. The program commences with an orientation session, which includes an introduction to the program mentors. These mentors are paid University of Ottawa students who provide support and encouragement to youth throughout the course of the program. The mentor-to-participant ratio is approximately 1:12. This type of group mentoring approach is growing as a prominent alternative to traditional one-on-one mentoring. Although there is limited empirical support for the effectiveness of group mentoring found in the literature, group mentoring has been recognized as a promising approach for youth from ethnic minority groups, who may be more likely to have an interpersonal orientation that favours interdependence with others (Kuperminc & Thomason, 2014). In the Youth Futures program, mentors attend each day of program activities alongside the youths and participate in organized social activities. The latter include a community BBQ, to which youths may invite parents and family members.

Following orientation, the youths engage in a series of workplace training and skill development activities focused on job search and employability. These activities take place from February to June on Saturdays and on March Break. Youths receive training and certification in the Advanced Leadership Program (ALP). The ALP training is delivered by certified Leadership Instructors from the City of Ottawa's Department of Parks, Recreation and Cultural Services, and Employment Specialists from Youth Zone Jeunesse. The training includes team building, communication, resume preparation, and interview skills, as well as certificate training in First Aid and CPR, HIGH-FIVE (training to work with children in sport and recreation programs), and

AODA (Accessibility for Ontarians with Disabilities Act). Youths are also provided with an opportunity to complete high school community service hours through volunteer work.

In addition to these training and skill development activities, the youths also experience opportunities for PSE exposure. This component of the program is targeted toward raising awareness of the PSE environment and the PSE opportunities and resources available to youth. Youths have the opportunity to spend time on campus at the local post-secondary institutions. On-campus activities include lectures given by university professors on a variety of different subjects, and workshops on topics such as budgeting, financing, and applying to PSE. The PSE exposure consists of 10 half-days of activities scattered throughout the program, as well as one full week of activities at the end of the program in August.

During the summer months, the youths participate in six weeks of full-time employment with the City of Ottawa and other local employers. This employment component offers hands-on experience and professional development opportunities. Mentors continue to check in with the youths over the course of their employment. Additionally, workplace supervisors offer guidance and support.

The program concludes at the end of August with an official graduation ceremony, attended by the youths' family and friends, as well as program staff, mentors, members of the Youth Futures partner organizations, and important community members.

Program Outcomes

The desired shorter-term outcomes for Youth Futures participants, as identified by program staff and partners and presented in the PLM, include: increased knowledge and awareness of PSE opportunities and resources, increased familiarity and confidence with PSE 'styles' of teaching/learning, increased familiarity and confidence with Ottawa physical spaces

for PSE, confirmed expression of intentions to pursue PSE, increased academic motivation, increased social connections and development of social support with peers and mentors, increased sense of parental support, increased self-confidence, competence, and self-mastery, improved leadership skills, increased conscientiousness, increased optimism about the future, employment experience gained, and practice of workplace skills in employment. Also, as detailed in the PLM, the desired longer-term outcomes for the youths in the program include access and persistence in PSE, and improved employment, health and life chances.

CHAPTER FIVE

Conceptual Frameworks Guiding the Youth Futures Program

The Youth Futures program aims to promote access to higher education for youths from low-income families by nurturing various socio-emotional and behavioural characteristics. This approach is supported by two distinct but related bodies of literature. The first pertains to the Positive Youth Development (PYD) perspective, and the second pertains to the role of non-cognitive factors in producing positive education outcomes. This section provides an overview of each of these concepts and how they can be applied to community-based programs for youth.

PYD Models

The stakeholders who developed the Youth Futures program have indicated that the conceptual framework guiding the program is the Five C's PYD model. The PYD view of adolescent development emerged in the 1990s as a conceptual alternative to the problem-centered, deficit-focused approaches that previously dominated the field of youth research and practice (Bowers et al., 2010; Damon, 2004; Lerner et al., 2010). The PYD perspective re-considers youth as a societal resource to be developed, rather than a problem in need of fixing (Lerner, 2005). A fundamental assumption of the PYD approach is that the nature of every child is characterized by potential and resiliency.

PYD is a holistic approach to maximizing the inherent strengths and positive qualities of youth (Damon, 2004). PYD is based on developmental systems theories, which focus on adaptive individual-context relations and the plasticity of human development, particularly during childhood and adolescence (Silbereisen & Lerner, 2007). The PYD approach focuses on aligning young people with positive growth-promoting resources – termed developmental assets (Bowers et al., 2010). Developmental assets may take the form of family, school, and community

resources (Lerner et al., 2010). “The key hypothesis of the PYD perspective is that when the strengths of youth are aligned with the strengths of the context, positive and healthy development will occur” (Bowers et al., 2010; p. 734).

One PYD model with a high degree of empirical support is the Five C’s model (Bowers et al., 2010). In this model, thriving in adolescence is marked by healthy development across five domains: Confidence (positive self-worth and self-efficacy), Competence (positive view of one’s actions in social, academic, cognitive and vocational domains), Character (morality, integrity, respect), Connection (positive bonds and bidirectional exchanges with others), and Caring (sympathy and empathy for others). Thriving is also promoted by positive youth contributions to self, family, community, and civil society (Lerner et al., 2010). The Five C’s model of PYD has been studied longitudinally and has been established as a robust theory related to indicators of positive outcomes and risk or problem behaviours through diverse and intricate pathways (Bowers et al., 2010; Lerner et al., 2005; Lerner et al., 2010).

PYD Programs

PYD aims to identify the developmental assets that promote thriving among diverse groups of youth, and to then apply this knowledge through PYD policies and programs that increase young peoples’ exposure to these assets (Lerner et al., 2010; Roth & Brooks-Gunn, 2003b). Developmental assets can be fostered across key settings of youth development, including the family home, school classrooms, and communities (Lerner et al., 2010; Lerner, Lerner, & Benson, 2011). Involvement in community-based, out-of-school time youth development programs has been identified as one asset in the development of adolescents (Lerner et al., 2011).

Programs that adhere to a PYD philosophy nurture the core attributes and competencies that youth rely on to navigate the transition into adulthood, supposing that this type of nurturance may not be readily available to some groups of youths in their existing family, school and community settings (Naudeau, Cunningham, Lundberg & McGinnis, 2008; Roth & Brooks-Gunn, 2003a). Rodriguez-Planas (2012) suggests that underprivileged youth may lack cultural and social capital, which targeted interventions can serve to develop. The PYD approach promotes intervention programs focused on supporting the naturally-occurring strengths and pro-social inclinations of youth, in part by fostering a sense of moral identity, civil duty, and social connectedness (Damon, 2004).

Pittman and colleagues (2003) identified a number of factors contributing to positive youth development which community-based intervention programs could address. The authors found that influential factors come in the form of services, supports, and opportunities, including secure spaces where youth feel safe, basic care and services, instruction and training, sustained and caring relationships, social and strategic networks, and the opportunity to participate in the full range of community life (Pittman et al., 2003).

Roth and Brooks-Gunn (2003a; 2003b) reviewed theory and evaluation literature and conducted a survey of highly-visible, well-regarded interventions in order to identify the defining features of PYD programs. Three features that emerged as being critical components of PYD programs were goals, atmosphere, and activities. It is important for program goals to consist not only of preventing problem behaviours among youths, but to actually promote positive development, encourage youths to navigate adolescence in healthy ways, and prepare youths for the future. The program atmosphere must convey a positive regard for youth, offering individual attention, cultural appropriateness, a safe space, a strong sense of membership, the chance to

develop relationships with supportive adults, and opportunities to exercise choice and responsibility. Lastly, important program activities were those that provided youths with opportunities to build new skills, engage in real and challenging activities, and broaden their horizons through exposure to new people, places, and situations. Leadership development, decision-making opportunities, and community service learning experiences are all considered “empowerment activities” of particular importance. Similarly, activities that communicate expectations for positive behaviour, such as public recognition, monetary stipends, outings and parties, are also considered central to program success.

Viewed through the lens of a PYD program, Youth Futures could be considered a promising intervention with the potential to positively influence participants’ lives. The Youth Futures program seeks to provide youths with the chance to develop important abilities and competencies by increasing their exposure to a supportive, empowering environment and skill-building and horizon-broadening enrichment activities that they may not have otherwise encountered. Youth Futures program activities include mentorship, leadership development, employment experience, exposure to new settings in the form of post-secondary campus environments, and public recognition and community-building activities, such as a community BBQ and graduation ceremony. These activities are consistent with those that previous research has suggested contribute to positive youth development (Damon, 2004; Pittman et al., 2003; Roth & Brooks-Gunn, 2003a; 2003b).

Evidence of the Effectiveness of PYD Programs

A systematic review of PYD programs in the United States located thirty programs with adequate evaluations, twenty-five of which were considered effective in producing significant effects on youth’s behavioral outcomes (Catalano et al, 2004). One particular type of PYD

program – namely, mentoring – has been the focus of recent evaluation work. Dubois and colleagues (2011) used a PYD model to guide their meta-analysis exploring evidence of the effectiveness of mentoring programs for youth. The authors found that mentoring as an intervention strategy results in gains on multiple domains of youth functioning and improves outcomes of policy interest, like academic achievement. The most effective mentoring programs involve: (a) at-risk youths or youths who have displayed problem behavior, (b) mostly male youths, (c) mentors who have educational or vocational backgrounds that are specific to the particular goals of the program, (d) mentors and youths who are paired together because they share common interests, and (e) mentors who assume teaching or advocacy roles with youth.

Despite these encouraging findings about the effectiveness of mentoring programs, Dubois and colleagues (2011) caution against overstating the persuasiveness of the evidence and prematurely scaling up existing programs. They identify key gaps in the evidence base: program effectiveness was found to be variable, gains were modest rather than transformational, and long-term effects remain unknown. Careful planning and refinement of programs along key dimensions is critical to achieving effectiveness (Dubois et al, 2011).

Non-Cognitive Factors

As a program, Youth Futures adopts a PYD philosophy and has a general goal of promoting positive youth development. Beyond this, the program has adopted a focused, instrumental goal relating to access to higher education. It is well-known that school performance and educational attainment are shaped by cognitive and intellectual abilities, as well as subject-matter and content knowledge. However, experts now recognize that additional student attributes impact the capacity to learn and succeed in school. These attributes have been referred to as non-cognitive factors, a term used to represent sets of behaviors, skills, attitudes,

feelings, thoughts and strategies that play a role in fostering positive academic outcomes for youth (Farrington et al., 2012; Garcia, 2014). These types of attributes go by many different names in the literature, including soft skills, personality traits, non-cognitive skills, non-cognitive abilities, character, and socioemotional skills (Heckman & Kautz, 2012).

There is no single definitive list of non-cognitive factors. Garcia (2014) has provided an overview of those factors considered most important to education policy and programming, including: problem solving skills, emotional health, social skills, community responsibility, factors affecting personal relationships between students and teachers (closeness, affection, and open communication), self-control and self-regulation, work ethic, as well as persistence, academic confidence, teamwork, organizational skills, creativity, and communication skills (Garcia, 2014). Additional factors identified by other experts in the field include conscientiousness, perseverance, sociability, and curiosity (Heckman & Kautz, 2013).

Evidently, the concept of non-cognitive factors can encompass a wide-ranging number of attributes. Duckworth and Yeager (2015) provide a pragmatic description of key features shared by all non-cognitive factors: (a) they are conceptually independent from cognitive ability, (b) there is general agreement that they are beneficial to the student and to society as a whole, (c) they are relatively stable over time, (d) they have the potential to be changed through targeted intervention, and (e) their expression is dependent on situational or environmental factors.

Farrington and colleagues (2012) have divided non-cognitive factors into five general categories related to academic performance: (1) academic behaviors (attending class, paying attention, participating in class, studying and completing homework), (2) academic perseverance (grit, persistence, self-control, self-discipline), (3) academic mindsets (the psycho-social attitudes or beliefs one has about oneself in relation to academic work), (4) learning strategies (processes

and tactics used to promote thinking, remembering and learning, including study skills, metacognitive strategies, and goal setting), and (5) social skills (interpersonal qualities including co-operation, assertion, responsibility, and empathy).

Measuring Non-Cognitive Factors

In addition to the challenges of identifying a satisfactory and concrete list of non-cognitive factors, researchers have struggled to develop consistent systems or scales to measure them (Garcia, 2014). Many studies define and measure non-cognitive factors in disparate ways (Gutman & Schoon, 2013). As Heckman and Kautz (2012) explain, measuring personality traits associated with non-cognitive factors is particularly difficult, because measurement is calibrated on behaviour, which can be influenced by incentives or by other traits. Further threats to validity arise from the use of self-report measures, which are subject to issues of language and literacy, cultural norms, reference bias, social desirability bias, acquiescence bias, and ability retrieve, recall and evaluate relevant information from memory (Duckworth & Yeager, 2015). Duckworth and Yeager (2015) recommend that more innovative and practical measures of non-cognitive factors be developed. Such measures should be brief, easily collected, contextually appropriate for particular settings (e.g. academic/school vs. community) and sensitive to short-term changes over time. Measures should also extend beyond self-report to include performance tasks (Duckworth & Yeager, 2015).

Evidence of the Importance of Non-Cognitive Factors

A growing body of literature has established a strong relationship between non-cognitive factors and positive outcomes for youth, particularly academic performance and educational achievement (Gutman & Schoon, 2013). For some outcomes, including academic performance, educational attainment, job performance, earnings, and longevity, the association with non-

cognitive factors is stronger than with cognitive ability (Heckman & Kautz, 2013). For example, conscientiousness – the tendency to be organized, responsible, and hardworking – is the most widely predictive across a variety of outcomes and predicts years of schooling with the same strength as measures of intelligence (Heckman & Kautz, 2013). Not only do non-cognitive factors predict positive outcomes, but there is some evidence to suggest they actually *produce* positive outcomes (Heckman & Kautz, 2012; Gutman & Schoon, 2013). A review by Farrington and colleagues (2012) determined that the category of non-cognitive factors that had the most influence on academic performance was academic behaviors. The authors found that almost all other non-cognitive factors work through academic behaviours to impact academic performance.

Interventions Targeting Non-Cognitive Factors

Non-cognitive factors present a possible avenue for intervention. Experts indicate that interventions that enhance non-cognitive factors have an important place in public policy and programming, particularly for students whose development of non-cognitive factors has been weakened by situational and environmental factors, such as inequality among families in parenting or poor quality school environments (Heckman, 2012; Heckman & Kautz, 2012; Heckman & Kautz, 2013).

Researchers have begun to explore which non-cognitive factors to target for intervention, and how. The central point of the review done by Farrington and colleagues (2012) is that the best way to improve academic outcomes for youth is to improve their perseverance and strengthen their academic behaviours by addressing their mindsets and learning strategies. Heckman & Kautz (2013) suggest that programs that target character skills by providing discipline and guidance are most beneficial. The authors indicate that to be successful, interventions should provide mentoring and attachment, similar to a family environment

(Heckman & Kautz, 2013). The review conducted by Gutman & Schoon (2013) established that social and emotional learning programs and out-of-school time programs play an important role in developing key non-cognitive factors. Evidence of effectiveness was strongest for interventions targeting the perception youth have of their ability, their expectations of future success, and the value they place on school, all of which influence their motivation and persistence. Finally, research by Garcia (2014) suggests that participation in extracurricular activities, high-quality afterschool programs and summer learning programs can positively influence students' personal and social development, identity development, and social relationships.

Overall, research on interventions promoting non-cognitive factors is promising. In their meta-analysis, Durlak and colleagues (2011) examined school-based, universal social and emotional learning programs and determined that these programs resulted in improved social and emotional skills, attitudes, behavior, and academic performance among youths. Although some non-cognitive factors are considered stable personality traits, evidence suggests that these traits are indeed malleable and that they can change with age and targeted intervention (Heckman & Kautz, 2012; Heckman & Kautz, 2013). The extent to which traits can change lies on a spectrum, with different traits more prone to change at different points in the life cycle, through different mechanisms, and to different degrees (Heckman & Kautz, 2012). Even traits like grit, self-control and conscientiousness can be the focus of successful academic intervention, despite the fact that these traits are generally considered difficult to change and little conclusive evidence of their malleability exists (Farrington et al., 2012). Farrington and colleagues (2012) explain that even though one's core nature and innate personality traits may persist, people can change the intensity, direction and duration of their behavior under differing conditions and contexts. The

authors argue, “There is significant empirical evidence that students demonstrate different amounts of perseverance at academic tasks under differing conditions, supporting the idea that academic perseverance as a behavior in a specific context is highly malleable.” (p. 24). Students can be encouraged – by classroom contexts and particular psychological conditions – to demonstrate grit in the form of academic perseverance at school, whether or not they have a gritty personality that carries over to all other aspects and contexts of their lives (Farrington et al., 2012).

As the Youth Futures PLM indicates, the program targets a number of non-cognitive factors. The intended short-term outcomes of the program include self-confidence, self-mastery, sense of competence, persistence, social connectedness, motivation, optimism, and conscientiousness. The goal of the program is to promote positive educational outcomes, but not through any direct attempts to boost participants’ cognitive abilities or intellect, or their subject matter or content knowledge. Youth take part in the program outside of school hours, in a community setting, with mentorship support. Research on the importance of non-cognitive factors suggests that the approach Youth Futures is taking is valid and may have the potential to produce positive academic outcomes.

CHAPTER SIX

Overview of Current Research

At the time that this thesis was developed, the Youth Futures program had been operating for over seven years, and had served over 270 youth. Program partners sought to expand the Youth Futures program to include more youth from more varied family backgrounds. New local partners were continually being recruited to join the program, and additional sources of long-term funding and support were being secured. Other municipalities had shown interest in replicating the Youth Futures program, and were searching for more information about the partnership model and the program implementation. As the Youth Futures program continued to grow and develop, stakeholders began to recognize the importance of conducting research to establish whether the program was indeed satisfying its outcome objectives.

This thesis was developed to investigate the outcomes of the Youth Futures program. As a pilot study, this thesis was the first outcome evaluation of the program to be conducted. The overarching question guiding the thesis was: Do youths who participate in Youth Futures experience increased access to PSE? The thesis involved a three-fold study design, allowing for an examination of a variety of shorter- and longer-term outcomes. Both quantitative and qualitative data were collected and analyzed, lending breadth and depth to the thesis findings.

Research questions. To formulate the fundamental questions of this thesis, it was necessary to draw a distinction between *outcome level*, *outcome change*, and *program effect*. Rossi, Lipsey and Freeman (2004) explained that outcome level “is the status of an outcome at some point of time”, outcome change “is the difference between outcome levels at different points in time”, and program effect “is that portion of an outcome change that can be attributed uniquely to a program as opposed to the influence of some other factor” (p. 206). The design of

the thesis limited the ability to examine the issue of program effect. Instead, the thesis examined outcome level and outcome change. Making conclusive claims about whether any observed outcome changes are attributable to the effects of the program was beyond the scope of this thesis.

To investigate the outcome level and outcome change associated with the Youth Futures program, three studies were conducted. The first study used a quasi-experimental design to investigate short-term outcomes among the cohort of participants in the Youth Futures program in 2014. This study explored outcome changes in predictors of PSE. The research question addressed by this study was the following: Do youths who participate in a community-based intervention experience positive short-term outcomes – in relation to non-cognitive factors that are predictive of PSE participation – immediately following their completion of the program, compared to a group of their peers who did not participate in the program?

The second study used qualitative methods to investigate the experiences of a sub-sample of 20 youths who participated in the 2014 Youth Futures program. This study represented an attempt, through qualitative analysis, to further understand the youths' experiences and perceptions of the program, and to shed light as to why any outcome changes may or may not have been observed in the quasi-experimental study. The research questions addressed by this study were the following: (a) What educational and career aspirations do participants have, and why? (b) What assets and resources are perceived by participants as helping them to reach their educational and career goals? (c) What barriers and challenges are perceived by participants in the pursuit of their educational and career goals? and (d) What changes, if any, do participants perceive in themselves as a result of their involvement in the Youth Futures program?

The third and final study used a brief questionnaire administered via telephone to investigate the outcomes experienced by Youth Futures alumni who had graduated from the program in 2012 or 2013. This study measured outcome level at a longer-term follow-up point after completion of the program. The qualitative component of this study represented an attempt to shed light on the reasons for the outcome level observed among program alumni. The research questions addressed by this study were the following: (a) What are the academic and employment outcomes experienced by Youth Futures program alumni post-graduation? (b) Do sub-groups of Youth Futures program alumni (namely, first-generation students and youth born outside of Canada) experience different academic and employment outcomes post-graduation? and (c) What changes, if any, do alumni perceive in themselves as a result of their involvement in the Youth Futures program?

CHAPTER SEVEN

Quasi-Experimental Study of Short-term Outcomes*Contributions*

Jennifer Rae developed the research presented in this manuscript and conducted the data collection, data entry, data cleaning, data analysis, and write-up of the results and discussion. Dr. Tim Aubry supervised the research. In their capacity as stakeholders of the Youth Futures program, Dr. Caroline Andrew, Dr. Elizabeth Kristjansson and Dr. Vivien Runnels provided input on the development of the research design and methods.

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Promoting Access to Post-Secondary Education among Youth from Low-Income Families: A
Study of the Short-Term Outcomes of the Youth Futures Program Using a Quasi-Experimental
Design

Abstract

Youth Futures is a community-based intervention intended to improve post-secondary education (PSE) access rates among high school youth from low-income families who tend to be under-represented in PSE (Berger, Motte, & Parkin, 2009; Norrie & Zhao, 2011; Provincial Advocate for Children and Youth, 2012). The bilingual (French and English) program spans seven months and consists of mentoring by university students, leadership training, workplace training and skill development activities, paid summer employment, and exposure to college and university settings. A quasi-experimental, pre-test/post-test design was used to investigate short-term outcomes targeted by the program among participants ($N = 44$, mean age of 16 years old at baseline, 85% first- or second-generation immigrants to Canada) in comparison to a group of their peers ($N = 40$, mean age of 16 years old at baseline, 75% first- or second-generation immigrants to Canada). A series of two-factor repeated measures Analyses of Variance (ANOVAs) were conducted to test for differences between groups over time on continuous outcome variables. Overall, no evidence was found to suggest that participants in the Youth Futures program experienced the hypothesized positive short-term outcomes in relation to a set of non-cognitive factors. The findings of the present study suggest several program improvement strategies that may be used to modify the Youth Futures program to ensure that the intervention reaches youth at risk of not pursuing PSE and that program activities are tailored to meet the unique needs of such youth.

Post-secondary education (PSE) occupies an increasingly important role in Canadian society. Over the next decade, about two-thirds of job openings in Canada are expected to be in occupations requiring PSE (Department of Finance Canada, 2014). PSE graduates experience improved employment opportunities, increased earning potential, and improved health and well-being (Canadian Council of Learning, 2006). Most young people in Canada are pursuing PSE. In 2012, 75 percent of people in Canada aged 25 to 44 had post-secondary experience of some kind (Statistics Canada, 2016c). However, youth from low-income families, youth whose parents did not attend PSE, youth who identify as Aboriginal, and youth in out-of-home care are all significantly less likely to attend PSE (Norrie & Zhao, 2011).

To address these inequalities, innovative interventions aimed at increasing PSE attendance amongst marginalized youth have been developed (Swail, 2012). Youth Futures, established in 2008, constitutes one such intervention. Youth Futures participants are high school youth (primarily in Grade 11) from low-income family backgrounds living in Ottawa. The bilingual, community-based program spans seven months and consists of mentoring by university students; leadership training; workplace training and skill development activities; paid summer employment; and exposure to college and university settings. The primary goal of the program is to raise PSE access rates among participants.

The present research study used a quasi-experimental design to investigate short-term outcomes among a cohort of participants in the Youth Futures program, in comparison to a group of their peers. The research question addressed by this study is: Do youths who participate in a community-based intervention experience positive short-term outcomes – in relation to non-cognitive factors that are predictive of PSE participation – immediately following their

completion of the program, compared to a group of their peers who did not participate in the program?

Literature Review

The Value of Higher Education

Acquiring PSE is becoming increasingly necessary for Canadians who wish to find secure employment. Over 200,000 jobs were gained among those with a university degree in Ontario in the first two months of 2016, while all other levels of educational attainment experienced job losses (Statistics Canada, 2016a). Findings indicate rapid growth of high-skilled, high paid jobs, while demands for medium-skilled segments of the employment market are decreasing (Burleton, Gulati, McDonald, Scarfone, 2013). Employment rates vary by educational attainment, with recent studies indicating that in 2015, 58 percent of people in Canada with a high school diploma were employed, compared to 70 percent of those with a college degree and 74 percent of those with a university degree (Statistics Canada, 2016b). The unemployment rate for adults in Ontario with no PSE credentials is 10 percent, double the unemployment rate for those with PSE credentials (Statistics Canada, 2016a). People in Canada with either college or university degrees experience fewer layoffs and are more likely to be covered by an employer-sponsored pension plan (Frenette, 2014).

PSE credentials also contribute to more promising earning potential. Young people in Canada aged 25 to 34 with a university degree report median annual earnings surpassing those of their counterparts with a high school diploma by about \$20,000 (Statistics Canada, 2008; p. 17). Research has established that people in Canada who have a Bachelor's degree experience a 21 percent increase in weekly wage earnings, relative to those who have only completed high school (Ferrer & Riddell, 2002). The median wealth of families headed by an income recipient aged 35

to 54 remained stagnant between 1984 and 2005, while the wealth of families headed by a university graduate aged 35 to 54 increased by 40 percent (Morissette & Zhang, 2006).

Longitudinal research over a 20-year period (beginning in 1991) has established that over the course of their working lives, men and women with PSE credentials earned substantially more than their high school-educated counterparts.

When comparing median cumulative earnings, men with a Bachelor's degree earned 1.7 times more, and men with a college degree earned 1.3 times more, compared to men with a high school diploma. Women with a Bachelor's degree earned 2.1 times more, and women with a college degree earned 1.4 times more, compared to women with a high school diploma (Ostrovsky & Frenette, 2014). Most recently, Finnie and colleagues (2016) used a tax-linkage approach to study university and college graduates' earnings over eight years, concluding that PSE graduates across all fields of study enjoy strong income growth. Average annual earnings for Bachelor's graduates were \$74,900 eight years after graduation, while college diploma graduates earned an average of \$54,000.

The financial return on investments in PSE can also be seen in the form of reduced costs incurred by the health care system, justice system, child protection system, and social assistance system (Cabinet Committee on Poverty Reduction, 2008). Research has shown that people with more years of formal education are more likely to access preventative healthcare, have improved health statuses, and have lower rates of obesity, smoking, and mortality (Baum, Ma & Payea, 2013; Levin, Belfield, Meunnig, & Rouse, 2007). The Canadian Council of Learning (2009) summarized research findings on PSE, concluding that higher education is associated with positive health effects and greater longevity, higher life satisfaction, reduced poverty and crime,

increased community volunteerism and charitable giving, and increased civic participation and democratization.

Access to Higher Education

Given the favourable labour market outcomes and positive individual and societal effects associated with higher education, it is encouraging that many youth in Canada are pursuing PSE. Canada is one of the most highly-educated countries in the world, with 57 percent of people in Canada aged 25 to 34 attaining a PSE credential. This is well above the average of 39 percent in other OECD member countries (OECD, 2014). In 2012, 75 percent of people in Canada aged 25 to 44 had post-secondary experience of some kind (Statistics Canada, 2016c). The proportion of working-age individuals (aged 15 to 64) with university degrees more than doubled between 1990 and 2012, from 10.9 percent to 22.2 percent (Statistics Canada, 2016c). Provincially, Norrie and Zhao (2011) found that currently, 46 percent of Ontario youth attend university by the age of 21, and 36 percent of all youth attend college by age 21.

Although these overall PSE access rates are promising, there are long-standing concerns about inequitable access to college and university (Berger, Motte, & Parkin, 2009). Certain groups of youth are under-represented in higher education in Canada, including youth whose parents do not have PSE experience (referred to as "first-generation" students), youth who identify as Aboriginal, youth with disabilities, youth from rural areas, and youth in out-of-home care are all significantly less likely to enrol in PSE (Berger et al., 2009; Norrie & Zhao, 2011; Provincial Advocate for Children and Youth, 2012).

In addressing the problem of educational disparity, the Youth Futures program has been primarily focused on the recruitment of participants from low-income families living in social housing neighbourhoods. The role that family income plays in predicting PSE access has

been a subject of thorough examination. There is general agreement in the existing literature that students from high-income families are more likely to access PSE, particularly university (de Broucker, 2005). Nationally, roughly half of students who come from families in the lowest income quartile will graduate high school and proceed directly to PSE. This is in contrast to students from families in the highest income quartile, of whom 77 percent access PSE immediately following high school (Berger et al., 2009). In Ontario, the biggest disparity exists between students from families in the lowest income quartile (income less than \$25 000 per year), 72 percent of whom attend some form of PSE, compared to students from families in the highest income quartile (income more (than \$100 000 per year), 93 percent of whom attend some form of PSE (Norrie & Zhao, 2011).

While the relationship between income and PSE attendance has been well-documented, the causal effect of income may be less than what is commonly believed. Eighty-four percent of the gap in university attendance that exists between low and high income youth can be accounted for by factors such as better test scores and marks, parental influences, and school quality. Only 12 percent of the gap is attributable to financial constraints (Frenette, 2007). Similarly, Finnie and Mueller (2007) found that the relationship between parental income and university attendance is largely diminished once parental education level, high school grades, academic participation, and standardized reading test scores are accounted for. Dooley and colleagues (2016) determined that the two biggest factors affecting PSE access rates are background factors that existed prior to entering high school (including gender, special needs, gifted, and school characteristics) and course selection and performance in Grade 9.

When it comes to determining whether youth will pursue PSE, the educational background of their parents is arguably the strongest factor of influence (de Broucker, 2005,

Norrie and Zhao, 2011). Eighty percent of young people in Canada whose parents completed a university education enrol in PSE, as do 66 percent of those whose parents completed a college certificate or diploma. These rates stand in contrast to those of youth whose parents are not educated beyond high school, of which only half pursue PSE (Berger et al., 2009). Overall, first-generation students are two-and-a-half times more likely to not participate in any form of PSE, compared to students with parents who have a higher education (Norrie & Zhao, 2011).

The children of parents with more formal education experience may be more likely to pursue PSE because they are exposed to greater parental expectations, attitudes and values for academic success, and because their parents are more familiar with the PSE process and experience (Cheung, 2007; Statistics Canada, 2001). Children of parents with less formal education experience are less likely to aspire toward PSE when they are in high school, and are less likely to register in Academic-level high school courses, a strong predictor of PSE attendance (Cheung, 2007; Hamelin & Cameron, 2015; Krahn & Taylor, 2007).

Educational disadvantage does not pass from parent to child in immigrant families in the same way that it appears to in non-immigrant families. Children of immigrant parents with no PSE experience go on to pursue PSE at rates that are much higher than those observed for children of Canadian-born parents with no PSE experience (Childs, Finnie & Mueller, 2015; Corak, 2008). On many measures of educational attainment, both first-generation immigrants (born outside of Canada) and second-generation immigrants (born in Canada to parents born outside of Canada) outperform non-immigrants (Childs et al., 2015; Norrie & Zhao, 2011). Immigrants are less likely to drop out of high school and are more likely to pursue PSE, especially at the university level (Finnie & Mueller, 2009; Gilmore, 2010; Norrie & Zhao, 2011).

The educational successes of immigrants and the children of immigrants have been at least partially attributed to cultural factors and the high value placed on education in immigrant families, which has been described as "a strong pro-PSE ethos" (Finnie and Mueller, 2009; p. 20; Gilmore, 2010). The effects of this cultural orientation toward education can be observed even if other factors are controlled, including geography (urban/rural), family income, parental education level, high school grades, literacy scores, and high school engagement (i.e. sense of academic identification and participation, as well as social engagement at school) (Childs et al., 2015; Finnie & Mueller, 2009).

While there is widespread research documenting the educational successes of immigrants, new Canadians are not a homogenous population (Berger et al., 2009; Sweet, et al., 2010). Researchers have identified immigrants from certain countries of origin that appear to face particular challenges. These include those from the Americas (excluding the United States), particularly the Caribbean and some Latin American countries, as well as West Africa (Corak, 2008; Finnie & Mueller, 2009; Sweet, et al., 2010). In Toronto, students who were born in the English-speaking Caribbean or in Central/South America/ Mexico, or who spoke Portuguese, Spanish or Somali at home, were found to be facing higher academic risks than their classmates, including decreased rates of high school graduation and PSE access (Brown, 2010). In addition to country of origin, educational outcomes can also differ depending on age of immigration to Canada (Corak, 2012; Gilmore, 2010). Corak (2012) found that the risk of not graduating from high school is about 15 percent for boys and 11 percent for girls who come to Canada before nine years of age. This risk increases by one percent for every year past the age of nine, reaching 20 to 25 percent for those youth who arrive in Canada after the age of 13. These types of patterns may be attributable to the challenges of learning a second language past a certain developmental

stage, or the education system's lack of capacity to meet the needs of immigrant children who arrive at older ages (Corak, 2012).

Expert Recommendations for Effective Interventions

A growing number of interventions are using new and innovative strategies to tackle the issue of inequitable access to PSE in Canada. Schultz and Mueller (2006) conducted a review of the available literature on “pre-college outreach programs”. The authors concluded that programs with the best evidence for effectiveness contain the following key features: early intervention (eighth or ninth grade or earlier); support for academic, personal and social enrichment; engagement of parents/family members; help navigating the PSE admissions process; financial assistance; comprehensive, long-term support (at least four years); and adoption of a systematic reform approach. Other researchers have made similar recommendations, suggesting that programs must start early, offer frequent, sustained, age-appropriate support, and comprise multi-component interventions. These components may include academic support (such as tutoring, mentoring, and academic enrichment); one-on-one, consistent positive contact with supportive adults, including counselling; coordination among different programs and services; financial assistance; exposure to college or university environments; information about higher education opportunities; support in developing time management, note-taking, and test-taking skills; activities aimed at improving self-esteem and motivation; and a means of engaging parents and other family members to support their children's education (Brock, 2010; Cunningham, 2002; Kuh, 2006; Tierney & Hagedorn, 2007; Swail, Quinn, Landis & Fung, 2012).

One critical factor contributing to the success of a program is its ability to meet the informational needs of students. Conley (2010) referred to college knowledge, or the “privileged

information” about the PSE system and culture that students need to apply for PSE and successfully navigate the PSE context. de Broucker (2005) noted that students may have distorted or misinformed views of PSE, and are likely to be overwhelmed by the massive amount of information available and the complexity of the PSE system. These disadvantages can be offset by interventions offering students support and instruction about PSE prerequisites, tuition costs, the returns of higher education, and the resources available to help fund their studies (de Broucker, 2005). Brock (2010) agreed that students require guidance to shape their expectations of PSE and to determine which courses to take and in what sequence, how to add or drop courses, how to apply for financial aid, and what resources and supports are available to ease the transition into campus life. In their review of “pre-college encouragement programs” for low-income and first-generation students, Kuh and colleagues (2006) found that the most effective programs provide participants with information, including information about financial aid. Students also benefit from encouragement to take academically challenging courses in high school and to prepare themselves for PSE (Choy, 2001).

The effectiveness of a program is not only based on the specific program components and supports offered to students and their families, but also on the structure of the program itself. In their meta-analysis, Durlak, Weissberg, and Pachan (2010) explored the effectiveness of after-school programs, hypothesizing that youth would experience positive outcomes if they participated in programs which met recommended training practices considered “SAFE”: that is, practices that featured a coordinated Sequence of activities, Active forms of learning, a clear Focus, and Explicit learning objectives. Findings revealed that SAFE after-school programs were indeed associated with students’ improved academic performance and achievement, as well as

reduced problem behaviours, improved positive social behaviours, and increased self-confidence and self-esteem.

Two PSE access programs in the Canadian context have received particular attention and acclaim: the Pathways to Education program and the Future to Discover pilot program. The Pathways to Education program model is based on four pillars, namely tutoring, mentoring, counselling, and financing. The program was first implemented in the Regent Park neighbourhood of Toronto in 2001, and has since been expanded to existing community centres in other cities across Ontario, including in Ottawa (Miner, 2011; OUSA, 2011). The impacts of the program were studied by the Boston Consulting Group, with results suggesting that the program increased high school graduation rates and PSE access rates (Boston Consulting Group, 2011). However, only executive summaries of evaluations are publicly available. Furthermore, it appears that the evaluation design did not include a comparison group, instead comparing program participants' educational outcomes to national, municipal or schoolboard averages, or to baseline neighbourhood averages (Kettle-Verleyen, 2013). Making interpretations about program outcomes on the basis of this kind of evidence that does not include a comparison group is limited and does not yield easily interpretable findings.

The Future to Discover pilot program was developed in 2004 by the Canada Millennium Scholarship Foundation in partnership with the provincial governments of Manitoba and New Brunswick. The program was intended to improve access to PSE by providing a combination of substantial financial support and workshops offering information about academic and career options, skills development, and support for career exploration and planning (Social Research and Demonstration Corporation, 2012). Evaluations of the program conducted by the Social Research and Demonstration Corporation (SRDC) included a comprehensive implementation

evaluation, and a methodologically rigorous random-assignment outcome evaluation that demonstrated that the combination of interventions had a persistent, positive impact on post-secondary application and attendance rates (Ford & Kwakye, 2016; Social Research and Demonstration Corporation, 2012) .

The Youth Futures Program

Youth Futures is a community-based intervention intended to improve PSE access rates among under-represented youths. The program activities, inputs, outputs and outcomes are described in detail in the program logic model, presented in Chapter Four of this thesis. The Youth Futures program is supported by a partnership comprised of the City of Ottawa, five local post-secondary institutions, and a number of community-based organizations, including Ottawa Community Housing, a coalition of community health and resource centres, and several immigrant settlement and integration service organizations. The program is offered at no cost to high school students aged 16 to 21 years old from low-income families and communities.

The program targets students who live in publicly-funded social housing and/or have a parent who is receiving social assistance in the form of Ontario Works (OW) or the Ontario Disability Support Program (ODSP). The rationale for this recruitment approach is tied to the broader literature base documenting the achievement gap between high- and low-income students, as well as local data suggesting that educational outcomes are diminished for youths living in particular neighbourhoods. For example, in one low-income social housing neighbourhood in the west-end of Ottawa, the high school drop-out rate was found to be 49 percent (Pathways to Education Ottawa, 2013). PSE completion rates in this neighbourhood were also low: 14 percent of adults aged 25 to 64 had a Bachelor's degree, compared to 40 percent of this age same group in the municipality as a whole (Pathways to Education Ottawa, 2006).

Youths are recruited into the program through multiple channels, including community partners' websites, OW and ODSP workers, and local schools, neighbourhoods and community centres. Interested youths are required to submit an application to the program. Applicants are screened for eligibility on the basis of age/grade level in school and family income (postal code is used to identify applicants living in social housing or a low-income neighbourhood). In-person interviews with program stakeholders are conducted with roughly twice as many eligible applicants as there are spaces available in the program. Offers to participate in the program are made on the basis of these interviews. The interviews serve to identify the youths who are considered most suitable for the program – generally speaking, those applicants with academic potential who express interest and motivation in participating in Youth Futures. Emphasis is also placed on ensuring that youths who appear to face multiple barriers to education are offered a chance to participate in the program. First-generation students and youths from recent-immigrant families are frequently accepted into the Youth Futures program, in addition to small numbers of Aboriginal youths and youths in out-of-home care.

The program is delivered to youths over the course of seven months each year, from February to August. During the academic year, program activities take place on Saturdays and during March Break. The program participants are divided into smaller groups, each lead by two mentors, who are university students hired to provide support and encouragement to participants. Ten days of the program are dedicated to training and certification in the Advanced Leadership Program (ALP). The ALP training is delivered by certified Leadership Instructors from the City of Ottawa's Department of Parks, Recreation and Cultural Services, and Employment Specialists from Youth Zone Jeunesse. The training includes team building, communication, resume preparation, and interview skills, as well as certificate training in First Aid and CPR, HIGH-

FIVE (training to work with children in sport and recreation programs), and AODA (Accessibility for Ontarians with Disabilities Act).

Direct exposure to PSE settings is another component of the program. On-campus activities include lectures given by university professors on a variety of different subjects, and workshops on topics such as budgeting, financing, and applying to PSE. The PSE preparation component of the program consists of 10 half-days of activities, as well as one full week of activities at the end of the program in August. During the summer months, participants complete six weeks of full-time employment with the City of Ottawa and other local employers.

A formative evaluation of the Youth Futures program was conducted in 2013. The evaluation was used to document current program activities, determine which aspects of the program were important to meeting program goals, and gauge participant satisfaction with the program (Runnels, 2013). The evaluation indicated that the Youth Futures program had achieved implementation success, as evidenced by the number of participants and graduates of the program, and the relative stability of program structure and activities from one year to the next (Runnels, 2013).

A total of approximately 270 youths had participated in the Youth Futures program at the time that the present study was developed. In 2014, the program received applications from approximately 200 youths, and approximately 120 interviews with eligible applicants were conducted. Seventy-seven successful applicants were invited to participate in Youth Futures in 2014. The vast majority of youths who are accepted into Youth Futures continue to participate for the duration of the seven-month program: program records indicate that the program completion rate is over 95 percent. The program stresses the importance of regular and punctual attendance in all program activities, and graduation is conditional on satisfactory program

attendance. The ALP training requires that participants attend at least 70 percent of programming in order to receive a certificate.

Although complete program attendance records were not available for the 2014 cohort, partial records taken during the first 11 days of the program indicated that on average, the youths attended approximately 80 percent of program days. These first 11 days included the program orientation event/launch night, the introductory day of programming, six ALP training days, and three PSE days. Program records also indicate that all Youth Futures participants who took part in the present study successfully graduated from the program, and all but one participant was hired in a summer job placement through the program.

Program Theory

The Youth Futures program aims to promote access to higher education among youths from low-income families by nurturing various socio-emotional and behavioural characteristics. This approach is supported by two distinct but related bodies of literature. The first pertains to the Positive Youth Development (PYD) perspective, and the second pertains to the role of non-cognitive factors in producing positive education outcomes.

The PYD perspective serves as a conceptual framework guiding the Youth Futures program. The PYD view of adolescent development emerged in the 1990s as an alternative to the problem-centered, deficit focused approaches that previously dominated the field of youth research and practice (Bowers et al., 2010; Damon, 2004; Lerner et al., 2010). PYD is a holistic approach to maximizing the inherent strengths and positive qualities of youth (Damon, 2004). The PYD approach focuses on aligning young people with positive growth-promoting resources – termed developmental assets – through targeted interventions (Bowers et al., 2010). Programs that adhere to a PYD philosophy nurture the core attributes and competencies that youth rely on

to navigate the transition into adulthood, supposing that this type of nurturance may not be readily available to some groups of youths in their existing family, school and community settings (Heckman, 2008; Naudeau, Cunningham, Lundberg & McGinnis, 2008; Roth & Brooks-Gunn, 2003).

Beyond the broader goal of promoting positive youth development, the Youth Futures program has adopted a focused, instrumental goal of promoting equal access to higher education. It is to this end that the research base on the importance of non-cognitive factors is relevant to the Youth Futures program theory. Experts now recognize that additional student attributes, beyond cognitive and intellectual abilities, impact the capacity to learn and succeed in school. These attributes have been referred to as non-cognitive factors, a term used to represent sets of behaviors, skills, attitudes, feelings, thoughts and strategies that play a role in fostering positive outcomes for youth (Farrington et al., 2012; Garcia, 2014). As the Youth Futures program logic model suggests, the program targets a number of non-cognitive factors. The intended short-term outcomes of the program include self-confidence, self-mastery, sense of competence, persistence, social connectedness, motivation, optimism, and conscientiousness.

A growing body of literature has established a strong relationship between these types of non-cognitive factors and positive outcomes for youth, particularly academic performance and educational achievement (Gutman & Schoon, 2013). For some outcomes, including academic performance, educational attainment, job performance, earnings, and longevity, the association with non-cognitive factors is stronger than with cognitive ability (Heckman & Kautz, 2013). Evidence suggests that a range of non-cognitive factors, such as positive self-concept, realistic self-appraisal, preference for long range goals, and presence of a strong supportive relationship with another person are all associated with positive academic outcomes (Sedlacek, 2005).

Emotional intelligence – including intrapersonal and interpersonal abilities, adaptability, and stress management ability – has also been linked to academic success and PSE retention and persistence (Parker et al., 2006; Parker et al., 2004; Parker, Duffy et al., 2005).

Encouragingly, targeted interventions can serve to develop and strengthen non-cognitive factors. Heckman (2008) assembled evidence to illustrate the powerful role that childhood and adolescent non-cognitive factors play in shaping positive social outcomes for adulthood, arguing that social inequality would be “attacked at its source” by high quality, early interventions aimed at enhancing abilities like motivation, socioemotional regulation, orientation toward future thinking, and teamwork (p. 290). Strengthening the evidence-based argument for interventions targeting non-cognitive factor development is the work of Gutman and Schoon (2013), who produced a comprehensive literature review confirming that various inter-related non-cognitive factors (including self-efficacy, motivation, academic expectations) are malleable and open to improvement through intervention activities. Gutman and Schoon also confirmed both correlational and emerging causal links between these non-cognitive factors and positive academic outcomes. In a later meta-analytic review of preventative interventions for youth, Gutman and Schoon (2015) found that high-quality social-emotional learning programs produced medium-to-large effects on social skills, and small-to-medium effects on academic achievement, positive attitudes, psychological/emotional adjustment, and problem behaviors.

In their comprehensive review, Farrington and colleagues (2012) have similarly argued that interventions targeting non-cognitive factors can produce positive academic outcomes. The authors view academic perseverance (i.e. effort and engagement) and positive academic behaviours (i.e. attendance and participation in class, studying, and completing assignments on time) as two non-cognitive factors most closely associated with achieving high grades. These

two areas can be improved and strengthened through interventions targeting students' academic mindsets (i.e. beliefs, attitudes, and self-perceptions in relation to learning) and learning strategies (e.g. time management, goal setting, self-regulation) (Farrington et al., 2012).

The Present Study and Research Hypotheses

A quasi-experimental design was used to investigate short-term outcomes for participants in the 2014 Youth Futures program, in comparison to a group of their peers. The research question guiding the present study is as follows: Do youths who participate in a community-based intervention experience positive short-term outcomes – in relation to non-cognitive factors predictive of PSE participation – immediately following their completion of the program, compared to a group of their peers who did not participate in the program? The outcome variables selected for inclusion in the present study were chosen based on their alignment with the program theory, as well as their established links to positive academic outcomes, including PSE access. The present study was intended to contribute to the growing body of literature on the effectiveness of interventions aimed at closing existing PSE access gaps by targeting the development of non-cognitive factors. Few rigorous studies of such interventions exist, especially within the unique Canadian PSE context. Experts have called for a stronger evidence base in this area to facilitate sound decision-making about which potential program models to establish or expand, and how to match students to the programs that best address their particular needs (Barnett et al., 2012; Tierney & Hagedorn, 2007; Shultz & Mueller 2006).

The primary outcome variables in the present study included the following non-cognitive factors: academic and general self-efficacy, academic certainty and aspirations, self-mastery, academic motivation, conscientiousness, and supportive relationships with peers and adults. It is

hypothesized that participants in the Youth Futures program will experience positive short-term outcome change on these variables.

The existing literature has established that these variables are linked to positive academic outcomes in inter-related ways. An extensive meta-analysis conducted by Robbins and colleagues (2004) established an association between PSE retention, academic skills, academic self-efficacy, and academic goals. Evidence of a link between goal certainty and persistence and retention in PSE has also been found (Parkin & Baldwin, 2009). High self-efficacy has been identified as a determinant of university participation and first-year grades in PSE (Finnie and Mueller, 2007; Zaracova, Lynch and Espenshade, 2005).

Intrinsically motivated students have higher levels of self-efficacy, resilience, and academic achievement (Guay, Ratelle, Roy & Litalien, 2010; Reynolds & Weigand, 2010). Self-mastery and sense of personal control, as well as similar aptitudes such as optimism and positive self-concept, have also been linked to academic achievement, success, and adjustment (Guay, Marsh, & Boivin, 2003; Guay et al., 2010; Gutman & Schoon, 2013; Perry et al., 2001; Ross & Broh, 2000; Stupinsky et al., 2012; Solberg Nes, Evans & Segerstrom, 2009; Wouters et al., 2011). Conscientiousness – a tendency to work hard and persevere, and to exercise self-control and self-discipline – has also been linked to academic performance and motivation (Duckworth & Seligman, 2005; Conard, 2006; Komarraju & Karau, 2005; O'Connor & Paunonen, 2007). In fact, conscientiousness is considered to be more predictive of educational attainment, labour market performance, grades and health than any other personality trait or facet of intelligence (Heckman & Kautz, 2012). A study by Mackinnon (2012) with youth aged 15 to 19 suggests that social support may be an outcome of academic achievement: an increase in academic achievement predicted an increase in perceived social support 2 years later. Finnie and Mueller

(2007) found that access to social support was related to PSE participation, particularly for male students. Parental support has also been linked to PSE persistence and academic achievement (Cutrona et al., 1994; Wintre & Bowers, 2007).

In addition to these primary outcomes, the present study also included the following exploratory outcome variables of interest: knowledge of PSE finances, and reading habits. Knowledge of PSE finances was included based on previous research indicating the importance of ensuring that students possess accurate information about PSE finances (Houston, O'Neill & Elliott, 2013; Kuh, 2006). Students from low-income family backgrounds may overestimate the financial burden that tuition will impose on them, while at the same time underestimating the financial pay-off associated with earning a PSE credential (Usher, 2005). Reading habits was included as a behavioural outcome, based on the work of Heckman and Kautz (2013), who have outlined a convincing argument for using measures of observable behaviour to complement tests of skills. Previous research has established a link between reading for enjoyment and academic outcomes in teenagers (OECD, 2010). Other school-related behaviours, such as school attendance/absenteeism or time spent studying were also of interest, but could not be readily assessed in the present study because the follow-up data collection period fell in the summer months, when participants were not currently in school.

Method

Sampling and Data Collection Procedures

Baseline recruitment of participants in the Youth Futures program was completed by the researcher, who attended the orientation session of the program in February, 2014 to explain the study to participants and their parents. The researcher then attended the first day of the program activities to again explain the study to the approximately 70 participants in attendance. Later that

same day, during a program activity session that took place in a computer lab, the youths who wished to participate in the study were invited to complete the baseline survey online, administered using Snap Survey software.

When the Youth Futures program concluded in August of 2014, the researcher attended the last two days of program activities to recruit participants to complete the follow-up survey. Youths completed the survey in a paper/pen format. However, attendance during the last two days of program activities was relatively low, and several of the youths who had completed the baseline survey were not present. The researcher called, texted and emailed these youths using the contact information they provided during the baseline survey to invite them to complete the follow-up survey online, this time administered using Fluid Survey software. Program mentors also assisted in informing participants about the follow-up survey.

A comparison group was initially recruited by asking Youth Futures participants to invite one or two friends (of the same age and gender and attending the same high school) to participate in the study online. Youth Futures participants sent their friend(s) an email containing a link to the online study. Due to challenges in recruiting an adequate number of participants' friends using this approach at baseline, additional comparison group youths were later recruited by the researcher directly. The researcher contacted local community organizations offering drop-in and recreational programs to high school students and made site visits to these organizations during program sessions to recruit Grade 11 youths to participate in the study. The youths completed the survey in a paper/pen format.

Follow-up recruitment of the Youth Futures participants' friends who had participated in the baseline survey began in August, 2014. The researcher used the contact information provided at baseline to call, text, and email these participants to invite them to complete the follow-up

survey online. Follow-up recruitment of the remaining comparison group participants – those who had completed the baseline survey at community organizations – took place from November, 2014 to January, 2015. The researcher returned to the same drop-in and recreation programs to invite youths to participate in the follow-up survey, in the paper/pen format. The researcher used the contact information provided at baseline to call, text, and email these participants to invite them to complete the follow-up survey online. Staff at the drop-in and recreation programs also assisted in informing youths about the follow-up survey.

An attrition analysis was conducted to determine whether the youths who were successfully recruited to complete the follow-up survey differed from those who did not. The results of this analysis are presented below in the Data Screening section.

All participants in the study received \$10 for each survey they participated in. This honorarium was paid either in cash or in the form of an e-gift card, depending on whether the survey was completed in the online or paper/pen format. University of Ottawa Research Ethics Board approval was obtained prior to the commencement of participant recruitment and data collection. Informed consent was obtained from all participants in the study.

Most participants completed the survey in 10 to 20 minutes. The researcher was available to supervise and monitor the time taken to complete the survey when data collection took place in-person (i.e. in the case of Youth Futures participants who completed the survey during program hours, and in the case of comparison group participants who completed the survey at drop-in centres). Time was also monitored in the case of those participants who completed the survey online independently using the Fluid Survey software. Time taken to complete these online surveys ranged from 8 minutes to 1.5 hours (suggesting that some participants may have

paused and returned to the survey later). As was the case with the in-person surveys, most participants completed the online survey in 10 to 20 minutes.

Measures

The survey consisted of quantitative scales measuring a variety of short-term outcomes. Specifically, the survey assessed academic and general self-efficacy, academic certainty and aspirations, self-mastery, academic motivation, conscientiousness, supportive relationships with peers and adults, knowledge of PSE finances, and reading habits. The survey also included background and demographic questions. Most of the standardized measures that were obtained were originally developed in English. For the purposes of this study, the measures were translated into French by a translator, then reviewed by a Francophone researcher. A copy of the survey can be found in Appendix A.

Measures of primary outcome variables.

General self-efficacy. General self-efficacy was assessed using an instrument previously used in the biannual California Healthy Kids Survey (CHKS) Resilience and Youth Development Module with a large, statewide sample of students in grades 7, 9 and 11 in California school districts (WestEd, 2014). This three-item scale assessed a student's perceived problem-solving and competence. For example: "I can do most things if I try." A 4-point Likert-type response scale ranging from 1 (Not at All True of Me) to 4 (Very Much True of Me) was used. Possible scores on this measure ranged from 3 to 12. Higher scores indicated higher general self-efficacy. This scale has demonstrated adequate internal consistency reliability within large samples of high school students and has demonstrated encouraging criterion validity in the form of strong associations with measures of Empathy, Problem-Solving and Self-Awareness (Wilson-Ahlstrom et al., 2011). In the present study, this scale demonstrated adequate internal

consistency reliability based on Cronbach's Alpha, with $\alpha = 0.68$ at baseline and $\alpha = 0.78$ at follow-up. Reliability statistics for this measure and others with multiple items are presented in Table 1.

Academic self-efficacy. Academic self-efficacy was assessed using the Student Approaches to Learning instrument developed by Marsh and colleagues (2006), which was previously used in the Youth in Transition Survey (Statistics Canada, 2011). This four-item scale assessed a student's perceived competence and confidence in the performance of school-related tasks. For example: "I am certain I can master the skills being taught." A 5-point Likert-type response scale ranging from 1 (Never) to 5 (Always) was used. Possible scores on this measure ranged from 4 to 20. Higher scores indicated higher academic self-efficacy. The Student Approaches to Learning instrument has been evaluated using a large, cross-cultural sample, and has demonstrated strong reliability and criterion validity (Marsh et al., 2006). In the present study, this scale demonstrated adequate internal consistency reliability, based on Cronbach's Alpha, with $\alpha = 0.79$ at baseline and $\alpha = 0.78$ at follow-up.

Academic certainty and aspirations. Certainty and aspirations related to PSE were assessed using three measures previously used in the Youth in Transition Survey (Statistics Canada, 2011). The first single-item measure assessed the degree of certainty a student had about whether they will pursue PSE: "How sure are you that you will get more education after you leave high school?" A 5-point Likert-type response scale ranging from 1 (Very Sure I Won't) to 5 (Very Sure I Will) was used. Possible scores on this measure ranged from 1 to 5. A higher score indicated a stronger sense of certainty about pursuing PSE.

The second single-item measure assessed PSE aspirations: "If you could go as far as you wanted in school, how far would you like to go?" A multiple-choice response scale ranging from

1 (Go to high school, but not graduate) to 8 (Pursue graduate studies) was used. Possible scores on this measure ranged from 1 to 8. Higher scores indicated aspirations for higher levels of education. Scores of 3 or higher indicated that a student aspires to accessing college, while scores of 6 or higher indicated that a student aspired to accessing university.

The final single-item measure assessed a student's perceptions of the barriers they faced in pursuing PSE: "Is there anything standing in your way of going as far in school as you would like to go?" A response scale permitting participants to check all applicable responses was used. Possible responses included No barriers, Financial situation, Marks too low, Not enough interest or motivation, I want to stay close to home, Getting a degree takes too long, I want to work, I have dependents to care for, My own health, I'm not sure what to do, and Other (an open-ended response was permitted). Note that no cumulative score was given.

Self-mastery. Self-mastery was assessed using an instrument used previously in the Youth in Transition Survey (Statistics Canada, 2011). This 7-item scale assessed a feeling of generalized powerfulness and sense that one's life chances were under one's own control. For example: "I can do just about anything I really set my mind to." A 5-point Likert-type response scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) was used. Possible scores on this measure ranged from 7 to 35. Higher scores indicated higher self-mastery. In the present study, this scale demonstrated adequate internal consistency reliability, based on Cronbach's Alpha, with $\alpha = 0.65$ at baseline and $\alpha = 0.72$ at follow-up.

Intrinsic and extrinsic academic motivation. Intrinsic and extrinsic academic motivation were assessed using the Motivated Strategies for Learning Questionnaire, which was modified by Rotgans and Schmidt (2010) to be a general assessment of academic motivation that did not refer to specific courses. This 8-item scale consisted of two, 4-item sub-scales assessing intrinsic

academic motivation (internal drive) and extrinsic academic motivation (drive related to external outcomes). For example, the following item assessed intrinsic academic motivation: “I prefer course material that arouses my curiosity, even if it is difficult to learn.” The following item assessed extrinsic academic motivation: “Getting good grades in school is the most satisfying thing for me right now.” A 7-point Likert-type response scale ranging from 1 (Not at All True of Me) to 7 (Exactly True of Me) was used. Possible scores on each of the two sub-scales of this measure ranged from 4 to 28. Higher scores indicated higher intrinsic or extrinsic academic motivation. The construct and predictive validity of the Motivated Strategies for Learning Questionnaire has previously been examined using confirmatory factor analysis and by correlating the instrument with academic grades; results have indicated the instrument is valid and reliable (Rotgans & Schmidt, 2010). In the present study, both sub-scales demonstrated adequate internal consistency reliability, based on Cronbach’s Alpha, with $\alpha = 0.74$ at baseline and $\alpha = 0.76$ at follow-up for intrinsic motivation, and with $\alpha = 0.84$ at baseline and $\alpha = 0.77$ at follow-up for extrinsic motivation.

Conscientiousness. Conscientiousness was assessed using the conscientiousness sub-scale contained within the self-report form of the 60-item NEO Five-Factor (Costa & McCrae, 1992). The conscientiousness sub-scale was a 12-item scale that assessed traits such as preparedness, organization, dependability, reliability, diligence, productivity, time management, and goal-setting. For example: “When I make a commitment, I can always be counted on to follow through.” A 4-point Likert-type response scale ranging from 1 (Strongly Disagree) to 4 (Strongly Agree) was used. Possible scores on this measure ranged from 1 to 48. Higher scores indicated higher conscientiousness. The NEO Five-Factor scale is used widely and has an acceptable reliability level for all sub-scales (Costa & McCrae, 1992). In the present study, this

scale demonstrated adequate internal consistency reliability, based on Cronbach's Alpha, with $\alpha = 0.78$ at baseline and $\alpha = 0.82$ at follow-up.

Supportive relationships. Perception of supportive relationships was assessed using three different instruments used in the CHKS (WestEd, 2014). The first instrument was a 3-item measure assessing support received from same age peers such as friends and siblings. For example: "I have someone my own age who talks with me about my problems". A 4-point Likert-type response scale ranging from 1 (Not at All True of Me) to 4 (Very Much True of Me) was used. Possible scores on this scale ranged from 1 to 12. Higher scores indicated higher levels of perceived support from peers. In the present study, this scale demonstrated adequate internal consistency reliability, based on Cronbach's Alpha, with $\alpha = 0.83$ at baseline and $\alpha = 0.83$ at follow-up.

The second instrument was a 3-item measure of peer behaviour. For example: "My friends try to do what's right." A 4-point Likert-type response scale ranging from 1 (Not at All True of Me) to 4 (Very Much True of Me) was used. Possible scores on this scale ranged from 1 to 12. Higher scores indicated more positive peer behaviour. In the present study, this scale did not demonstrate adequate internal consistency reliability. Low reliability was found both at baseline (3 items; $\alpha = 0.56$) and follow-up (3 items; $\alpha = 0.47$). This scale was thus deleted from all subsequent analysis.

The final instrument was a 9-item measure assessing perceived sense of support received from adults such as parents, teachers, and coaches. For example: "I have an adult in my life who listens to me when I have something to say." A 4-point Likert-type response scale ranging from 1 (Not at All True of Me) to 4 (Very Much True of Me) was used. Possible scores on this scale ranged from 1 to 36. Higher scores indicated higher perceived support from adults. In the

present study, this scale demonstrated a high level of internal consistency reliability, based on Cronbach's Alpha, with $\alpha = 0.92$ at baseline and $\alpha = 0.88$ at follow-up.

Measures of exploratory outcome variables.

Knowledge of PSE finances. Knowledge of PSE was assessed using a series of seven multiple-choice questions developed specifically for the purposes of the current study. The researcher developed these questions based on the existing literature, in consultation with stakeholders from the Youth Futures program. Questions were developed based on the data available from the Council of Ontario Universities Graduate Survey (2013), Statistics Canada University Tuition Fees report (2013), the Association of Universities and Colleges of Canada Trends in Higher Education report (2011), and information available on the Government of Ontario website pertaining to Education and Training and Financial Aid.

Seven single-item questions were developed to assess a student's knowledge of PSE finances, including financial supports available, tuition costs, and PSE returns in terms of earnings and employment outcomes. For example: "What is the maximum amount of financial help that you can receive from the Ontario government if you are a typical, full-time student in college or university?" and "Two years after graduation, what percentage of Ontario university graduates are employed full-time in a job that is relevant to the educational degree they earned?" Questions were presented in a multiple-choice format with four to five response alternatives per question. Participants were instructed to select the best possible answer. For each of the seven single-item questions, possible scores were either 1 (Correct Response) or 0 (Incorrect Response).

Reading habits. A single-item measure of reading habits was developed by the researcher for the purposes of the present study, based on previous research (OECD, 2010). The measure

was developed to assess how often a student reads for pleasure: “How often do you read books, magazines, or newspapers in your free time?” A 4-point Likert-type response scale ranging from 1 (Almost Never) to 4 (Almost Every Day) was used. Possible scores on the measure ranged from 1 to 4. Higher scores indicated reading for pleasure more often.

Table 1

Internal Consistency Reliability of Measures with Multiple Items

Measure	N of Items	Cronbach's Alpha	
		Baseline	Follow-Up
General Self-Efficacy	3	.68	.78
Academic Self-Efficacy	4	.79	.78
Self-Mastery	7	.65	.72
Intrinsic Academic Motivation	4	.74	.76
Extrinsic Academic Motivation	4	.84	.77
Conscientiousness	12	.78	.82
Peer Support	3	.83	.83
Adult Support	9	.92	.88

Data Analysis

Data were analyzed using IBM SPSS Statistics 23.

The primary purpose of data analyses was to determine whether the youths who participated in the Youth Futures program showed greater improvement on the primary and exploratory outcome measures of interest than a group of their peers who did not participate in the program.

Chi-square tests of independence were conducted to determine whether baseline differences existed between the two participant groups (Youth Futures participants and comparison group participants) on background/demographic variables. Independent samples t-tests were also conducted to determine whether baseline differences existed between the two groups on any of the continuous outcome variables: academic and general self-efficacy, academic certainty and aspirations, self-mastery, intrinsic and extrinsic academic motivation, conscientiousness, supportive relationships with peers and adults, and reading habits. No significant differences were found, suggesting that the two groups were equivalent on these outcome measures at baseline. Thus, any differences found at follow-up were likely to be associated with participation in the program, rather than pre-existing group differences. A series of two-factor (group, time) repeated measures Analyses of Variance (ANOVA) were then conducted to test for differences between groups over time on the following continuous outcome variables: academic and general self-efficacy, self-mastery, intrinsic and extrinsic academic motivation, conscientiousness, supportive relationships with peers and adults, and reading habits.

Academic certainty and aspirations included two continuous variables, but these variables were not analyzed using ANOVA tests because of violations of the assumption of normality (normality is further discussed below in the Data Screening section). Instead, descriptive

statistics (frequencies) were produced to summarize participants' scores on these two variables. The variables were then dichotomized. The first variable about certainty of pursuing PSE was dichotomized into two response levels: "Very/Probably Sure I Will Get More Education After High School" and "Very/Probably Sure I Won't, or Not Sure One Way or Another". The second variable about desire for higher education was dichotomized into two response levels: "Desires Some Level of PSE" and "Desires a High School Diploma or Less". The variables were then analyzed using a Chi-square test of independence to determine whether differences were present between groups at baseline, and at follow-up. Each individual question was also analyzed using McNemar's test to determine whether changes occurred over time within groups.

Knowledge of PSE finances and perceived barriers to PSE were dichotomous rather than continuous outcome variables. For these variables, each individual question was analyzed separately using a Chi-square test of independence to assess between-group differences at both time points and a McNemar's test to assess within-group differences over time. Descriptive statistics (frequencies) were also computed to summarize participants' scores.

Data Screening

Data on continuous variables was screened for missing values and violations of the assumptions of ANOVA.

Missing data. To address missing values, one Youth Futures participant who was missing data on 12 different outcome variables was deleted from the analysis, reducing the sample size to 44 Youth Futures participants (and 40 comparison group participants). Prorating (i.e., imputing each individual participant's missing scores using the mean of his or her available item-level data) was then conducted on variables with four items or more, in cases where data

were present on at least 75 percent of the items. When prorating was complete, a missing values analysis indicated that no variables exceeded 5 percent missing data.

A sensitivity analysis was conducted to determine whether multiple imputation of the small amount of missing data were likely to make a difference to the analysis. The variable with the most data missing was the extrinsic academic motivation variable at baseline, for which three participants were missing data ($N = 81$). Multiple imputation of this variable was conducted to produce pooled results from five complete sets of data. A two-factor, repeated measures ANOVA test was conducted using the five imputed datasets, revealing that the main effect of time, the main effect of group, and the interaction effect of group by time were all non-significant in all five of the imputed datasets. These effects were similarly non-significant in the original dataset. Multiple imputation did not appear to impact the results of the analysis, and was therefore not conducted for the other variables.²

Attrition. Independent samples t-tests of baseline data were conducted to determine if any differences existed between participants who completed the baseline survey only and participants who were successfully recruited to complete the second, follow-up survey. No significant baseline differences were found between Youth Futures participants who completed the follow-up survey and Youth Futures participants who did not. However, significant baseline differences were found between comparison group participants who completed the follow-up survey and comparison group participants who did not: comparison group participants who completed the follow-up survey scored significantly higher on the variables of self-mastery

² Graham (2012) has previously discussed limitations associated with carrying out the multiple imputation procedure using the SPSS software program. Graham suggests imputing using the Norm 2.03 software and importing the Norm-imputed data into SPSS. However, in the present study, we decided to proceed with imputation using SPSS despite its limitations, because of the small amount of missing data, the small number of variables, and the fact that the original dataset was retained because imputation did not appear to impact the results of the analysis.

$[t(64) = 2.20, p = 0.03]$ and adult support $[t(64) = 3.04, p = 0.003]$, compared to participants in the comparison group who were not successfully recruited to complete the follow-up survey.

Outliers. Univariate outliers were assessed on each variable separately by group (Youth Futures participants, comparison group participants). The distance of raw scores to the Mean was assessed using a z-score distribution. Absolute values of $z = \pm 2.58$ were considered outliers, and were modified to be less deviant and closer to the normal distribution curve for the variable, using a procedure outlined by Tabachnik and Fidell (2007) that is commonly referred to as “Winsorizing”. Outliers were replaced with the largest possible values that remained within the 95th percentile cut-off, based on the Mean and Standard Deviation of the variable. Replacement values were calculated by multiplying the Standard Deviation by 2.58, and adding the Mean.

Normality. Normality was assessed on each variable separately by group (Youth Futures participants, comparison group participants). The overwhelming majority of both Youth Futures and comparison group participants indicated at both baseline and follow-up that they had a high degree of certainty and high aspirations about pursuing PSE, resulting in a distribution of participant responses on these two variables that was highly skewed. Visual inspection of the distribution, as well as examination of the standardized skew and kurtosis values, clearly indicated that the assumption of normality was violated for these two variables. Due to the extent of the violation of normality, ANOVA tests were not conducted on these two variables. Instead, these variables were dichotomized and Chi-square tests of independence were conducted to determine whether the two groups differed at baseline or at follow-up. Each of the two questions was also analyzed using McNemar's test to determine whether changes occurred over time within groups. Descriptive statistics (frequencies) were also computed to summarize participants' scores.

Two other variables were also found to have non-normal distributions: extrinsic academic motivation at both baseline [skewness = -1.20 (se = 0.32), kurtosis = 0.89 (se = 0.63)] and follow-up [skewness = -1.24 (se = 0.36), kurtosis = 0.99 (se = 0.70)], and peer support at follow-up only [skewness = -0.65 (se = 0.36), kurtosis = 0.25 (se = 0.71)]. “Square-root” transformations were performed, which produced acceptable skewness and kurtosis for all variables. A two-factor, repeated measures ANOVA was conducted using these transformed variables, but the results did not differ from those obtained using the untransformed variables, so the untransformed variables were ultimately retained and reported on in the Results section of this paper.

Homogeneity of variance. The assumption of homogeneity of variance was met, as determined by the calculation of F-max ratios.

Independence of errors. Sphericity was not an issue in the present analysis, given that the independent variables of time and group were each limited to only two levels.

Sample Characteristics

At baseline, 59 Youth Futures participants completed the survey, compared with 45 (76%) at follow-up. As previously described, one Youth Futures participant was subsequently deleted from the analysis, due to missing values, resulting in a sample size of 44 Youth Futures participants. At baseline, 66 comparison group participants completed the survey, with 33 (50%) recruited online as friends and 33 (50%) recruited in-person from community drop-in/recreational programs. At follow-up, 40 (61% retention) comparison group participants completed the survey, with 20 (50%) recruited online as friends and 20 (50%) recruited in-person from community drop-in/recreational programs. Within the final sample of 84 participants, a considerable number of surveys [15 (34%) (Baseline); 17 (39%) (Follow-up)]

were completed in French by participants in the Youth Futures program. Only one comparison group participant completed a survey in French at baseline, and none did so at follow-up.

An a priori power analysis was conducted using G*Power 3 (Faul, Erdefelder, Lang, & Buchner, 2007) in order to ensure that a sufficient sample size of participants was recruited to detect a medium effect size ($F=.25$) for a repeated measures ANOVA, within-between interaction. The analysis indicated that with power $=.95$ and an α set at $.05$, a total sample size of $N = 54$ is needed. Therefore, the sample size of $N = 84$ in the present study is considered sufficient.

Baseline sample characteristics for participants are presented in Table 2. Youth Futures participants and comparison group participants were generally similar on all baseline sample characteristics. Chi-square tests of independence revealed only two significant differences, both pertaining to country of birth (see below).

More than half of the sample was female (Youth Futures $n = 30$, 68%; Comparison $n = 23$, 58%). Participants' ages ranged from 15 to 20 years old, though most participants (Youth Futures $n = 31$, 70%; Comparison $n = 34$, 85%) were either 16 or 17 years old at baseline. Most participants (Youth Futures $n = 27$, 61%; Comparison $n = 24$, 60%) were enrolled in Academic-level courses, as opposed to Mixed (Youth Futures $n = 6$, 14%; Comparison $n = 7$, 18%) or Applied (Youth Futures $n = 11$, 25%; Comparison $n = 9$, 23%).

Only a small proportion of Youth Futures participants ($n = 5$, 11%) indicated they were first-generation students, meaning they did not have a parent with any college or university experience. More than half ($n = 26$, 59%) of Youth Futures participants reported that at least one of their parents had university experience. Comparison group participants tended to report slightly higher rates of parental PSE experience. A smaller proportion of comparison group

participants ($n = 3$, 7.5%) indicated that they were first-generation students, and a larger proportion of comparison group participants ($n = 28$, 70%) indicated that they had a parent with university experience.

Most participants were either first- or second-generation immigrants. Only a small proportion of Youth Futures participants indicated that they had been born in Canada and that their parents had been born in Canada as well ($n = 7$, 16%); of this group, most identified as Aboriginal ($n = 4$, 9.1%). A slightly larger proportion of the comparison group participants indicated that they had been born in Canada and that their parents had been born in Canada as well ($n = 10$, 25%). Approximately 55 percent ($n = 24$) of Youth Futures participants had been born outside of Canada, and 45 percent ($n = 20$) had been born in an African country. The single most common birth country, outside of Canada, was Congo, where approximately 18 percent ($n = 8$) of Youth Futures participants had been born. Approximately 33 percent ($n = 13$) of comparison group participants had been born outside of Canada, and approximately 18 percent ($n = 7$) were had been born an African country. The single most common birth country, outside of Canada, was the United States, where approximately 8 percent ($n = 3$) of comparison group participants had been born. Chi-square tests comparing Youth Futures participants to comparison group participants on country of birth revealed that a significantly larger number of Youth Futures participants had been born outside of Canada ($\chi^2 = 4.13$, $p = .04$) and a significantly larger number of Youth Futures participants had been born in an African country ($\chi^2 = 7.51$, $p = .01$).

Approximately 84 percent ($n = 37$) of Youth Futures participants had at least one parent born outside of Canada, and 64 percent ($n = 28$) had at least one parent who was born in an African country. The most common birth countries among the parents of Youth Futures

participants were Congo ($n = 8$, 18%) and Somalia ($n = 8$, 18%), followed by Canada ($n = 7$, 16%). Approximately 75 percent ($n = 30$) of comparison group participants had at least one parent born outside of Canada, and approximately 48 percent ($n = 19$) had at least one parent who had been born in an African country. The most common parental birth countries, outside of Canada, were Somalia ($n = 7$, 18%) and Haiti ($n = 4$, 10%).

Table 2

Characteristics of Baseline Sample

Characteristic	Youth Futures (<i>N</i> = 44)		Comparison (<i>N</i> = 40)	
	<i>n</i>	%	<i>n</i>	%
Gender (Female)	30	68.2	23	57.5
Age (16 or 17 years old)	31	70.4	34	85.0
Enrolled in Academic-Level Courses	27	61.4	24	60.0
First-Generation Student	5	11.4	3	7.5
Parent with University Experience	26	59.1	28	70.0
Aboriginal	4	9.1	2	5.0
Born outside of Canada	24	54.5	13	32.5
Born in African Country	20	45.5	7	17.5
Born in Congo	8	18.2	2	5.0
Parent born outside of Canada	37	85.1	30	75.0
Parent born in African Country	28	63.6	19	47.5

Results

Group Comparisons on Primary Outcome Variables

Two-factor repeated measures ANOVA tests were conducted to examine the effect of group and time on the following continuous primary outcome variables: general self-efficacy, academic self-efficacy, self-mastery, intrinsic motivation, extrinsic motivation, conscientiousness, and supportive relationships (peer support and adult support). The Means and Standard Deviations of scores are presented in Table 3. Average scores were generally in the mid-to-high range on most measures. The results of the ANOVA tests, including the F ratio, p values, effect sizes and 95 percent confidence intervals around effect sizes, are presented in Table 4.

The interaction effect between group and time was not statistically significant on any of the outcome variables. There was no statistically significant main effect of group or time on the outcome variables, except for the main effect of group on the outcome variable of adult support. Simple main effects analysis showed that comparison group participants were significantly more likely to report higher levels of adult support than Youth Futures participants, $F(1,81) = 4.02$, $p = .048$. While the main effect is statistically significant, the effect size ($\eta^2 = .047$) is small, and the confidence interval around the effect size (95% CIs [.02, .14]) is very close to containing zero, suggesting that the practical significance of the difference between the two groups is limited. Further, this one significant finding may be a false positive resulting from the performance of multiple tests simultaneously on one data set, which increases the probability of Type 1 errors. Using a Bonferroni correction to adjust for the family-wise error rate associated with multiple tests results in adjusted alpha levels of .006 per test (.05/8). At this adjusted alpha level, the main effect of adult support is no longer significant.

Table 3

Means and Standard Deviations of Scores: Primary Outcome Variables

Measure	Theoretical Range of Scores	Youth Futures (N = 44)				Comparison (N = 40)			
		Baseline		Follow-up		Baseline		Follow-up	
		M	SD	M	SD	M	SD	M	SD
General Self-Efficacy	3 - 12	9.94	1.59	9.65	1.54	9.79	1.78	9.97	1.55
Academic Self-Efficacy	4 - 20	14.75	3.07	14.60	3.15	14.83	2.63	14.88	2.39
Self-Mastery	7 - 35	20.28	2.88	20.92	3.40	20.97	3.52	21.60	3.65
Intrinsic Academic Motivation	4 - 28	20.12	5.06	19.05	5.56	19.64	5.02	19.75	5.15
Extrinsic Academic Motivation	4 - 28	22.28	5.61	22.92	5.29	23.05	4.84	23.31	4.05
Conscientiousness	12 - 48	35.43	4.58	35.62	4.14	34.56	5.13	35.63	5.92
Peer Support	3 - 12	9.36	2.53	9.09	2.13	9.74	2.52	10.08	2.39
Adult Support	9 - 36	28.08	6.23	28.82	5.69	30.59	5.42	30.77	4.79

Table 4

Results of ANOVA: Primary Outcome Variables

Measure		<i>F</i>	<i>p</i>	Effect size	Lower 95% CI	Upper 95% CI
General Self-Efficacy	Time	.09	.77	.00	.00	.04
	Group	.08	.77	.00	.00	.04
	Time x Group	1.47	.23	.02	.00	.09
Academic Self-Efficacy	Time	.02	.88	.00	.00	.01
	Group	.12	.73	.00	.00	.04
	Time x Group	.08	.77	.00	.00	.04
Self-Mastery	Time	2.53	.12	.03	.00	.11
	Group	1.22	.27	.02	.00	.08
	Time x Group	.00	.99	.00	.00	.00
Intrinsic Academic Motivation	Time	.51	.48	.01	.00	.06
	Group	.01	.91	.00	.00	.01
	Time x Group	.77	.38	.01	.00	.07
Extrinsic Academic Motivation	Time	.69	.41	.01	.00	.07
	Group	.35	.55	.01	.00	.06
	Time x Group	.13	.73	.00	.00	.04
Conscientiousness	Time	1.83	.18	.02	.00	.10
	Group	.192	.66	.00	.00	.05
	Time x Group	.88	.35	.01	.00	.08
Peer Support	Time	.02	.89	.00	.00	.01
	Group	2.17	.15	.03	.00	.11
	Time x Group	1.31	.26	.02	.00	.09
Adult Support	Time	.82	.27	.01	.00	.07
	Group	4.02	.048*	.05	.02	.14
	Time x Group	.29	.59	.00	.00	.05

* Significant at the $p < .05$ level, ** Significant at the $p < .01$ level

As previously noted, two of the variables related to academic certainty and aspirations severely violated the assumption of normality, and were consequently not analyzed using an ANOVA test. Descriptive (frequencies) analyses were conducted to summarize participant responses on these two variables: degree of certainty, and aspirations about pursuing PSE. Results of these analyses are presented in Table 5. At both baseline and follow-up, almost all Youth Futures and comparison group participants indicated that they were “Very Sure” or “Probably Sure” they would pursue further education after high school. Aspirations about pursuing some form of PSE were similarly high for both groups at both baseline and follow-up. Chi-square tests of independence and McNemar tests were conducted on the dichotomized variables to determine whether either variable differed according to group and time. No significant differences were found.

The third variable related to academic certainty and aspirations, which assessed perceived barriers to education, was dichotomous, rather than continuous. Descriptive (frequencies) analyses were conducted to summarize participant responses on this variable. Results of this analysis are presented in Table 5.

A relatively large proportion of participants in both groups reported that they were not facing any barriers to education at both baseline (Youth Futures $n = 16$, 36%; Comparison group $n = 20$, 50%) and follow up (Youth Futures $n = 19$, 45%; Comparison group $n = 17$, 43%). The most common barrier to education reported by participants was Financial, while the other most common responses were *Time Necessary to Get a Degree*, *Desire to Work*, *Uncertainty About What to Do*, and *Low Grades*. After completing the program, fewer Youth Futures participants indicated that the time necessary to get a degree was a barrier for them ($n = 9$, 21% at follow-up; $n = 3$, 7% at baseline). Similarly, after completing the program, fewer Youth Futures participants

indicated that being uncertain about what to do was a barrier for them ($n = 9$, 21% at follow-up; $n = 4$, 10% at baseline).

Chi-square tests of independence and McNemar tests were conducted to determine whether perceived barriers to PSE differed according to group and time. This analysis was limited to *No Barriers* and *Financial Barriers*, which were the two most frequent responses. Few participants indicated that they were facing other barriers, leading to small cell sizes which would be inappropriate for a Chi-square analysis. The results of the Chi-square tests of independence, including Chi-square values, p values, odds ratios and 95 percent confidence intervals around the odds ratios, are presented in Table 6. The Chi-square test comparing Youth Futures participants to comparison group participants on *No Barriers* and *Financial Barriers* indicated no statistical differences by group. A McNemar test was also conducted to determine changes occurred over time within each participant group. None of the values were significant.

Table 5

Frequencies of Responses: Academic Certainty, Aspirations, and Perceived Barriers to PSE

Measure	Youth Futures				Comparison			
	(N = 44)				(N = 40)			
	Baseline		Follow-Up		Baseline		Follow-Up	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Certainty of Pursuing PSE:	37	88.1	41	95.3	37	92.5	39	97.5
<i>Very/Probably sure I will</i>								
Desire for Highest Level of	41	93.2	38	90.5	40	100.0	37	92.5
Education: <i>Aspires to PSE</i>								
Barriers to Education: <i>No</i>	16	36.4	19	45.2	20	50.0	17	42.5
<i>barriers</i>								
Barriers to Education: <i>Financial</i>	22	50.0	20	47.6	16	40.0	16	40.0
Barriers to Education: <i>Getting a</i>	9	20.5	3	7.1	5	12.5	5	12.5
<i>degree takes too long</i>								
Barriers to Education: <i>I want to</i>	9	20.5	7	16.7	6	15.0	5	12.5
<i>work</i>								
Barriers to Education: <i>I'm not</i>	9	20.5	4	9.5	2	5.0	5	12.5
<i>sure what to do</i>								
Barriers to Education: <i>Not able</i>	6	13.6	5	11.9	6	15.0	9	22.5
<i>to get in/marks too low</i>								

Results of Chi-Square tests: Perceived Barriers to PSE

[illegible]

Group Comparisons on Exploratory Outcome Variables

The first exploratory outcome variable was knowledge of PSE finances, which was dichotomous (Correct/Incorrect). Chi-square tests of independence and McNemar tests were conducted to determine whether performance on the seven questions differed according to group and time. The number and percentage of correct answers by participants on the seven knowledge questions are presented in Table 7.

The results of the Chi-square tests of independence, including Chi-square values, p values, odds ratios and 95 percent confidence intervals around the odds ratios, are presented in Table 8. Note that for these analyses, α was set at a more conservative .01 rather than .05, to reduce the risk of Type I error given the relatively large number of comparisons being made. The Chi-square test comparing Youth Futures participants to comparison group participants indicated no statistically significant baseline differences by group. On four questions – Earnings Payoff, Ontario Student Access, Employment Outcomes, and Work-Study Program – the 95 percent confidence intervals for the odds ratios include 1, further indicating that the odds of answering the question correctly is independent of group.

At follow-up, a significantly larger number of comparison group participants answered the question regarding OSAP ($\chi^2 = 11.63$, $p = .00$, OR=8.06, 95% CIs [2.1, 30.4]) correctly than Youth Futures participants. However, the 95 percent confidence interval of the odds ratio is very large, suggesting a high degree of uncertainty as to the true odds ratio. To explore the unexpected group differences in performance on the question related to OSAP, a second Chi-square test was conducted to compare participants who completed the survey in English with those who completed the survey in French. On the OSAP-related question at baseline, 23 English Youth Futures participants (82%) responded correctly, while only 4 (26.7%) French participants

responded correctly, indicating a statistically significant difference according to language ($\chi^2=12.87$, $p = .00$, OR = .08, 95% CIs [.02, .35]). Similarly, at follow-up, 21 (75%) English Youth Futures participants responded correctly, while only 5 (33%) French participants responded correctly, again indicating a statistically significant difference according to language ($\chi^2=7.09$, $p = .00$, OR = .17, 95% CIs [.04, .66]). Differences between linguistic groups were not found on any of the other PSE knowledge questions.

A McNemar test was also conducted to determine whether performance on the PSE knowledge questions changed over time within each participant group. None of the values were significant, indicating that the number of Youth Futures participants who answered the questions correctly did not change significantly between before and after the Youth Futures program, and similarly, that the number of comparison group participants who answered the questions correctly did not change significantly between baseline and follow-up.

Number and Percentage of Correct Answers: Knowledge of PSE Finances

Measure	Youth Futures				Comparison			
	(N = 44)				(N = 40)			
	Baseline		Follow-up		Baseline		Follow-up	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
PSE Knowledge: <i>Tuition Cost</i>	11	26.2	16	37.2	9	22.5	7	17.5
PSE Knowledge: <i>Earnings Pay-off</i>	12	29.3	17	40.5	11	27.5	15	37.5
PSE Knowledge: <i>OSAP</i>	27	62.8	26	60.5	31	79.5	37	92.5
PSE Knowledge: <i>Financial Aid</i>	10	23.3	15	34.1	8	21.6	6	15.0
PSE Knowledge: <i>Ontario Student Access Guarantee</i>	25	59.5	20	51.3	16	42.1	22	55.0
PSE Knowledge: <i>Employment Outcomes</i>	3	7.1	10	24.4	3	7.5	3	7.7
PSE Knowledge: <i>Work-Study Program</i>	20	50.0	25	62.5	21	58.3	17	43.6

Table 8

Results of Chi-Square Tests: Knowledge of PSE Finances

Measure	Baseline					Follow-up				
	χ^2	<i>p</i>	Odds	Lower	Upper	χ^2	<i>p</i>	Odds	Lower	Upper
			Ratio	95% CI	95% CI			Ratio	95% CI	95% CI
<i>Tuition Cost</i>	.15	.70	.82	.30	2.25	4.02	.045	.36	.13	.10
<i>Earnings Pay-off</i>	.03	.86	.92	.35	2.41	.076	.78	.88	.36	2.15
<i>OSAP</i>	2.75	.10	2.30	.85	6.20	11.62	.00*	8.06	2.14	30.37
<i>Financial Aid</i>	.03	.86	.91	.32	2.62	4.07	.04	.34	.12	.99
<i>Ontario Student Access</i>	2.42	.12	.50	.20	1.21	.11	.74	1.16	.48	2.81
<i>Employment Outcomes¹</i>	-	.639	1.05	.20	5.56	4.10	.04	.26	.07	1.02
<i>Work-Study Program</i>	.53	.47	1.40	.57	3.47	2.84	.09	.46	.19	1.14

* Significant at the $p < .01$ level. Note that α was set at a more conservative .01 rather than .05, to reduce the risk of Type I error.

¹Note that on the baseline Employment Outcomes variable 2 cells had an expected count of less than 5. As a result, the Chi-Square value is not reported. Instead, the *p* value from Fisher's Exact Test is reported here.

All of the PSE knowledge questions were presented in a multiple-choice format. Three questions required participants to identify the correct definition of a term. Four other questions required participants to identify a correct numerical range, either in dollars or percentages. For the purposes of the Chi-square and McNemar analyses, responses to the multiple-choice questions were categorized as dichotomous (Correct/Incorrect). To further explore trends in participants' responses, descriptive (frequencies) analyses were conducted on the four questions with numerical responses. The number and percentage of participants who responded with incorrect responses – under-estimations, specifically – are presented in Table 9. The results of these analyses show that at both baseline and follow-up, a large number of participants underestimated the average annual cost of university tuition in Ontario; the earnings pay-off of a university education; the amount of financial help available to students from the Ontario government; and the full-time employment rate of Ontario university graduates two years after graduation.

Table 9

Frequencies of Incorrect (Under-Estimated) Responses: Knowledge of PSE Finances

Response	Youth Futures				Comparison			
	(N = 44)				(N = 40)			
	Baseline		Follow-up		Baseline		Follow-up	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Tuition Cost: <i>Less than \$7,000</i> <i>per year</i>	27	61.4	21	48.8	29	72.5	28	70.0
Earnings Pay-off: <i>Less than</i> <i>\$30,000 per year</i>	22	53.7	16	38.1	18	45.0	17	42.5
Financial Aid: <i>Less than \$10,000</i> <i>per year</i>	22	51.2	21	47.7	22	59.5	26	65.0
Employment Outcomes: <i>Less</i> <i>than 75%</i>	39	92.9	31	75.6	28	92.5	36	92.3

The second exploratory outcome variable was participants' reading habits. A two-factor repeated measures ANOVA test was conducted to examine the effect of group and time on this continuous variable. The Means and Standard Deviations of scores are presented in Table 10. The results of the ANOVA test, including the *F* ratio, *p* value, effect size and 95 percent confidence interval around the effect size, are presented in Table 11. The interaction effect between group and time was not statistically significant. There was no statistically significant main effect of group or time.

Table 10

Means and Standard Deviations of Scores: Reading Habits

Measure	Youth Futures				Comparison			
	(N = 44)				(N = 40)			
	Baseline		Follow-up		Baseline		Follow-up	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Reading Habits	2.86	.93	2.52	1.09	2.84	.95	2.78	1.07

Table 11

Results of ANOVA: Reading Habits

Measure		<i>F</i>	<i>p</i>	Effect size	Lower 95% CI	Upper 95% CI
Reading Habits	Time	2.79	.10	.03	.00	.12
	Group	.42	.52	.01	.00	.06
	Time x Group	1.47	.23	.02	.00	.09

Discussion

Overall Findings

Overall, the results of the study indicated that participants in the Youth Futures program did not demonstrate the hypothesized improvement in positive short-term outcomes related to non-cognitive factors after exposure to the program. In fact, the findings showed no changes on primary outcomes for either group over the course of the study. Moreover, no differences were evident on primary outcomes between the groups, except for one variable, namely that of adult support, on which comparison group participants reported higher levels than Youth Futures participants at both baseline and follow-up. Some comparison group participants may have reported higher levels of adult support because of their relationship with program facilitators at the community drop-in and recreation programs from which they were recruited. The youth who were successfully recruited to participate in the study at both time points were likely those who were better known to program facilitators and attended programming more regularly. Analyses indicated that those comparison group participants who were successfully recruited to complete the follow-up survey reported higher levels of adult support than other comparison group participants who only completed the baseline survey.

Participants in the Youth Futures program generally had scores that fell in the mid-to-high range on most primary outcome measures, suggesting that even at baseline, they possessed many of the non-cognitive factors that previous research has shown to predict success in pursuing PSE. This may have resulted in a ceiling effect: because a large concentration of participants already scored at or near the upper limit of the scale at baseline, there was no room for upward movement that could be captured at follow-up.

Non-Cognitive Factors

Taken as a whole, these findings raise interesting questions relevant to the broader research base on non-cognitive factors. It may be that the current evaluation efforts fail to capture the factors that are affected by the Youth Futures intervention. This may be because the wrong factors were chosen for measurement and/or that the measures used were inadequate. A number of brief measures were used in the present study, some with only moderate internal reliability. Fewer but longer, more sensitive measures would be have been preferable. These concerns are representative of broader issues within the field. Researchers have struggled to identify a satisfactory, concrete, definitive list of non-cognitive factors, and have not yet developed consistent systems or scales to measure them (Garcia, 2014). Many studies define and measure non-cognitive factors in disparate ways (Gutman & Schoon, 2013).

Duckworth and Yeager (2015) suggested that measures of non-cognitive factors may not be sensitive to short-term changes, or may not be contextually appropriate for specific program settings. Self-report measures of non-cognitive factors, like the ones used in the present study, are subject to a long list of threats to validity, including language and literacy issues; cultural norms; reference bias; social desirability bias; acquiescence bias; and ability retrieve, recall and evaluate relevant information from memory (Duckworth & Yeager, 2015). Available measures of non-cognitive factors remain almost exclusively self-report and do not incorporate more innovative approaches, like measurement of performance tasks (Duckworth & Yeager, 2015).

The findings of the present study also draw attention to another on-going point of deliberation within the field, regarding the malleability of non-cognitive factors. The extent to which factors can change lies on a spectrum, with some more prone to change at different points in the life cycle, through different mechanisms, and to different degrees (Heckman & Kautz, 2012). Non-cognitive factors that are stable personality traits, like conscientiousness, are more

difficult to change (Gutman & Schoon, 2013). Some non-cognitive factors may have sensitive developmental periods, during which interventions are relatively more productive, while others may have critical developmental periods, outside of which an intervention will simply not be effective at all (Heckman & Kautz, 2013). To produce change, the Youth Futures program may need to reconsider the timing and intensity of the intervention. Intervening earlier, and for longer periods, may be more conducive to achieving the desired outcomes.

Research also suggests that programs targeting particular sub-sets of non-cognitive factors are more effective than others. The central point of the review conducted by Farrington and colleagues (2012) is that the best way to improve academic outcomes for youth is to improve their perseverance and strengthen their academic behaviours by addressing their mindsets and learning strategies. Gutman and Schoon (2013) found that evidence of effectiveness is strongest for interventions targeting the perceptions youth have of their ability, their expectations of future success, and the value they place on school, all of which influence their motivation and persistence. The Youth Futures program should tailor program activities toward nurturing and promoting the specific non-cognitive factors that are best-supported by the existing evidence base in the field.

Knowledge of PSE

An area in which Youth Futures participants and the comparison group showed lower levels of performance at both baseline and follow-up entailed their knowledge of PSE. Both groups demonstrated similar levels of knowledge about PSE finances, with the exception of knowledge about OSAP. A significantly larger number of comparison group participants answered the question on OSAP correctly at follow-up than the Youth Futures participants. This difference between the groups appears to be due to the different linguistic makeup of the Youth

Futures group, with it having proportionally more French-speaking youth than the comparison group. In particular, the translation of the term “OSAP” from English to French may have been unfamiliar to Francophone youth, especially considering that these youth were first-generation immigrants. Although the translation used in the study – “RAFEO” (Régime d’aide financière aux étudiants de l’Ontario) – is the official translation used by the Government of Ontario, it may not have been a commonly-used term among youth. This translation issue may have made it more difficult to answer the question in French, contributing to the differences between the groups.

Tellingly, participants in both groups tended to under-estimate the average annual cost of university tuition in Ontario; the earnings pay-off of a university education; the amount of financial help available to students from the Ontario government; and the full-time employment rate of Ontario university graduates two years after graduation. Their performance on these questions suggests that participants may lack knowledge about effective planning for financing PSE and about the value of a PSE degree; this lack of knowledge could affect their motivation to pursue higher education.

These findings are consistent with previous research. Recent data suggests that students continue to misunderstand key aspects of OSAP, such as who qualifies for the program and when loans start to accrue interest (HEQCO, 2017). Youth from under-represented groups (including low-income and first-generation students) are particularly likely to have incomplete or inaccurate information bias about the costs, benefits, and outcomes associated with PSE (Cassidy, 2015; Palameta & Voyer, 2010; Usher, 2005; McElroy, 2008). Palameta and Voyer (2010) used a high-stakes laboratory experiment to illustrate that youths from low-income backgrounds, first-generation students, and Aboriginal youths all demonstrated greater price sensitivity toward PSE

– meaning they had a lower willingness-to-pay threshold than other groups. The authors also found evidence of high rates of loan aversion among participants, especially those who expressed doubts about the returns to PSE. Loan-averse students are not willing to take out loans to cover the costs of PSE, despite being willing to make other types of financial investment in PSE (Palameta & Voyer, 2010).

Understanding students' perceptions about the cost-benefit ratio of PSE is important, because research suggests such perceptions can be predictive of university attendance (Côté, Skinkle and Motte, 2008). In the present study, at both baseline and follow-up, roughly half of Youth Futures participants cited financial barriers as being an obstacle to their pursuit of higher education. These perceived financial barriers may partly be informational barriers, attributable to participants' inflated estimates of the costs of tuition and lower estimates of available financial aid. Their misjudgements about the pay-off of PSE in terms of earning potential may also contribute to a more pessimistic view about the prospect of fulfilling student debt obligations.

Although at the time of the study the Youth Futures program offered presentations to students about financing their education, it appears that this educational intervention was not sufficient to produce perceptible changes to participants' performance on the PSE knowledge questions. It is advisable that the program prioritize this area of instruction by developing purposeful curricula and dedicating more time to the topic within the scheduled activities of the program. To mitigate participants' perceptions of PSE as having high costs and uncertain returns, the Youth Futures program should introduce program curricula specifically aimed at increasing participants' understanding of the value of PSE as an investment and combatting loan aversion by emphasizing the subsidization rate and interest-free features of student loans (HECQO, 2017; Palameta & Voyer, 2010). It may also be important for the Youth Futures program to explore the

role that culture may play for youth when it comes to financing education. Although the issue was not raised by youth in the present study, some Muslim youth may be reluctant to take on interest-bearing loans, which can be considered problematic according to traditional interpretations of Islamic Law (Usher, 2012).

Reaching Students at Risk of Not Accessing PSE

The results of the present study underscore the importance of recruiting and admitting students into the Youth Futures program who are actually in need of this specific intervention. Youth Futures participants were already reporting mid-to-high levels of non-cognitive factors at baseline, prior to receiving the intervention. This trend could be characterized as a ceiling effect on some measures. The demographic information collected from Youth Futures participants also raises questions about whether they are a group at risk of not accessing PSE, even in the context of them having come from low-income families. Only 11 percent of Youth Futures participants indicated they were first-generation students. More than half reported that at least one of their parents had university experience. This finding is important, given that parental education is considered the most significant determinant of participation in PSE: eighty percent of youth whose parents are university-educated pursue PSE (Berger et al., 2009; Finnie, Childs, & Wismer 2011). Similarly, the majority of Youth Futures participants were either first or second-generation immigrants from African countries, another group that research suggests is likely to achieve higher education.

Compared to non-immigrants, first-generation immigrants from Africa are 24 percentage points more likely to attend university. Among second-generation immigrants from Africa the achievement gap widens to 39 percentage points (Childs et al., 2015). The high education levels of participants' parents are not surprising, given their immigrant background.

Recent Canadian immigrant cohorts are highly educated, due to the points-based immigration system in place since the 1990s that emphasizes education and language knowledge (Picot, 2008; Reitz and Sommerville, 2004). Immigrant families are also more likely to live in urban areas, within commuting distance of universities and colleges, further contributing to their children's likelihood to access PSE (Reitz and Sommerville, 2004). These findings suggest that to be effective, the Youth Futures program may need to re-examine the selection criteria used to identify and admit youth into the program.

Other researchers have recognized that student success initiatives may not be reaching the students who are most likely to benefit from them. In their literature review, Shultz and Mueller (2006) noted that most programs promoting PSE attendance target students from underrepresented groups who demonstrate motivation and mid-level academic achievement. The authors contend that "Most participants are academic survivors in many regards prior to program entry. On the other hand, unmotivated students who achieve below average or failing grades are often neglected by these programs" (p.15). Similarly, in his review of initiatives within the Greater Toronto Area intended to improve PSE accessibility for under-represented groups, Miner (2011) notes a systemic gap in existing programs' ability to reach the most challenged youths in the city and provide them with the significant levels of support and attention they require.

Ultimately, interventions are most effective in producing positive change if they are successful in reaching the youths most in need of the intervention. In their meta-analysis of mentoring programs for youth, Dubois and colleagues (2011) found that the most effective mentoring programs involve at-risk youths or youths who have displayed problem behavior. The authors indicate that there are important personal and environmental circumstances that shape how youths respond to programs. They suggest that program effects may "hinge to a noteworthy

extent” on decisions regarding which youths are targeted and selected for the intervention (Dubois et al., 2011; p. 24).

In the present study, most participants in Youth Futures appear to fit Shultz and Mueller’s (2006) description of academic survivors – motivated students already experiencing some measure of academic success. At baseline, they indicated very high levels of certainty and desire for pursuing PSE, with 88 percent stating that they were either “Very” or “Probably” sure they would pursue PSE, and 93 percent reporting that if they could go as far as they would like to in school, they would attain a college or university degree.

More than a third of the Youth Futures participants said that they were not facing a single barrier to higher education. The majority of Youth Futures participants also indicated that they were taking Academic-level high school courses, suggesting they were already on the path to higher education. Provincially, 46 percent of all students take Academic courses throughout high school (King, 2009). Among Youth Futures participants, 61 percent reported taking Academic-level courses and an additional 14 percent reported taking a mixture of both Academic and Applied courses. Course selection is an important predictor of PSE attendance: 90 percent of students who take academic courses attend some form of PSE within one year of leaving high school (King, 2009). Less than 14 percent of the Youth Futures participants expressed concerns that their marks might be too low to get into PSE.

The Youth Futures program may benefit from adjustments to its recruitment strategy to ensure that the program reaches needier youths who have more non-cognitive and cognitive skill deficits. Currently, the primary eligibility criteria of Youth Futures are based on estimates of family income level. Youths whose families live in social housing neighbourhoods are targeted for recruitment. Partner agencies, many of which are organizations providing social services to

immigrants, also assist in recruitment. As a result of this approach, the youths who participate in the program are mostly first- or second-generation immigrants. Although this group of youth may indeed be facing challenges, the research suggests that most will succeed in accessing higher education (Childs et al., 2015). Their chances of high educational attainment are further improved by the high education levels of their parents, and their urban upbringing in close proximity to multiple PSE institutions (Berger et al., 2009; Finnie, Childs, & Wismer, 2011, Reitz & Sommerville, 2004; McElroy, 2008).

All things considered, the evidence suggests that family income level is not the most effective variable to base the recruitment strategy of the Youth Futures program on because it is not the most predictive of PSE access, especially among first-generation immigrant youth (Dooley, Payne & Robb, 2016; Finnie & Mueller, 2007; Frenette, 2007). The limitations of the Youth Futures recruitment strategy are likely to become even more apparent in the future, as the fastest growth in PSE enrolment rates in Ontario is currently occurring at the bottom of the income distribution (Frenette, 2017). It is also important to note that the needs of low-income students as a group may be changing, given the Canadian government's introduction of a new system of student aid in the 2017/18 academic year that offers larger amounts of non-repayable grant assistance to more students (Liberal Party of Canada, 2016). For these reasons, the current recruitment strategy of the Youth Futures program should be reviewed carefully and consideration should be given to its revision in the direction of targeting youths at high risk of not pursuing PSE.

Introducing specific selection criteria could ensure that the program is reaching more at-risk immigrant youths, such as youths who arrived to Canada at later ages, have lower levels of English or French language proficiency, arrived in Canada as refugees, or belong to an at-risk

region-of-origin group, such as the Caribbean (Corak, 2012; Gilmore, 2010; Kanu, 2008; Sweet, 2010). Alternatively, the program could focus its recruitment strategy on reaching non-immigrant youths who are at higher risk of not pursuing PSE, perhaps by partnering with different community service providers or recruiting from different neighbourhoods, including rural areas surrounding Ottawa. The program has previously endeavoured to reach more Aboriginal youths, and youths in out-of-home care, but has encountered some challenges in recruitment and retention. However, given that these groups of youth are highly underrepresented in PSE, they remain a worthy target of the intervention (Norrie & Zhao, 2011).

In addition to adjusting its recruitment strategy, Youth Futures may also benefit from changes to its admissions process. Currently, youths must prepare and submit an online application, attend an in-person interview, and compete with other applicants for a limited number of spots available in the program. This approach may contribute to systematic differences between participants and non-participants, because of self-selection. Youths who are motivated, confident, and conscientious are more likely to initiate and follow through with an application to the program, and attend the interview. These same personal qualities may translate into academic success and persistence for these youths in PSE programs, regardless of the Youth Futures intervention.

To overcome the influence of participant self-selection, the program could lower admissions requirements, and could more actively outreach to youths who are identified as being in need, inviting them to participate in the program, rather than requiring them to apply and compete with other applicants. The program should also be mindful of eligibility criteria that may create barriers to participation for some at-risk youths. To participate in the program, youths are currently required to have two pieces of government-issued identification, a social insurance

card, and a bank account. Youths must also pass a police background records check. If possible, eliminating such requirements would make the Youth Futures program accessible to a wider group of youth.

These proposed changes to program recruitment, selection, and admissions would increase the likelihood of reaching needier youths who are at risk of not accessing PSE. However, to be successful, the program would need to tailor program activities to meet the unique needs of these youths and address the full combination of barriers they face. Focusing on fundamental cognitive skills, including reading and math skills, will be important (Finnie & Mueller, 2007; Frenette, 2007). Emphasizing diverse PSE options – especially college and apprenticeship pathways – will also be valuable. In its current form, the Youth Futures program does not provide programming that is culturally-specific or explicitly targeted toward the needs of one particular group of youth. If the program continues to focus its recruitment efforts on immigrant youth, the program design should be responsive to their particular experiences, needs, and aspirations. The PYD model indicates that interventions should be culturally tailored for target populations, emphasizing the importance of individual values, choice and culture (Durlak et al., 2007).

Immigrant youth have reported facing unique challenges related to identity development, language issues, discrimination and negative stereotypes, and tensions based on conflicting values, expectations and cultural practices between home/family life and their peer group, school, and larger community (Anisef & Kilbride, 2003). If the Youth Futures program endeavours to recruit at-risk youths with high needs, significant adaptations in terms of the intensity, duration, and type of program activities, as well as the timing of the intervention, may also be necessary. For example, war-affected refugee youth may require targeted and specialized

supports to address specific barriers they are facing, such as separation from family, academic gaps due to disrupted schooling, fear of authority figures, acculturation stress, inappropriate academic grade placement, and traumatic pre-migration experiences (Kanu, 2008; Shakya et al., 2011).

Limitations

The present study was limited by several design and methodological factors. These limitations are particularly important to explore because this study was a pilot, intended to serve as a precursor to a more rigorous longitudinal study of participant outcomes in the Youth Futures program.

The present study was limited by its quasi-experimental, non-equivalent groups design, which is less rigorous than a randomized controlled trial (RCT) design, in which participants would be assigned to the intervention through a random lottery. With a non-equivalent groups design, internal validity can be threatened by selection threats. However, despite this caveat, non-equivalence of groups does not appear to contribute to the interpretation of the overall findings of the present study, which suggest equivalent outcomes for both the Youth Futures participants and the comparison group participants.

The study was also limited by its singular reliance on self-reported data. Because of the age of participants and the data collection method used (e.g. collected in a group setting), information that could have been perceived as sensitive or invasive was not collected. For example, detailed questions about immigration status – including refugee status – or family income were not asked. The timing of the data collection also placed limitations on the relevance of some measures. Many participants completed either the baseline or follow-up survey in July or August, while they were out of school for summer break. Questions pertaining to school-

related behaviours (i.e. study habits and attendance), were omitted from the study after many participants did not answer or indicated that the question was not applicable. Responses on some other measures, such as academic self-efficacy or academic motivation, may have been speculative, because they did not have a current frame of reference to base their answers on. The responses of participants may have also been influenced by social desirability, as participants may have been eager to present themselves in a positive light.

The study was also limited by its relatively small sample size. Although all 77 Youth Futures participants in the 2014 cohort were invited to participate in the study, recruitment was largely constrained to the approximately 70 youth who attended the first day of programming, when the data collection took place. There were also issues in retaining Youth Futures participants, due to reduced attendance in the program during the follow-up data collection period in August. The ability to draw conclusions about outcome change in the present study is limited by the failure to reach or retain the entire Youth Futures sample. It is impossible to know how representative the youth in the present study were. Recruiting and retaining comparison group participants was also challenging. Comparison group participants who were lost to follow-up scored lower on some outcome variables of interest at baseline, suggesting that attrition was less likely among higher-performing youth.

The relatively small sample size of the study restricted the potential to make comparisons between sub-groups. Trends toward improvements – for example, a smaller percentage of Youth Futures participants reported facing certain barriers to education at follow-up compared to baseline – could not be meaningfully explored because of the small sample size. Similarly, further exploration of the effects of linguistic differences in the present study is limited because of the small sample size, and the absence of comparison group participants who completed the

survey in French. Linguistic differences in program outcomes between Francophone and Anglophone students have previously been reported in the Future to Discover evaluation (Ford and Kwakye, 2016).

Future Research

Future research should follow participants for a longer time period, examining outcome variables of actual PSE attendance and persistence, using a combination of participant self-report data as well as school administrative data. A rigorous study design, preferably an RCT, is needed to determine whether PSE participation rates increase as a direct result of the intervention. Future research should also focus on drawing direct connections between program components and outcomes, so that successes can be accounted for and replicated by others. For example, the program could be divided into multiple interventions: workplace experience, on-campus activities, and leadership and skills development training. The effectiveness of the interventions could then be examined alone and in combination. Participants could be randomly assigned to receive one, two, or all three of the interventions, or to a comparison group. Such a design would clarify the unique contributions of each program activity in this complex, multi-component intervention. Roth and Brooks-Gunn (2003) have previously noted that few studies systematically vary elements of the program design to determine which, in which combination, are critical to producing change. Without this type of information, it is difficult to draw conclusions about why a program did, or did not, produce desired outcomes.

To secure a sufficient sample size for analysis, participants could be recruited in multiple cohorts over successive years. A larger sample size would allow for the effectiveness of the intervention to be tested across different variables of interest, such as linguistic group or level of parental education. This type of in-depth analysis would determine the program components that

are most beneficial and appropriate for different groups of youth. A similarly complex, rigorous RCT study has been successfully conducted by the Social Research and Demonstration Corporation (SRDC) on the Future to Discover pilot program (Ford & Kwakye, 2016).

Conclusions

We did not find evidence to support the hypothesis that participants involved in the Youth Futures intervention would experience positive outcomes related to non-cognitive factors that are predictive of PSE participation. The findings of the present study suggest several useful program improvement strategies that may be used to modify the Youth Futures program, to ensure that students in actual need of the intervention receive programming tailored to their unique needs. As a pilot study, lessons learned from the present study may be valuable in informing the design and implementation of future outcomes evaluations of the Youth Futures program, and may also be of interest to other researchers evaluating similar programs.

The findings of the present study contribute to the emerging body of research focused on the identification of interventions that can contribute to closing the gap in PSE access for under-represented groups of students. Experts have called for reliable empirical evidence in this area to improve our understanding of what governments, educational institutions and community partners can do to overcome PSE access barriers (Barnett et al., 2012; Miner, 2011; OUSA, 2011; Shultz & Mueller 2006; Slobodin, 2010; Tierney & Hagedorn, 2007). The evaluation research presented here can help to modify and improve Youth Futures and other programs intended to ensure that all Canadian youth have an equitable opportunity to benefit from higher education.

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CHAPTER EIGHT

Qualitative Study of Short-Term Outcomes*Contributions*

Jennifer Rae developed the research presented in this manuscript and conducted the data collection, transcription, data analysis and write-up of the results and discussion. Dr. Tim Aubry supervised the research. In their capacity as stakeholders of the Youth Futures program, Dr. Caroline Andrew, Dr. Elizabeth Kristjansson and Dr. Vivien Runnels provided input on the development of the research design and methods.

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Promoting Access to Post-Secondary Education among Youth from Low-Income Families: A
Study Exploring Post-Secondary Transition Experiences and Outcomes of the Youth Futures
Program using Qualitative Methods

Abstract

There are long-standing concerns about inequitable access to higher education in Canada (Berger, Motte, & Parkin, 2009). Youth Futures is a bilingual (French and English), community-based intervention intended to increase access to post-secondary education (PSE) among high school-aged youths from low-income family backgrounds. The purpose of the present study was to explore the PSE access experiences and outcomes experienced by Youth Futures participants as expressed in their own words. Semi-structured, open-ended qualitative interviews were conducted with a purposeful sample of 20 program participants whose approximate age was 17 years old. Interviews lasted approximately 25 minutes. A general inductive approach to qualitative data analysis was used. Findings suggest participants held high expectations regarding PSE, which had developed early in life. Participants were strongly influenced by their parents and siblings. Participants described assets and resources available to them, including their own personal values, life experiences, skills, and abilities, as well as their relationships with positive role models. Participants faced some barriers to higher education, including debt aversion, academic demands, and lack of time management. While participants described largely positive experiences in the Youth Futures program, there was no specific evidence to suggest that the program was achieving its goal of increasing PSE access rates among these participants. Findings indicate several program improvement strategies that may be useful in modifying the Youth Futures program to ensure that students in need of the intervention receive programming tailored to their needs and that the timing of the intervention is effective.

Canada is one of the most highly-educated countries in the world, with 57 percent of adults aged 25 to 34 attaining a PSE credential. This is well above the average of 39 percent in other OECD member countries (OECD, 2014). In 2012, 75 percent of adults aged 25 to 44 had post-secondary experience of some kind (Statistics Canada, 2016). The proportion of working-age individuals (aged 15 to 64) with university degrees more than doubled between 1990 and 2012, from 10.9 percent to 22.2 percent (Statistics Canada, 2016). Provincially, Norrie and Zhao (2011) found that 46 percent of Ontario youth attend university by the age of 21, and 36 percent of all youth attend college by age 21.

Although these overall PSE access rates are impressive, there are long-standing concerns about inequitable access to PSE, with gaps in university participation being particularly pronounced (Berger, Motte, & Parkin, 2009; Finnie, Wismer & Mueller, 2015; Finnie, Childs & Wismer, 2011). The primary determinants of PSE access are not just academic achievements like reading scores or math and science grades, but also cultural background and parental education levels (Vaccaro, 2012). Thus, certain groups of youth are under-represented in the higher education system in Canada. Research has demonstrated that youth from low-income families, youth whose parents do not have PSE experience (referred to as "first-generation" students), youth who identify as Aboriginal, youth with disabilities, youth from rural areas, and youth in out-of-home care are all significantly less likely to enroll in PSE (Berger et al., 2009; Norrie & Zhao, 2011; Provincial Advocate for Children and Youth, 2012). Conversely, both first-generation immigrants (born outside of Canada) and second-generation immigrants (born in Canada to parents born outside of Canada) are more likely to access PSE than are non-immigrants (Berger et al., 2009; Norrie & Zhao, 2011; Finnie et al., 2015; Finnie et al., 2011).

To address inequalities in access to higher education, innovative interventions aimed at increasing PSE attendance amongst under-served youth have been developed. Youth Futures, established in 2008, is one example of such an intervention. Youth Futures participants are high school youth from low-income family backgrounds living in Ottawa. The bilingual program spans seven months and consists of mentoring by university students; leadership training; workplace training and skill development activities; paid summer employment; and exposure to college and university settings. The primary goal of the program is to improve PSE access rates among participants.

The purpose of the present study was to investigate the PSE access experiences of “special population” (Smith & Gottheil, 2008) high school students through in-depth qualitative interviews conducted with 20 youths who participated in the Youth Futures program in 2014. Key factors influencing the high school-to-PSE transition were explored, including participants’ aspirations and choices of educational and career pathways; parental and family influences; supportive assets and resources; and barriers and challenges faced by participants. The study also addressed program outcomes by investigating participants’ perceptions of personal changes resulting from their involvement in the Youth Futures program.

Literature Review

Smith and Gottheil (2008) use the term “special populations” to refer to groups of students who face specific barriers to education and have been the focus of educational policy and programs. The groups of greatest interest in Canada include Aboriginal, recent immigrant, Asian, northern Canadian, rural, first-generation, low-income, Francophone, and black students as well as students with disabilities (Smith & Gottheil, 2008). A number of these special student populations are commonly represented among participants in the Youth Futures program. The

bilingual program is targeted toward youths from low-income family backgrounds with the intention of recruiting first-generation students who are the first in their family to pursue PSE, youths who are first- or second-generation immigrants to Canada, and Aboriginal youths. What follows is a review of the literature exploring the PSE experiences of these three special student populations, and the role that transition programs such as Youth Futures can play in supporting them in accessing higher education. These three special student populations – first-generation students, immigrant youth, and Aboriginal youth – were selected for investigation because they are most reflective of the intended recruitment strategy of Youth Futures and because they are the most frequently examined in the literature.³

Conceptual Framework

The concepts of social and cultural capital underlie much of the research on the experiences of special populations navigating the Canadian PSE system. *Cultural capital* denotes the knowledge, experiences, values, behavioural practices and connections which stem from one's parents and family and contribute to one's success in life (Childs, Finnie, Mueller, 2016; Griffin, del Pilar, McIntosh & Griffin, 2012; Lane & Taber, 2012; Yan, Lauer & Jhangiani, 2008). Cultural capital is a form of socialization that is difficult to measure but is important to understand, because it is strongly linked to education and labour market outcomes (Yan et al., 2008). *Habitus* is a similar but separate construct from cultural capital. Cultural capital refers to the resources available to an individual, while habitus refers to the individual's orientation toward these resources (Griffin et al., 2012). Habitus embodies an individual's view of the world

³ Although Youth Futures selects youths based on income specifically, the qualitative literature does not tend to focus on income in isolation. Instead, studies of student experiences explore the effects of family income indirectly, in combination with an investigation of the other background factors it's correlated with, like parental education. For example, Lehman (2009) studied the experiences of first-generation students from working-class family backgrounds.

and his or her perceived position in it (Griffin et al., 2012). Habitus develops early in life and is reinforced over time, producing a predisposition to interpret, think and behave in certain ways, which shapes an individual's life course (Lehmann, 2007)

Two forms of social capital have also been identified as central to the discussion of how youth navigate education systems. *Bonding social capital* is associated with interactions among people sharing close-knit ties who know each other well, while *bridging social capital* is associated with interactions among people sharing weaker ties in an extended social network (Ellison, Wohn & Greenhow, 2014). Bonding social capital provides social support and a sense of belonging and solidarity, but may constrain life choices, as youth may be hesitant to choose a path that diverges from that of others within their close network. Bridging social capital exposes youth to external assets, diverse world views and novel information (Ellison et al., 2014; Yan et al., 2008). Youth who lack bridging social capital may struggle to access resources available from the larger society outside of their community, limiting their opportunity for social mobility.

Experiences of Special Population Students Navigating PSE Pathways

Experiences of first-generation students. When it comes to determining whether youth will pursue PSE, the educational background of their parents is arguably the strongest factor of influence (de Broucker, 2005, Norrie and Zhao, 2011). Eighty percent of young people in Canada whose parents completed a university education enroll in PSE, as do 66 percent of those whose parents completed a college certificate or diploma. These rates stand in contrast to those of youth whose parents are not educated beyond high school, of which only half pursue PSE (Berger et al., 2009). Overall, students with parents who have some form of higher education are two-and-a-half times more likely to pursue PSE, compared to first-generation students (Norrie & Zhao, 2011).

Students who are the first in their family to experience college or university differ in significant ways from their non-first-generation peers and may encounter unique challenges when navigating the PSE system. At the same time, first-generation students bring unique strengths and resources to their PSE experience which contribute to their success. Despite the challenges that their first-generation status may pose, students express positive self-concepts, describing themselves as persistent, motivated, appreciative and not entitled, driven to succeed, self-reliant and responsible, and adaptable (Tate et al., 2015).

Support from family is one resource commonly identified by first-generation students, who describe the importance of parental involvement and encouragement in their educational experiences (Lane & Taber, 2012; Tate et al., 2015). Parental support influences students' beliefs about education, and contributes to their educational decision-making (Lane & Taber, 2012; Tate et al., 2015). A positive relationship between degree of parental involvement and educational aspirations among first-generation students has been documented, suggesting that first-generation students benefit from the active engagement of their parents (McCarron & Inkelas, 2006). Parents of first-generation students demonstrate emotional support for their children by reassuring them that they have family who can be counted on, encouraging them to remember their family roots and cherish family ties throughout their educational journey, and inspiring them to become someone others can be proud of (Wang, 2014).

First-generation students may be motivated to pursue PSE in part because of the financial instability and lack of labour market opportunities that their parents may have experienced (Lane & Taber, 2012). McCall (2014) referred to negative vicarious experiences, or negative models, as a motivational force that prompts first-generation students to seek out PSE. Similarly, parents wish to see their children access educational and career opportunities that they themselves were

unable to, and will encourage their children to pursue PSE programs and career fields that they perceive as being more stable, profitable, or prestigious than their own (Lehmann, 2009; Tate et al., 2015).

Parents of first-generation students are important sources of emotional support and encouragement. However, without prior personal experience and familiarity with the PSE system, it may be difficult for parents of first-generation students to assist their children in preparing for and applying to PSE, or navigating the PSE and career development process (McCall, 2014; Tate et al., 2015). First-generation students may lack knowledge around the structure and function of PSE, PSE regulations and practices, fields of study and career options, or the costs, benefits, and requirements associated with various PSE pathways (Cassidy, 2015; Wheeler, 2016). It can be challenging for first-generation students to locate resources and reliable sources of information about PSE (Wheeler, 2016).

First-generation students face further informational barriers because they tend to lack an established professional or career network through their families and communities. First-generation students may not personally know anyone in their intended profession, limiting their ability to access people who can act as role models and support them in their educational and career pursuits (Ellison et al., 2014; Lehmann, 2009; Tate et al., 2015). Perhaps as a way to combat the lack of bridging social capital available to them, first-generation students may rely more on teachers and school counsellors as sources of PSE support (McCall, 2014). First-generation students are more likely to name school counsellors as a key influencer in their pursuit of PSE, surpassing parents and friends (Cholewa, Burkhardt & Hull, 2016). Course streaming in high school may be particularly critical for first-generation students. Students who are placed in academic streams are exposed to a curriculum, teaching style, and relationships

with teachers that can redirect their habitus, and set them on a path to PSE (Lehmann, 2009). Given the important influence of teachers, counsellors, and exposure to Academic-level course work, it is troubling that some first-generation students report that they encounter systemic barriers in high school, including restrictive course streaming and lack of teacher guidance (Lane & Taber, 2012).

The experiences and beliefs of their parents may lead first-generation students to adopt a utilitarian or pragmatic view of higher education. First-generation students and their parents often view education as being critical to job security and financial capital – essentially viewing education as the key to a good life (Auton-Cuff & Gruenhage, 2014). This instrumental assessment of the value of education is rooted in class habitus and the desire for upward mobility (Lehmann, 2009). Holding a utilitarian view of PSE may give first-generation students a clear sense of purpose and enhance their motivation and persistence to pursue PSE (Auton-Cuff & Gruenhage, 2014).

At the same time, this narrow view of PSE may pose problems. First-generation students are urgently concerned with the employment value of their education, the availability of jobs in their field of study, and the payoff or return on investment associated with a degree (Cassidy, 2015; Lehmann, 2009). Students and parents may possess inaccurate information or hold biases that constrain PSE choices and place pressure on students to pursue particular PSE pathways—namely, professional-type occupations and PSE credentials that are closely linked to employment (Cassidy, 2015; Lehmann, 2009). First-generation students may experience intense pressure to succeed, and any periods of doubt about the vocational potential of their chosen PSE pathway may contribute to an increased risk of dropping-out over concerns about wasting money (Lehmann, 2007; Lehmann, 2009).

First-generation students may also be at risk of dropping out of PSE because they experience a clash of old and new habitus that results in feelings of isolation and not fitting in or relating well to others (Lehmann, 2007). To succeed in higher education, students may feel that they need to reconcile discontinuities between the habitus of their social roots and the new habitus required to thrive in PSE (Lehmann, 2007). Students experience competing pressures: to succeed in PSE, achieve upward mobility, and pursue a different lifestyle from their parents, but also to reaffirm their social background, stay close to their family, and choose a clear vocational pathway to a familiar profession (Lehmann, 2009). First-generation students may describe feeling a sense of guilt about attending school while family members struggle financially at home; abandoning family or choosing education over family obligations; not being able to relate to family anymore; and not wanting to pursue the goals their parents had set for them (Wheeler, 2016).

Experiences of youth whose families have immigrated to Canada. On many measures of educational attainment, both first- and second-generation immigrants outperform non-immigrants (Childs, Finnie & Mueller, 2015; Norrie & Zhao, 2011). Immigrants are less likely to drop out of high school and are more likely to pursue PSE, especially at the university level (Dooley, Payne & Robb, 2016; Finnie & Mueller, 2009; Gilmore, 2010; Norrie & Zhao, 2011). Educational disadvantage does not pass from parent to child in immigrant families in the same way that it appears to in non-immigrant families: children of immigrant parents with no PSE experience go on to pursue PSE at rates that are much higher than those observed for children of Canadian-born parents with no PSE experience (Childs et al., 2015; Corak, 2008). Similarly, the effect of income on PSE access is not observed among first-generation immigrant youth. First-

generation immigrant youth living in low-income neighbourhoods attend PSE at the same rate as Canadian-born students living in high-income neighbourhoods (Dooley et al., 2016).

The educational successes of immigrant youth have been at least partially attributed to cultural factors and the high value placed on education in immigrant families, which has been described as “a strong pro-PSE ethos” (Finnie & Mueller, 2009; p. 20; Gilmore, 2010; Keller & Tillman, 2008). The effects of this cultural orientation toward education can be observed even if other factors are controlled for, including geography (urban/rural), family income, parental education level, high school grades, literacy scores, and high school engagement (i.e. sense of academic identification and participation, as well as social engagement at school) (Childs et al., 2015; Finnie & Mueller, 2009; Finnie et al., 2011). Immigrant youth describe education as an integral part of their values, imparted to them at a very young age by their parents who constantly encouraged them and equated education with cultural identity, prestige, and success (Yan et al., 2008; Shakya et al., 2012). As Griffin and colleagues (2012) explained, immigrant students have PSE expectations, rather than aspirations. The high expectations that immigrant parents hold for their children lead them to invest in their child’s education through deliberate parenting practices (such as attention to homework and the home-learning environment), and through the accumulation of greater savings for their child’s education (compared to native-born parents) (Sweet, Anisef & Walters, 2010).

Evidence of high rates of PSE attainment among immigrant youth is encouraging but may be masking real challenges faced by immigrant youth and their families. In many cases, immigrant youth overcome significant obstacles to achieve PSE credentials. The motivation to succeed academically may stem in part from the knowledge that their families have made extensive sacrifices in migrating to Canada (Griffin et al., 2012; Lehmann, 2009; Taylor &

Krahn, 2013). Many parents experience downward social mobility as a result of their immigration, and despite PSE experience in their country of origin, find themselves working in hard, low-wage jobs in Canada because their credentials are not recognized (Taylor & Krahn, 2013). Parents who struggle to realize positive career outcomes for themselves transfer their aspirations onto their children (Griffin et al., 2012; Yan et al., 2008). Meanwhile, immigrant youth who witness their parents' struggles may begin to question the labour market value of education, and become demotivated (Taylor & Krahn, 2013).

Youth may feel pressured to justify the sacrifices their families have made, not only by attending PSE, but also by pursuing particular types of academic programs and professions that are most valued by their parents. While intergenerational obligation fosters a clear sense of purpose and strong commitment to education, it may also result in feelings of guilt and overwhelming responsibility (Griffin et al., 2012; Lehmann, 2009). Youth who acquiesce to their parents' wishes when choosing an educational pathway may experience uncertainty and regret, especially if their choice is not well-suited to their own personal dispositions (Lehmann, 2009; Taylor & Krahn, 2013). Students who go against their parents' wishes may experience internal identity struggles and a diminished parent-child relationship (Paat, 2013; Taylor & Krahn, 2013).

Although immigrant parents are able to encourage their children to attend PSE, they may struggle when it comes to helping their children with the specific logistics of navigating the PSE system because of their lack of familiarity with the Canadian context (Taylor & Krahn, 2013). In some cases, parents do not have English language proficiency, so youth themselves take on the role of interpreter and service navigator for their families (Shakya et al., 2012; Taylor & Krahn, 2013). Immigrant youth may need information and guidance about the Canadian education

system and the process of searching for, deciding on, and applying to PSE (Griffin et al., 2012; Shakya et al., 2012).

In addition to being influenced by the migration experiences of their parents, youth who are first-generation immigrants may also face challenges associated with their own journey to Canada. Families may be reunited or separated as a result of migration, which can be a source of significant stress for youth (Shakya et al., 2012). Migration is particularly difficult for youth who arrive in Canada at an older age, who are more likely to have experienced disruptions to their education and to struggle with English language proficiency (Shakya et al., 2012; Taylor & Krahn, 2013). Immigrant youth who enter the Canadian school system may encounter teachers or administrators who place students in classes that are an inappropriate match for their abilities, based on discriminatory views of racialized groups or ‘foreign education’ (Shakya et al., 2012).

Some immigrant youth may also experience discrimination and racism from other students while in school, which can adversely impact their identity, well-being and sense of school as a safe place (Shakya et al., 2012). Immigrant youth report that it can be challenging to learn and adjust to new cultural norms, and that they experience cultural barriers and conflicts between their cultural values and the values of the academic institution (Sinacore & Lerner, 2013). Immigrant youth may struggle with developing a sense of belonging and integration in PSE environments, especially if the campus climate is not perceived as welcoming (Stebbleton, Soria, & Huesman, 2014). Immigrant youth may benefit from PSE environments that provide identity-based spaces, encourage interactions with supportive faculty members, and foster strong peer relationships (possibly through mentoring programs pairing upper-year students with first-year students) (Stebbleton, Soria, & Huesman, 2014). Campus services specifically geared toward immigrant youth may be useful (Sinacore & Lerner, 2013).

Experiences of Aboriginal students. Historically, the formal education system has been associated with forced assimilation for Aboriginal peoples in Canada, who have endured racist government educational policies intended to alienate them from their values and traditions (Orr, Roberts & Ross, 2008). Aboriginal communities continue to experience the impacts of these disturbing educational policies. Aboriginal students remain the most under-represented group in Canadian post-secondary institutions: Aboriginal students' high school dropout rates are twice as high and their rates of university degree attainment are three times lower than other students (Berger et al., 2009). Gaps in attainment are not narrowing, despite the high educational aspirations that Aboriginal youth and their families have, and the high levels of academic achievement demonstrated by Aboriginal students who do attend PSE (Finnie, Childs, Kramer & Wismer, 2010; Gordon & White, 2014; Restoule, 2013). The disparity is driven by a range of factors, including socio-cultural and personal barriers, financial barriers, geographic barriers, and discrimination (Gordon & White, 2014; Orr et al., 2008).

Aboriginal students are more likely to be first-generation students whose parents did not attend college or university (Finnie et al, 2010). However, most Aboriginal students report that their families encouraged them to pursue PSE and had expectations of them to succeed (Restoule et al., 2013). High rates of poverty and unemployment may be present in the home communities of Aboriginal students, with few college or university-educated community role models available (Orr et al., 2008). Some Aboriginal students and their families may be facing other barriers, including substance abuse, child welfare or criminal justice system involvement, or physical, emotional or sexual abuse (Wesley-Esquimaux & Bolduc, 2016). As a result of their first-generation status and community characteristics, Aboriginal students may lack access to information, and face issues with wellness, preparedness and confidence in relation to PSE

(Restoule et al., 2013; Wesley-Esquimaux & Bolduc, 2016). Aboriginal students who do access PSE are at an elevated risk of leaving without graduating, despite strong academic performance (Finnie et al., 2010).

Financial barriers are encountered by many Aboriginal students along their path to PSE (Restoule et al., 2013; Wesley-Esquimaux & Bolduc, 2016). Systemic discrimination is evident in the chronic underfunding of First Nations schools across Canada, as well as the government-imposed quotas on both secondary and post-secondary education funding. Funding caps mean that demand outstrips supply, such that thousands of Aboriginal students accepted into PSE are denied financial support through their band each year (Orr et al., 2008). Aboriginal students describe confusion and a lack of clear information about how to apply for band funding, scholarships, and provincial financial aid (Restoule et al., 2013). Bureaucratic barriers arise when the various government departments responsible for Aboriginal education and training do not communicate and collaborate effectively (Orr et al., 2008).

Many Aboriginal students are from smaller, rural communities and must relocate away from home to attend PSE in urban areas (Finnie et al., 2010). Geographic barriers arise for these students, who may struggle to maintain community ties and fulfill family obligations (Orr et al., 2008; Restoule et al., 2013). These barriers are particularly noteworthy because Aboriginal students have expressed that they prioritize family and community commitments over school responsibilities (Restoule et al., 2013). Some Aboriginal students describe experiences of culture shock as a result of moving to attend PSE, coupled with reverse culture shock when transitioning back into their home community (Wesley-Esquimaux & Bolduc, 2016).

Discrimination and racism remain a disconcerting reality for Aboriginal students who pursue PSE at mainstream institutions. Universities and colleges often overlook and undervalue

Aboriginal culture and traditional methods of learning (Orr et al., 2008). Non-Aboriginal students, staff and faculty members often have a limited understanding of Aboriginal culture and history, and may be misinformed or hold discriminatory views (Orr et al., 2008). Almost all Aboriginal students report experiencing at least one instance of racism at some point in their school experience (Restoule et al., 2013; Wesley-Esquimaux & Bolduc, 2016). Many Aboriginal students state that they do not feel supported or encouraged by their teachers (Restoule et al., 2013). Perceived or experienced racism is a significant burden for students, leading to feelings of alienation that deter them from pursuing or continuing PSE (Wesley-Esquimaux & Bolduc, 2016).

The Role of Transition Programs in Supporting Special Population Students

As described above, special population students – including first-generation students, immigrant youth, and Aboriginal youth – face unique challenges in navigating PSE pathways. Transition programs designed to serve as a bridge between the secondary and post-secondary education systems can be an effective means of supporting these students to thrive in higher education (Deller & Tomas, 2013). *Thriving* includes not only achieving academic success and attaining occupational goals, but also employing effective coping skills, maintaining a positive perspective, engaging in healthy behaviours, and gaining connectedness (Cossy, 2014).

To be most effective, transition programs should target the unique barriers identified by special population students. Special student populations often have constrained views of potential PSE pathways because of the narrow range of careers represented in their families and home communities (Ellison et al., 2014). These students are particularly likely to benefit from interventions that increase their bridging social capital by exposing them to diverse people with different life experiences through field trips, presentations, and peer mentorship (Petty, 2014).

Transition programs should inform students about different institutions and programs of study, and assist them in navigating the intricacies of searching and choosing a PSE program, to ensure that students select a pathway that is well-suited to their individual needs and interests (Griffin et al., 2012).

Special population students may also benefit from transition programs that increase their sense of belonging in PSE environments and in their family and home communities (Wheeler, 2016). Transition programs should assist students in communicating with family about PSE and managing family expectations about their educational and career path, perhaps through the use of role-play to build self-efficacy and communication skills (Wheeler, 2016). Social and emotional intelligence training, such as mental toughness training, may also benefit special population students by their increasing self-confidence, interpersonal skills, and ability to cope with stress (Cossy, 2014; Stelnicki, Nordsokke & Saklofske, 2015; St Clair-Thompson et al., 2016).

Transition programs that provide cultural supports are also important. The PYD model indicates that interventions should be culturally tailored for target populations, emphasizing the importance of individual values, choice and culture (Durlak et al., 2007). Culturally-appropriate interventions may be particularly valuable for Aboriginal students, who benefit from programs that are reflective of Aboriginal cultural beliefs and values. Research has demonstrated that incorporating traditional Aboriginal cultural activities into program curricula enhances students' experiences and promotes empowerment (Favell, 2013). Programs should connect students with Aboriginal instructors and staff members, as well as peer mentors and community Elders (Restoule et al., 2013; Wesley-Esquimaux & Bolduc, 2016).

The Youth Futures Program

Youth Futures is a community-based intervention intended to improve PSE access rates among special population students. The program activities, inputs, outputs and outcomes are described in detail in the program logic model presented in Chapter Four of this thesis.

The Youth Futures program is based in Ottawa, Ontario, and is supported by a partnership comprised of the City of Ottawa, five local PSE institutions, and a number of community-based organizations, including Ottawa Community Housing, a coalition of community health and resource centres, and several immigrant settlement and integration service organizations. The program is offered at no cost to high school students aged 16 to 21 from low-income families and communities that include first-generation students, immigrant youths and Aboriginal youths.

The program targets students who live in publicly-funded social housing and/or have a parent who is receiving social assistance in the form of Ontario Works (OW) or the Ontario Disability Support Program (ODSP). Youths are recruited into the program through multiple channels, including community partners' websites OW and ODSP workers, and local schools, neighbourhoods and community centres. Interested youths are required to submit an application to the program. Applicants are screened for eligibility on the basis of age/grade level in school and family income (postal code is used to identify applicants living in social housing or a low-income neighbourhood). In-person interviews with program stakeholders are conducted with roughly twice as many eligible applicants as there are spaces available in the program. Offers to participate in the program are made on the basis of these interviews. The interviews serve to identify the youths who are considered most suitable for the program – generally speaking, those applicants with academic potential who express interest and motivation in participating in Youth

Futures. Emphasis is also placed on ensuring that youths who appear to face multiple barriers to education are offered a chance to participate in the program.

The program spans seven months, from February to August. During the academic year from February to June, program activities take place on Saturdays and during spring break. During the summer months of July and August, the youths go through a formal hiring process with the City of Ottawa and other local employers, and complete six weeks of full-time employment as well as a one-week university experience at the end of the program. The program participants are divided into smaller groups, each lead by two mentors, who are university students hired to provide support and encouragement to participants. Program activities include workplace training and skill development activities focused on job search and employability, as well as direct exposure to PSE settings. On-campus activities include lectures given by university professors on a variety of different subjects, and workshops on topics such as budgeting, financing, and applying to PSE. The PSE preparation component of the program consists of ten half-days of activities, as well as one full week of activities at the end of the program in August.

Program Theory

The Youth Futures program aims to promote access to higher education among youths from low-income families by nurturing various socio-emotional and behavioural characteristics. This approach is supported by two distinct but related bodies of literature. The first pertains to the Positive Youth Development (PYD) perspective, and the second pertains to the role of non-cognitive factors in producing positive education outcomes.

The PYD perspective serves as a conceptual framework guiding the Youth Futures program. The PYD view of adolescent development emerged in the 1990s as a conceptual alternative to the problem-centered, deficit focused approaches that previously dominated the

field of youth research and practice (Bowers et al., 2010; Damon, 2004; Lerner et al., 2010). PYD is a holistic approach to maximizing the inherent strengths and positive qualities of youth (Damon, 2004). The PYD approach focuses on aligning young people with positive growth-promoting resources – termed developmental assets – through targeted interventions (Bowers et al., 2010). Programs that adhere to a PYD philosophy nurture the core attributes and competencies that youth rely on to navigate the transition into adulthood, supposing that this type of nurturance may not be readily available to some groups of youths in their existing family, school and community settings (Heckman, 2008; Naudeau, Cunningham, Lundberg & McGinnis, 2008; Roth & Brooks-Gunn, 2003).

Beyond the broader goal of promoting positive youth development, the Youth Futures program has adopted a focused, instrumental goal of promoting equal access to higher education. It is to this end that the research base on the importance of non-cognitive factors is relevant to the Youth Futures program theory. Experts now recognize that additional student attributes, beyond cognitive and intellectual abilities, impact the capacity to learn and succeed in school. These attributes have been referred to as non-cognitive factors, a term used to represent sets of behaviors, skills, attitudes, feelings, thoughts and strategies that play a role in fostering positive outcomes for youth (Farrington et al., 2012; Garcia, 2014).

As the Youth Futures program logic model suggests, the program targets a number of non-cognitive factors. The intended short-term outcomes of the program include self-confidence, self-mastery, sense of competence, persistence, social connectedness, motivation, optimism, and conscientiousness. A growing body of literature has established a strong relationship between these types of non-cognitive factors and positive outcomes for youth, particularly academic performance and educational achievement (Gutman & Schoon, 2013). Further, evidence suggests

that various inter-related non-cognitive factors (including self-efficacy, motivation, academic expectations) are malleable and open to improvement through intervention activities (Farrington et al., 2012; Gutman & Schoon, 2013).

The Present Study

The present study used qualitative methodology to explore the experiences of special population students transitioning from high school to PSE. Semi-structured, open-ended interviews were conducted with a sub-sample of 20 youths who completed the Youth Futures program in 2014. The research questions guiding the study were the following: 1) What educational and career aspirations do participants have, and why? 2) What assets and resources are perceived by participants as helping them to reach their educational and career goals? 3) What barriers and challenges are perceived by participants in the pursuit of their educational and career goals? And 4) What changes, if any, do participants perceive in themselves as a result of their involvement in the Youth Futures program?

Method

Participants. A group of 20 youths who completed the Youth Futures program in 2014 were recruited to participate in the present study. The recruitment process was conducted with the help of with program staff and mentors familiar with the youths in the program, and a purposeful sampling procedure was used. Patton (2002) describes the value of purposeful sampling – sometimes called purposive or judgement sampling – by remarking that, "the logic and power of purposeful sampling lie in selecting information-rich cases for study in depth. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the inquiry" (p. 230). Relevant family background characteristics considered during recruitment included parental education, birth country, and Aboriginal

background. The degree of engagement and success in Youth Futures was also considered, to ensure that the sample was comprised of youths who had a diverse range of experiences in the program. The intention was to interview youths who varied in terms of the extent to which they had attended and participated in program activities, and the extent to which they had experienced positive outcomes.

The sample of youths who participated in the study included ten males and ten females. Eight participants had completed the Youth Futures program in French, while the remaining twelve participants had completed the program in English. Participants ranged in age from 15 to 20 years old at the time of the interview, with the average age being 17. Almost all participants were entering Grade12 at the time of the interview, with the exception of one participant entering Grade 11, and three participants who had recently graduated from high school in June 2014. Information about family immigration history and parental education was available for 19 out of 20 participants, who had completed a demographic questionnaire administered on the first day of the Youth Futures program (this questionnaire was administered as part of a broader survey on program outcomes, presented in Chapter Seven of this thesis).

Nine participants were first-generation immigrants born outside of Canada; six were born in Africa, two in the Middle East, and one in the United States. Of the participants born in Canada, eight were second-generation immigrants whose parents were born outside of Canada; four had parents born in Africa, three had parents born in the Middle East, and one had parents born in Eastern Europe. The remaining two participants identified as Aboriginal. Most participants stated that one or both of their parents had some college and/or university experience, in Canada or elsewhere. Only one participant stated that neither of her parents had any PSE experience.

Interview Protocol. Individual, semi-structured, open-ended interviews were conducted with the youths. A general interview guide was developed as a tool to ensure consistency between interviews and to focus on topics directly related to the research questions. The interview guide was reviewed by program stakeholders, including the youth mentors, whose feedback was sought to ensure that the guide was appropriate in terms of the language used and the relevance of the topics discussed. (The interview guide is attached in Appendix B.) The interviewers were free to extend beyond this guide, adopting a conversational approach and probing unanticipated topics or issues as they arose, in order to explore individual differences and circumstances between participants. This approach to semi-structured, open-ended interviews was based on the methods outlined by Patton (2002).

The interview guide contained questions about participants' educational and career aspirations, their educational journeys or pathways, their experiences in the Youth Futures program, and their perceptions of how they may have changed as a result of their involvement in the program. Most of the questions in the guide are what Patton (2002) refers to as opinions and values questions, which are conducive to understanding the interpretative process of participants, including what they think about an experience or issue, their judgements and values, and their goals, intentions, desires, and expectations. Consideration was given to the sequencing of questions within the guide. Initial questions were straightforward, noncontroversial, and grounded in the present, requiring descriptive answers and minimal recall. The guide then moved toward eliciting participants' opinions and feelings and querying past and future events. This approach to sequencing is consistent with the recommendations of Patton (2002).

Data collection procedures. The present study was explained to all of the youths in the program during a brief presentation given during the last week of program activities in August,

2014, held on campus at the University of Ottawa. The sub-sample of 20 youths who had been identified for recruitment were then approached individually by the program mentors, who explained the study in further detail, and invited the youth to participate. No youths declined the invitation to participate in an interview.

The interviews were conducted in a private office on campus. The 12 English interviews were conducted by myself, as the principal investigator, while the 8 French interviews were conducted by a francophone PhD student hired as a research assistant. Informed consent was obtained from each participant prior to the interview. Interviews lasted approximately 25 minutes. The interviews were audio recorded and transcribed verbatim. I transcribed the English interviews. The French interviews were transcribed and then translated into English by a professional translator. The translated transcripts were then reviewed and verified by the original interviewer.

Throughout the data collection process, I kept detailed field notes. In particular, immediately following each interview, I recorded my observations and initial impressions about both the content of the interviews and the interview process itself, including the interaction between myself and the participants, and ideas about amendments to the interview guide, such as questions to add or re-phrase. As Patton (2002) explains, field notes such as these provide a context for interpreting and making sense of an interview at later stages in the study. In addition to keeping personal notes, I also discussed the interview process and guide with the francophone interviewer after each interview, and we made adaptations and adjustments as needed to improve the effectiveness of the guide and the quality of the interviews.

University of Ottawa Research Ethics Board approval was obtained prior to the commencement of participant recruitment and data collection. Informed consent was obtained from all participants in the study.

Data analysis. The qualitative data analysis strategy used in the present study was guided by the inductive approach presented by Miles, Huberman and Saldana (2014) and the data analysis sequence outlined by Saldana (2009). The qualitative software package NVivo was used to organize and manage the raw data, which included audio recordings, interview transcripts, and the field notes I had written during the data collection process.

I began the analysis by reading all of the interview transcripts, and summarizing each interview in a brief, descriptive paragraph. While reading the interview transcripts, I engaged in analytic memo writing, described by Saldana (2009) as an informal note-to-self that is used to document and reflect on initial reactions to the data, and thoughts and speculations about emergent patterns and themes. From an early stage of data analysis onward, I also began discussing the data with others, including program stakeholders, my colleagues, and my thesis supervisor. These discussions helped me to clarify and articulate my ideas, check my interpretations with others, and draw new insights about the data. Saldana (2009) has noted the importance of this type of discussion throughout the data analysis process, particularly when qualitative interviews and data analysis are conducted by a single researcher.

I used the *First Cycle* and *Second Cycle Coding* methods described by Miles and colleagues (2014) and Saldana (2009) to assign codes to the data. Coding refers to applying labels to segments of text, with a code being “a word or short phrase that symbolically assigns a summative, salient, essence-capturing and/or evocative attribute” (Miles et al., 2014; p. 72). First Cycle Coding is the first stage of coding, and involves detailed, line-by-line coding that is done

quickly and spontaneously, as a way of initially summarizing data and bringing together related passages. First Cycle Coding can include a variety of different approaches, which can be used in combination, as needed. In the present analysis, I used predominantly “descriptive coding”, “emotion and values coding”, and “causation and evaluation coding”. For descriptive coding, I assigned basic labels to the data as a first step in the data analysis, to create an inventory of topics.

As the coding process progressed, I engaged in *values* and *emotion coding*, labelling the emotions, attitudes and beliefs expressed by participants, as a means of gaining insight into participants’ perspectives, world-views, life conditions and identity. I also engaged in *causation* and *evaluation coding*, which involved extracting participants’ causal beliefs about why a particular outcome came to pass, and applying codes assigning judgement about the merit or worth of various aspects of the program. Causation and evaluation coding are particularly appropriate approaches for evaluating the efficacy of a particular program, as was the intended purpose of the present study (Miles et al., 2014).

In First Cycle Coding I began to organize and group coded data together into categories and subcategories. In Second Cycle Coding, I refined this work, organizing and grouping codes into a smaller, more select number of categories. In some cases this process involved recoding – some codes were subsumed by others, relabeled, or dropped altogether – and rearranging and reconfiguring categories created in First Cycle Coding. The purpose of Second Cycle Coding is to prioritize and synthesize the data, and to engage in conceptualizing and theory building. *Pattern coding* is the primary method used in Second Cycle Coding. Pattern codes are meta-codes that condense information in a meaningful way and identify emergent themes. In pattern coding, I assembled similarly-coded segments of text, reviewed the codes that I had previously

assigned, assessed commonality and differences, and then assigned a pattern (meta) code that pulled the material together in a meaningful, parsimonious way.

Throughout the coding process, I remained mindful of enhancing the validity and trustworthiness of the analysis. I regularly chose labels for codes that were "in vivo", consisting of participants' own words. *In vivo coding* is a method of attuning to participant language and perspective, to preserve participants' world view throughout the analysis (Miles et al., 2014). To avoid prematurely arriving at conclusions about trends or patterns in the data, I consciously sought out disconfirming or contradictory data and considered alternative interpretations. I also continued to engage in analytic memo-writing concurrently throughout the process of coding. Memo-writing served to promote researcher reflexivity by facilitating critical thinking and prompting me to confront my own assumptions.

After completing First and Second Cycle Coding, clear concepts and themes were beginning to emerge. The final stage of the data analysis involved the creation of a matrix display of these concepts and themes. A matrix shows condensed data in a tabular, visual format. The matrix is a useful tool that focuses and organizes information, providing a full view of the data set that allows the researcher to more readily make comparisons, detect differences, and note patterns, themes and trends. The matrix that I prepared in the present study is what Miles and colleagues (2014) refer to as a Conceptually Clustered Matrix.

This matrix was arranged as a simple participant-by-variable matrix, displaying respondents in the rows of the table and the major research questions in the columns. Cell entries contained labels/codes, quotations, and short summary phrases. The purpose of this matrix was to bring together key data into a single document, allowing for an at-a-glance summative analysis and cross-case comparison between participants and between responses. The process of

preparing and reviewing the matrix facilitated meaningful interpretation of the data set as a whole, ensuring that all of the data fit into a reasonable scheme and that my interpretations as a researcher were well-founded, based on the data under study.

Results

Results of the qualitative analysis of data collected through interviews with Youth Futures participants are presented below. The results are organized to address the research questions guiding the study. The first question to be addressed was the following: What educational and career aspirations do participants have, and why? Key themes relevant to this research question included aspiring toward higher education, choosing an educational and career pathway, family influences, parents' preferred educational and career pathways, and migration as a motivating factor. The second question to be addressed was the following: What assets and resources are perceived by participants as helping them to reach their educational and career goals? Key themes relevant to this research question included personal values, past experiences, skills and abilities, and role models. The third question to be addressed was the following: What are barriers and challenges perceived by participants as facing them in pursuing their educational and career goals? Key themes relevant to this research question included finances, academic demands, and time management. The final question to be addressed was the following: What changes, if any, do participants perceive in themselves as a result of their involvement in the Youth Futures program? Key themes relevant to this research question included staying the same, reaffirming decisions, sense of support, exposure to people with first-hand knowledge; personal growth, and employment experience.

What Educational and Career Aspirations do Participants Have, and Why?

In discussing their educational and career aspirations, participants were clear that their aspirations included pursuing higher education beyond high school. The participants discussed the decision-making process associated with choosing an educational and career pathway. They identified a number of factors that influenced their aspirations and choices, including their family background; the preferences expressed by their parents about certain educational and career pathways; and the migration experiences of their families.

Aspiring toward higher education. All of the participants in the present study aspired toward a college or university education for themselves. The participants held strong beliefs about the importance and value of higher education. They indicated that these beliefs took shape in early childhood, such that their pursuit of college or university was almost “automatic”. One participant stated, “Education is important to me, (be)cause it’s all I have ever known.” As other participants explained, “Education is the most important thing” and “It’s the only way.” One participant said about excelling academically, “It’s just a must, it’s something I must have.”

Only one participant, who identified as Aboriginal, shared a different view, remarking on alternatives to higher education by saying, “Well, my family have a long line of tradition to make like crafts and different art, so it’s not really important to me to go to school (be)cause I can always rely on like making different art to make a living.” However, this participant also said that he personally aspired toward attaining a university degree and pursuing a career in a health profession.

Many participants adopted a pragmatic view of college and university, with higher education considered a practical means to positive career outcomes. When asked why PSE was important, one participant replied, “Education, it helps you get a job, doesn’t it? It helps you get things you want, doesn’t it?” Another participant explained, “It’s really something that’s

important to do if you want to succeed and have a good job, provide for your needs and also provide for your family.” Another reflected on the importance of pursuing university by saying, “I wanna take full advantage of all the education I received throughout my life and use that and get a job from that.” The participants described a “good job” as one that would “make myself happy in the future”, “make money” provide “a nice cultural workplace”, and “give back to the world.”

Choosing an educational and career pathway. It was important to the participants to decide on a program of study and career path. As one student said, “When you don’t know what to do, like where you will go, it’s like you will not have the confidence to keep studying.” Most participants had either decided on the program of study they would pursue, or had a shortlist of choices but had not finalized their decision. Only two students stated that they had not yet identified a program of interest. One undecided student felt she needed to “pick carefully”, and said:

Usually when I get that question, “Oh, what do you want to do?”, it’s really nerve-racking (be)cause I never know...but I have while talking to some people who’ve been to uni, like I talk to them and they say, don’t rush anything, you know, take your time, so I take that advice well. So now I’m just still figuring out what I wanna do... I don’t want to rush it.

Several participants had made their PSE decisions at a young age. One participant recalled, “I knew that when I was like 12 or 13 years old, I was doing a lot of volunteer work and I was thinking that I liked working with people, I like all that, yeah, I started at that age.” Another participant had decided at an even earlier age, saying “I am going into civil engineering, to become a Civil Engineer. It’s been my dream since I was 8 years old, so it’s my only goal in life.” However, the majority of the participants described Grade 10 and 11 as the time when they

started to think more seriously about which PSE program to pursue. Several participants said that careers classes in high school led them to identify a program of study. One participant said that progressing into the senior grades and having more choice of which classes to take prompted him to think about his interests, and, by extension, his career path. A few participants said that they began to consider their choices more when adults in their life started frequently asking about them and when their friends started discussing their own plans. Only one participant cited Youth Futures as the genesis of her decision-making process, saying,

This program actually really got me thinking, so, started thinking about my, like what career decision...The whole like what I said, the postsecondary days, and I see professors coming in and out and telling us oh, this program, this program, and I'm seeing which ones I like, which ones interest me so that really helped me.

The participants identified a number of factors that influenced their decisions about which PSE programs to pursue. They were inclined to make decisions based on their interests, passions, and strengths. For some of the participants, the high school courses that they enjoyed or performed well in formed the basis of their decision to choose a particular PSE pathway. High school co-operative education experiences, volunteer work, and employment experiences (including those obtained through Youth Futures) were also influential. Some participants had passions that they wished to pursue through higher education. For example, one participant aspired toward a career as a professional dancer. Another participant explained her PSE decision by saying, "I've always wanted to be with children and this is the reason why I've chosen Child and Youth worker. I've loved being with children, just helping kids, also being around them all the time."

Family influences. Family members were described by the participants as key figures influencing their PSE aspirations and decisions about programs of study. All but two participants described their parents as being very involved in their education. One of the participants with a differing experience described his situation by saying, “I’m on my own... It gets tough sometimes, but you know, it gets easier and easier the more you learn about. It just gets easier, the tougher you get the easier it gets for you.” The other participant said of her parents,

They don’t know what I want to do or what I want to pursue, (be)cause they’re not that, we’re not that close to be honest. So like if they ask I’ll tell them, but that’s basically it. They don’t really know about much like about my life and what I want to do.

The remaining participants presented a positive view of their parents’ role in their education. Participants indicated that their parents valued higher education and actively encouraged them to pursue PSE. Participants described their education as being “really important” to their parents, and stated that their parents were “excited”, “happy” and “proud” that their children were pursuing PSE. One participant said that her parents were so proud of her academic achievements that they “show me off to their friends.” Another participant commented, “For my parents, if I have diplomas or if I reach my goals, they will be proud of me and more confident in me.”

Parents ensured that education was always at the forefront of their children’s minds. One participant remarked, “I knew my parents really wanted me to go [to university] (be)cause they’ve been talking about it for years and years.” Parents frequently – in some cases, on a daily basis – discussed education with their children, giving advice, encouraging them to study, helping them to complete their homework, and urging them to act responsibly. Parents also reminded participants of the investments they were making toward their education. One

participant described how her parents would regularly take her with them to the bank so that she could see them deposit money toward her educational savings. Another participant recalled that her parents hired a tutor for her to help her in a subject she was struggling with. One participant described his mom as working hard to pay for his extra-curricular activities. One participant was attending private school, and was cognizant of her parents paying for her to attend. She said, “I go to a private school, and my dad pays tuition for that, so he’s like, ‘I don’t want that money to go to waste, so take full advantage of what you’re doing.’ So it’s really important to him.”

The participants described education as being deeply ingrained in their family. Some participants discussed their education in relation to their parents’ own educational experiences, as if they were following in their parents’ footsteps. One participant commented:

It’s really important for my parents that I go to university. Because my father went to university. He got his Bachelor’s degree. He did it in Africa, and then he did it here as well when he came to Canada. It’s really important to him that the whole family go to university as well, to obtain a Bachelor’s degree.

Siblings also influenced participants to pursue PSE. One participant explained, “All my brothers and sisters graduated from university and I was the next person in line so I was like, I wanna make my parents proud, and my brothers and sisters...They motivated me, so I want to do that.”

Although most of the participants spoke positively about their family’s influence, a few participants suggested that high expectations weighed heavily on them. One participant said that his father demands perfection and that his mother would be disappointed in him if he did not succeed in school. Another participant, who was the oldest of her siblings, explained, “It’s a lot

of pressure (be)cause like I'm the first child, and I'm like the first one to go to university, so my parents are like freaking out."

Parents' preferred educational and career pathways. A large number of the participants – almost half – described their parents as holding strong preferences about which PSE pathways their children should pursue. Parents commonly wanted their children to pursue a professional degree. One participant remarked, "They just think doctor, lawyer. If not doctor, nurse. If not lawyer, like other thing...I don't know, (be)cause doctor's well known and they get a lot of money too." In some cases, parents wanted their children to attain the same degree that they had, and even to attend the same institution. Parents were very frank in sharing their views with their children. One participant commented, "Already my mother, she never stops telling me that she'd love that I be her engineer." Another participant, who was interested in studying psychology, said:

My mother would rather want me to be a physician or something like that. Physician or engineer... like a job that you can do anywhere you go and that earns you a lot... She has already told me, "Why aren't you studying Medicine?"

Some participants were in agreement with their parents' preferences, while others expressed reluctance. One participant, whose parents wanted her to be a lawyer, said:

I really, really do like computer programming and graphic designing, that seems like a lot of fun. But obviously there's like sometimes my parents can go a little bit strict and on, on into what I, what I should be doing and stuff.

Other participants were determined to follow their own path, even if it was not what their parents wanted. One participant said, "I don't really listen to them." Another participant explained, "I wanna do what I'm doing, what makes me happy, I don't wanna make my mom

happy, like I wanna make myself happy into the future so that I'm not stuck with a job I don't like, you know?" This participant had described how his mom wanted him and his brother to go into the healthcare field, like other family members had done:

She really wanted like, uh me to do something in like med school or nursing or something like that (be)cause all her sisters are like doctors and my dad's side are like doctors, they don't want like to let down the family like you know?

Not all parents held strong preferences about their children's PSE pathways. A few participants said their parents just told them to be happy and to "do what you love." One participant said of her parents:

I speak to my dad but he just says that my goals and my dreams are my own, like he wants, he obviously wants to know what I want to do but he wants, whatever thing I want to study or something, he's happy for me, because like, I think like sometimes parents or someone close can influence you in terms of choosing your career, but my dad, like, my parents aren't like that.

Migration as a motivating factor. Almost all of the participants had parents who had immigrated to Canada. Several participants described their family's migration as a factor that motivated them in their pursuit of higher education. The participants appreciated the struggles their parents had endured and believed that the educational opportunities available to them in Canada should not be taken for granted. One participant, who immigrated to Canada with his family, described his family's migration experience by saying:

There they didn't have much and when we came here, they wanted me to get a good diploma and work, all that. And I went back to there and I saw where my parents used to live, all that, and it was... like it wasn't, it was unbelievable. Their life was to find water and food. That's

it. That was their life. So it was very interesting to see. There, it was during a war and all that, so coming here was difficult, but they had to have risks to take, but they took it, and then we came here. They have told me the story of how we got here. After that story, I have to do something in life to... to thank my parents and all that, so that is my determination.

The participants whose parents had made sacrifices for their family were grateful, and motivated to give back. One participant explained that her parents gave her everything so that she could realize dreams that they were unable to. She said she wanted to pursue PSE so that in the future she could “help my parents with some bills and stuff like that, and buy my mom a house of course.”

A few participants also observed that their parents endured financial difficulties after migrating to Canada. These participants explained that their parents’ experience motivated them to pursue a different life for themselves. One participant explained that her parents’ engineering degrees were not recognized in Canada, and her family went bankrupt as a result. She said of her parents, “I see them as where I don’t want to be”, and went on to stress the importance of witnessing their struggle, saying, “You need to see what you want, and you need to see what you don’t want...(Be)cause like that’s the starting point. Like what don’t you want in life?” Another participant said, “After observing my family...climbing up the ladder to success and watching them struggle with minimum wage jobs, I’m like, ‘I don’t want to be like that’. So that’s what kind of influenced me to change.”

What Assets and Resources Are Perceived by Participants as Helping them to Reach their Educational and Career Goals?

In discussing the assets and resources available to them, the participants referred to their own internal attributes, including their strong personal values, past life experiences, and

particular skills and abilities. They also referred to external assets and resources in the form of role models who played an important part in their lives.

Personal values. When participants discussed their aspirations for higher education, they frequently referred to a belief in hard work and determination as key ingredients for success. “I work hard and I am not in the habit of giving up,” said one participant, while another similarly said, “When I put my mind to something, I really try hard to achieve it, and I put in a lot of effort.” Participants noted that their parents encouraged them to work hard, and served as an example to follow. One participant, whose mother grew up in poverty, said, “My mom really worked so hard to get into [her profession], to get that job, and to get the life that I have now.”

The participants also valued self-reliance and independence. They believed that they were responsible for their own futures. One participant remarked, “It all starts with yourself, and you have to help yourself...So I need to understand that it’s not going to be given to me at any point.” Another participant said, “It’s not good to lean on people the whole time. When you give your own, like, just do your own thing, you give your own effort, I think that’s really important.”

Past experiences. The participants were confident in their ability to succeed in higher education because of past experiences that had prepared them to persevere and overcome obstacles. They frequently cited the importance of “never giving up” in the face of challenges. Three participants had experience in training for long hours as student-athletes, one had experience working two jobs while studying full-time in high school, and several other participants had academic experience succeeding in difficult classes. The participants felt that their experiences had mentally prepared them for barriers they might encounter in college and university. When looking toward the future, one participant said, “I think my strength will be my

background experience...and having that thought in my head that I wanna do well, like the positive energy in my head.”

Several participants discussed past achievements that had increased their self-confidence. One participant commented, “My [future] goals seem a lot easier now that I’ve actually achieved one of my goals.” Another participant explained, “I feel achieving a goal is part of developing your own character and personality.”

Skills and abilities. The participants were aware of their own personal skills and abilities that could contribute to their future success in higher education. These skills and abilities varied, and were unique to individual participants. Patience, adaptability, and being goal-oriented were all mentioned by participants. One participant described herself as organized and focused in school, saying, “I’m a pretty organized person. My notes are organized. And also like I really listen to the teacher, like I focus on school, and when other kids are fooling around in class, I don’t really pay attention to them.” Another participant said that she had strong social skills, explaining, “Just communicating and talking with people, (be)cause I know that’s a really big part in law, like understanding and being face-to-face with different types of people.” Lastly, one participant felt that his open-mindedness would be an asset in the future, saying:

I have an open mind toward a lot of things, like other people are really close-minded about some things and I’ll just be like okay...I’ll give it a few tries and if I don’t like it I don’t like it but I’ll give it a few tries.

The participants voiced confidence in their ability to achieve their educational goals. They generally expressed a sense of preparedness and readiness for PSE, with one participant saying, “I’m confident in reaching my academic goals, because first, I know what I want to do and I have the willpower to do it... I’m convinced that I’ll reach my goals.” Another participant

said that, “I know for a fact I’m gonna be heading on a good road.” Only one participant expressed serious doubts about his future, saying, “I know that sometimes I lack self-confidence. My self-esteem is sometimes really low and especially with people in my surroundings, the people discourage me easily... My morale is very low.” However, this same participant also acknowledged a sense of resilience by commenting, “I am someone that is able to fight, I’d say. With time and maturity comes courage.”

Role models. The participants often described positive role models in their lives who supported them in reaching their goals. Older siblings were the most commonly-identified role models. Siblings with PSE experience were a significant source of information that demystified higher education for participants, and motivated them to follow their example, sometimes in the same field of study and career path. In describing their influence, participants emphasized the tangible ways that their siblings supported their pursuit of PSE. Siblings assisted participants with their homework, offered them insider advice about which courses to take in high school and which teachers to select, and helped them to decide on a PSE program of study. One participant described her older sister’s influence on her decision to pursue Early Childhood Education, saying:

I think my oldest sister was like the biggest influence because she knew that I like love working with kids, (be)cause I like to babysit her kids... She all envisioned me doing it because she saw how, like my talent.

Several participants explained that siblings made particularly powerful role models. One participant said, “It’s better than having somebody else, like maybe your friend, it’s better than that...It helps a lot.” Another explained that his siblings’ example was so helpful because, “They

went through the same thing I went through.” Similarly, one participant described her desire to emulate her brother, in part because she identified with his experiences:

I look at him and like he had the same as me, he grew up with the struggles, he grew up with everything, and he still is successful today, he’s like, he’s not like a millionaire or anything, but he’s doing pretty well for himself...He just did what to do to get to his goals.

In addition to influential siblings, several participants described friends who served as role models. Friends were identified as a sense of support and encouragement. One participant described his relationship with friends by saying, “I like to socialize, I like to talk with someone. We talk about our problems, we exchange solutions. We, like, we provide mutual moral support, psychological or mental.” These participants said their friends set positive examples and demonstrated good study skills. One participant said that her friends reminded her to complete assignments on time and not to procrastinate. Friends also provided a normative influence to participants that served as motivation to pursue PSE. One participant explained:

I just really didn’t care right, but then in grade 11 when I started realizing all my other friends were choosing what they wanted do. (Be)cause all of my other friends, they mostly wanna go to university, so they’re all like I wanna do this or I wanna go into that...they’ve even talked about going to class together and stuff, so obviously I wanna be part of that too, so now I’m more like excited to go as well. Knowing that I’m gonna be surrounded by my friends from high school.

Influential adults also served as role models for participants. Several participants became connected with supportive adults through community-based programs, such as Pathways to Education, or through their high school experiences, including extra-curricular activities. For example, one participant had met an adult role model through his high school co-op job, while

another described his teachers and coaches as being role models who had first-hand experience with his chosen field of study. One Aboriginal student described a number of different role models that he had become connected to within the Aboriginal community, through his band and a local Friendship Centre.

What Barriers and Challenges are Perceived by Participants in the Pursuit of their Educational and Career Goals?

In discussing the barriers and challenges they were encountering, the participants referred to the potential for financial demands to impede their ability to fulfil their educational goals. They also discussed challenges posed by the academic demands of higher education and by a lack of personal time management skills.

Finances. The participants discussed financial demands as a potential barrier to reaching their goals for higher education. They were aware of scholarships, grants and loans available to fund PSE, but some still had concerns. Several participants mentioned their reluctance to accrue student debt. One participant remarked, “No point going to university if in the end you will only work to pay back what you owe the university.” Another participant explained that she was not comfortable owing money and had heard from other students who had struggled to pay back student loans. She was considering taking a year off from school to work and save money, and she planned to pursue college rather than university because she considered it more affordable. She said that she would consider taking “partial OSAP”, but would not accept the full amount of funding available to her. A few participants mentioned that their parents were not able to support them financially during their studies. One participant with four siblings whose family had recently immigrated to Canada was concerned about his ability to get scholarships due to his

marks and explained that it would be difficult for his father to pay tuition for him and his siblings.

Even for one participant who had already secured a scholarship for her first year of studies, finances remained a concern. She worried about buying a laptop and making a down-payment on tuition fees before the semester began, because her scholarship and loans were not yet available to her. While she was grateful for the funding she had, she remained uncertain about the future, saying, “I’m just scared for like the year after. I don’t know why I’m thinking ahead, but like am I getting the same amount of scholarships next year?”

Other participants were less concerned about finances. While some saw the cost of tuition as a challenge, they were confident they could overcome it. One participant said, “There are grants for everything, right? So it’s just to check and search for it. The financial support, I don’t think it’s a big problem.” Most participants planned to apply for the Ontario Student Assistance Program (OSAP), which would “really help”. One participant said, “I don’t think about it very much, (be)cause I’m gonna get OSAP or something, so it’s not a problem.” Other participants were confident that their families could assist them financially. One student commented:

I’m really lucky I get, (be)cause like my mom have been saving up since I was born and I have all this money and I don’t have to worry about like what other kids have to worry about like how they’re gonna pay for school and all that.

Academic demands. Some participants commented on the potential for challenges in meeting the academic demands of higher education, particularly university. They described university as “competitive” and “hard”, and they often remarked on the need for getting good marks. Some participants noted that they were struggling in certain subjects in high school and

questioned whether their marks would impede their acceptance into PSE or their ability to earn scholarships. Concerns about the possibility of failure also arose.

These participants expected to dedicate “long hours” to their studies in PSE, with one participant saying, “It’s more work than high school, it’s a big responsibility, like sort of a new chapter.” Some students questioned their study skills and preparedness for the style of teaching in PSE. One participant said, “I’ve always had trouble writing exams, and then focused studying skills.” Another asked, “What’s the longest class gonna be? ... That’s gonna be a challenge for me. Sometimes, like, I’ll doze off. I don’t know if I’ll be able to focus completely for three hours.”

Although these participants voiced concerns, they also expressed a sense of resilience. One participant said that in the face of challenges, “I will just try my best.” Another participant, who said he was sometimes concerned he might find university too difficult and feel like quitting, qualified these comments by saying, “But I’m also sure that I could overcome that.” One participant countered her peers’ concerns by observing:

They think it’s too hard. They’re not informed, that’s why. They think only gifted people go to university, only really smart people go to university and college, only rich people go to university and college, and I know that’s not true... They just stereotype it.

Time management. A number of participants commented on challenges related to time management in PSE. Several participants confessed that they struggle with procrastination, and are easily distracted from their studies by the internet and television. These participants expected that in college or university they would have “a lot of free time” and a lack of “structure”, which could exacerbate their tendency to procrastinate. One participant explained her study habits by saying:

I'll have like an essay due in like a week and I'll do it the day before literally. And the thing is I tell myself, "Oh, I work well under pressure," but sometimes it doesn't go my way...I'll regret it so bad... for uni I know I'm going to have to fix that bad habit.

Time management was also a concern for participants who questioned their ability to balance school with their social life or athletic commitments. These participants discussed examples of peers who had negative peer influences in PSE, or had adopted a "party life" that had been detrimental to their academic progress. One participant had some concerns related to his plans to live in student residence, but was confident in his ability to manage any potential problems:

A lot of people tell me like first year's like a hard deal (be)cause like there's a lot of partying in res and stuff, and distractions, and like...I think I'll just like know my limits and like know, do homework first and then whatever fun stuff, save for later on, the time I have.

What Changes Do Participants Perceive in Themselves as A Result of Their Involvement in the Youth Futures Program?

In discussing changes resulting from their involvement in Youth Futures, some participants stated that they had mostly stayed the same over the course of the program. In other instances, participants said that the Youth Futures program had served to reaffirm their decisions about PSE, provide them with a sense of support, expose them to people with first-hand knowledge of PSE, and offer them employment experience. Some participants described experiencing personal growth over the course of their involvement in the program.

Staying the same. A handful of participants suggested that they did not experience meaningful changes as a result of their involvement in the Youth Futures program. One participant viewed the impact of the program as being insignificant, saying:

I already knew what I was going to do and Youth Futures just kind of helped me explore a little more but it didn't change my life or anything like that...The program was just to get a job, it wasn't to like improve my life or anything.

Reflecting on the effect that the program had on their ability to achieve their educational goals, several participants said that the program had not had a noticeable impact. Two participants indicated that the information they received through Youth Futures could be obtained elsewhere. One participant remarked, "If you really want to learn, you're going to find all of this." Another said:

We are a little better prepared to go to college or to university, but I think it doesn't mean that we are more likely to go. There are some who never did the program, and they are going. They have searched for someone who already went to university to guide them.

Reaffirming decisions. The participants frequently described themselves as more informed about PSE choices as a result of their involvement in Youth Futures. Through the program, they had learned about the range of programs of study available to them, as well as options like co-operative education and bilingual programs. They described themselves as being more open-minded toward program options.

As participants became more informed about PSE, their confidence increased. Many of these participants described previously feeling scared and intimidated by the thought of PSE. After completing Youth Futures, they felt more prepared. One participant explained, "It helps. I was scared at first, but now it's, I saw that it went well so it wasn't worth being scared. Here, people guide us." Another participant remarked:

I feel more ready... back then, I dunno, I was kind of scared and I was thinking maybe I should just take a year off school and just go travel or something. But now I feel ready and I really want to go to university right after high school.

For participants who had already decided on a program of study, Youth Futures presented a valuable opportunity to learn more about what to expect with their chosen program, which served to reaffirm their choice and increase their confidence. One participant commented:

My goal is changing in a way that I'm like more positive, and more, like my thoughts are set in stone basically... When I first came into this program, I was still wondering, 'Is this really what I want to do, is it too late to switch?' But after finishing this program I was like yes, that's what I want to do, for sure, for sure.

Several participants described feeling empowered as a result of Youth Futures. Their experience in the program had led them to view higher education in a different light. Now participants were "excited" about PSE and "eager to go", and understood that attending college or university could be "fun", "interesting" and an opportunity to learn. This new perspective stood in contrast to one participant's description of her original views toward PSE. She said, "Before, I was just like, 'I'm gonna go to class, get a good mark, go into law, ride the boat, and hopefully it will all be over.'" Another participant described a change in her thinking by saying, "I just thought of [education] like oh, (be)cause we're students we have to learn stuff....Now I think of it as in my decision, my choice to learn, and like my future and stuff."

Sense of support. The participants described feeling supported as a result of the Youth Futures program. They characterized program staff and mentors as being understanding, patient, kind, helpful and approachable. One participant recalled the sense of support he experienced by saying:

Honestly the workers are chill. They're cool... they're good people... let's say we needed anything, like not physically but mentally, like to figure things out... Wherever there were tough situations they were there to give us a hand, you know?

One participant in particular felt that Youth Futures provided her with a support system that had benefited her mental health and well-being by making her feel less alone. She explained:

In the beginning I was really unstable. I felt like I had an anxiety, like I would, my heart would beat so fast when I thought about like university. I would really even cry to myself (be)cause the stress, me like being the first one, I have no support from anyone, my parents don't know anything. I just feel like I'm going into this alone. But now after the program finished I feel like more um like as I said more stable. I feel like there's a lot more people by my side, my parents now know stuff, my mentor, my employers they know everything now, they'll be my references in the future, you know they can be that support if I need anything. Um, so I have more people like I feel like I'm not going into this alone any more.

Exposure to people with first-hand knowledge. Interacting with people who have first-hand experience of higher education was one element of Youth Futures that resonated strongly with the participants. They frequently discussed the impact of hearing personal stories from others who had PSE experience, including the program mentors, professors who delivered presentations, and coworkers and employers from their summer jobs. The participants found the personal experiences of others to be inspiring and motivational. One participant said of his mentor:

We are the same age, but when I see what she is able to accomplish... She is in her 3rd year at university this year, she has this job that she does, and how she can manage everything at the same time, that is really impressive for me.

It was particularly important to the participants to hear from others who they could personally identify with. Several participants recalled hearing from people who had overcome obstacles in order to achieve a higher education. One participant commented, “We had so many inspirational talks about how some people that didn’t have great grades and people that were like poor and they still get through school, they still got through university, and they even got their Masters.” The participants took away lessons of hard work and perseverance from these stories. One participant commented on a professor’s presentation by saying, “Studying takes time and it’s long, but you benefit in the end.” The participants could see their future selves represented by the people they met through the program. This made their educational aspirations seem much more real and tangible. One participant explained:

I only knew I wanted to go to university for the future, but now it’s much more explicit. I can see people who have that future and they went to university and they describe what they did to get that future.

Another participant met coworkers through her summer job who had acquired the same social work degree that she was planning to pursue through PSE. She discussed how valuable it was to interact with her coworkers and envision her future, saying:

I got some chance to actually ask them like, what did you do in school, like how did you get this job? ...And so like I had the chance to see like if I pursued what I’m gonna do this is how I might be in the future, you know what I mean?

Employment experience. The participants spoke favourably about their employment experiences with Youth Futures. Many said that they had saved money from their summer job to put toward their education savings. The participants said they felt prepared for future employment experiences because Youth Futures had taught them how to behave in the

workplace, how to dress, and how to perform well in an interview. The employment experience was an asset on their resume, and employers could be used as references.

Several participants saw their employment experience as an opportunity to explore their likes and dislikes. One participant said he was surprised to find that he did not mind working in an office setting. Another participant commented that she had learned more than she had expected to from her summer job, saying:

When I was working at the wading pool it was a simple job but I learned many things from it. One little thing can teach you many things...When you're working with kids you need patience, responsibility, like teamwork, (be)cause you're always working with someone, being like, um, making fast decisions. Yeah, like I thought it all gave me things that are required in the future.

Two participants shared a different view of the employment experience. One participant said that he already had a job prior to Youth Futures and did not receive any additional employment experience through the program. The other participant described a largely negative experience with the summer job that she had had through Youth Futures. She described a lack of diversity among her coworkers that left her feeling stigmatized and excluded. She said that "everyone knew" she was with Youth Futures and was "given" a job because she was "low income". She explained that she could not relate to her coworkers, whom she described as being older and from wealthier families:

They are well off in their life...I was like the youngest one...I can't talk to them about that stuff (be)cause they don't have problems with it. They couldn't relate. So they were more well off well, and I was just like, whatever, I'm just here to make money. But like ya I just couldn't talk to them about that kind of stuff...like but they had it, like talk about cottages

and stuff, I can't talk about going to a cottage (be)cause I don't have a cottage right? So like. They're older, they have different lives, different realities. So I just, I didn't connect that much with them in that sort of way.

Personal growth. The participants described themselves as having experienced personal growth as a result of their experience in Youth Futures. Various participants said that they became more open-minded, engaged in more positive-thinking, more patient, and more empathetic, more focused on their futures, and better problem-solvers. Several participants described themselves as being more responsible as a result of the Youth Futures program, and specifically, the employment experience. These participants said they had learned the importance of punctuality, respect for others, and accountability. One participant described the change she had observed in herself and how it would benefit her future:

When I was in Youth Futures I actually had I got the job and I learned many things from there,(be) cause I just wanted a job just for, (be)cause I really wanted to see what does it mean to be responsible, what does that mean to when you have a shift you actually have to come, it's not like school you can be late? It changed me (be)cause now I know in school or college I'm going to treat it like a job, I will come, (be)cause even, I'm not getting paid but like it's a responsibility.

Reflecting on their experience in Youth Futures, a number of participants described gaining stronger interpersonal skills. Several participants characterized themselves as being shy and quiet, saying that prior to their involvement in the program, they lacked confidence speaking and interacting with others. One participant said, "In the beginning, I was kind of this shy little girl who didn't talk much." Another said, "I'm really like quiet around people, even my friends,

like I don't really talk a lot, I keep to myself." Youth Futures provided participants with an opportunity to interact with peers, as well as employers and the general public through their jobs.

As a result of these experiences, the participants said they "broke out of their shell", becoming more "social" and "open". They recalled learning how to work collaboratively in groups, resolve conflict, demonstrate leadership, and network in professional contexts. One participant spoke insightfully about how his approach to communicating with others had changed over the course of the program. He said:

The way I present myself, the way I talk to people, and just like the way I move... Like usually I'd like control the conversation, (be)cause like I dunno why, it was just my thing...Now I just let other people talk, and then I wait for my turn, you know?...I realized, and I was like ok, I just need to like be myself and then I'll wait for my turn to talk, and I'll let the other person share their opinion.

Discussion

This study presents findings based on interviews with special population high school youths who have completed the Youth Futures program. The youths in the study were primarily first-and second-generation immigrants to Canada. Two youths were Aboriginal. Only one youth was a first-generation student. The analysis of interview data explored the education and career aspirations of these youths, the assets and resources they perceived as available to them, the barriers and challenges they perceived as facing them, and the changes they perceived in themselves as a result of their involvement in Youth Futures, a program intended to promote access to PSE.

The major findings suggested that this group of youths had high expectations regarding PSE and that these expectations had developed early in life. Furthermore, they placed a great

deal of value on the credentials earned through PSE. Decisions about which PSE program to pursue were generally made by the youths during high school, with consideration given to their personal interests and strengths, and to the preferences of their parents. The youths were heavily influenced by their parents, who held high expectations for them and actively encouraged them to pursue PSE. The education, career, and migration experiences of their parents were impactful for youth, affecting their perspective of the value of PSE and motivating them to pursue a degree.

The youths in the study cited a number of assets and resources available to them, including their own personal values of hard work, perseverance, and self-reliance; their past life experiences; their individual skills and abilities; and their relationships with positive role models, most notably older siblings who supported their educational pursuits in tangible ways. The youths also acknowledged barriers and challenges that threatened their educational aspirations. Financial barriers to PSE, including loan aversion, were discussed by some youths. At the same time, financial barriers were dismissed by others who were confident that they could finance their studies with support from family, financial aid, and their own earnings from employment. Other potential barriers to PSE that were a concern to youths included academic demands and a lack of time management skills.

The youths described largely positive experiences in Youth Futures. Involvement in the Youth Futures program reaffirmed their choice to pursue PSE, empowering them with increased self-confidence and sense of support. Hearing personal success stories of people with first-hand experience of PSE was particularly salient for the youths. The youths perceived elements of personal growth – most notably, an increased sense of responsibility, and improved interpersonal skills – in themselves as a result of their experiences in Youth Futures. A handful downplayed the notion that the program had significantly affected them.

Educational Expectations and the Role of the Family

One of the most striking findings of the present study was the powerful expectation to attend PSE that was described by the youths. The decision to pursue PSE was hardly a decision at all. The youths did not recall assessing other options available to them. Instead, they described their ‘decision’ to attend PSE as being automatic and unquestioned. Their habitus included viewing PSE as important and necessary and viewing themselves as being on the path to PSE. The youths saw higher education as being valuable because they expected it would lead to positive career outcomes. However, this utilitarian or pragmatic view of education was tempered by the emphasis that they placed on pursuing programs and careers that interested them and would contribute to their future happiness.

This finding is consistent with existing literature. Finnie (2012) determined that decisions regarding PSE are made early in life, with 40 percent of youth attending university saying that they had “always known” they were going, and another 40 percent saying that they had decided by grade nine or ten. Previous research has also shown that first- or second-generation immigrants, who were the predominant group in the present study, have exceptionally high educational aspirations. Krahn and Taylor (2005) found that 77 percent of first-generation immigrant youth aspired toward one or more university degrees, compared to 60 percent of Canadian-born youth.

The parents of first-generation immigrant youth also express high educational aspirations for their children and a high degree of certainty that their children will achieve their educational goals (Krahn & Taylor, 2005). Aspirations for pursuing PSE are highly predictive of what ultimately transpires later on. In one Canadian longitudinal study, 76 percent of high school students who aspired toward university had some level of PSE or had graduated from a PSE

institution four years later, compared to only seven percent of students who had not aspired toward PSE in high school (Belanger, Akbari, Madgett, 2009).

Finnie (2012) strongly suggested that the decision to pursue PSE is rooted in the family. The family environment, including parental education levels and parental opinions of higher education, are known to be positive factors promoting high PSE aspirations (Belanger et al., 2009). The parents of first- and second-generation immigrant youth tend to be highly educated as a result of Canada's immigration policy, which relies on a point system that favours educated applicants (Krahn & Taylor, 2005; Boyd, 2009). High parental education patterns contribute to the so-called "success orientation" or "immigrant optimism" patterns observed in the literature, whereby educational attainment is found to be higher among immigrant youth than Canadian-born youth (Boyd, 2009; p.364). Parental involvement in a child's schooling is associated with higher rates of PSE access (Maxwell, McNeely & Carboni, 2016).

The findings of the present study align with this past research. The youths were almost uniform in their description of their parents as being key players in their PSE decision-making. Siblings were also influential, acting as role models and supporting the youths by giving advice and direction and assisting with school work. Almost all of the youths were being raised by educated parents in a familial "culture of PSE", alongside siblings who were also pursuing PSE (Finnie, 2012; p. 1163). Cultural capital was derived not only from their parents but their siblings as well. The youths were taught the value of PSE by their parents and siblings and expected to pursue PSE as their family members had done. The PSE attitudes, preferences, and experiences of their parents and siblings shaped the youths' own PSE expectations. This was also true for youths who said that the experiences of their parents served as negative models *not* to follow.

These youths were motivated to pursue PSE to avoid the struggles they witnessed their parents endure (Taylor & Krahn, 2013).

In some cases, the family's migration experience also contributed to the youths' PSE expectations, motivating them to make the most of the educational opportunities that had been afforded to them as a result of their family's sacrifices. This finding is consistent with existing literature on the concept of intergenerational obligation, common among immigrant youth who are impacted by the life course transitions of their parents (Griffin et al., 2012; Lehmann, 2009; Taylor & Krahn, 2013). Intergenerational obligation can be problematic for some youth, such as the small number of youths in the present study who described feeling pressured by their parents (Taylor & Krahn, 2013)

Parents not only held high expectations for youths, but also demonstrated these expectations through concrete actions, such as engaging in frequent discussions about PSE plans, and through investments, such as saving for PSE, hiring a tutor, and paying for private school tuition. Maxwell and colleagues (2016) have suggested that these actions reflect the functional nature of intergenerational cultural capital: parental actions transmit parental expectations, which are converted into student expectations, and ultimately, action on the part of the student. The youths in the present study were indeed taking concrete actions to support their educational goals. They were focused on getting good marks in school, saving their earnings from their summer jobs, and participating in extra-curricular activities and community-based programs, including Youth Futures itself.

Personal Values as Assets

In discussing their educational aspirations, the youths in the present study expressed certainty about their personal ability to work hard and persevere in PSE. Some youths recalled

past successes and instances in their lives when they had encountered obstacles but were able to overcome them. Such experiences had led to increased confidence in their own resiliency.

Previous qualitative research by McCall (2014) has suggested that students' self-efficacy is raised through the achievement of important milestones.

The emphasis that the youths in the present study placed on personal values like hard work, determination, and self-reliance is encouraging. In a qualitative study of successful university students, Stelnicki et al., (2015) found that persistence was one of the prominent themes supporting positive academic outcomes. Other research has suggested that individuals with high hope will persist toward a goal, even when faced with barriers, and this trait has been found to predict academic achievement and persistence in PSE (Snyder et al., 2002). Self-mastery and a sense of personal control, as well as optimism and positive self-concept, have also been linked to academic achievement, success, and adjustment (Guay, Marsh, & Boivin, 2003; Guay et al., 2010; Gutman & Schoon, 2013; Perry et al., 2001; Ross & Broh, 2000; Stupinsky et al., 2012; Solberg Nes, Evans & Segerstrom, 2009; Wouters et al., 2011). High self-efficacy has been identified as a determinant of university participation and first-year grades in PSE (Finnie & Mueller, 2007; Zaracova, Lynch & Espenshade, 2005).

Financial Barriers

The Youth Futures program targets its recruitment efforts toward youth from low-income family backgrounds, including those whose parents are receiving social assistance or who are living in social housing. Although no data were gathered concerning the family finances of the youths in the present study, their eligibility for participating in Youth Futures suggests that their families probably had limited financial means. Thus, the extent to which these youths encounter affordability barriers in accessing PSE is of particular interest.

The findings suggest that although PSE finances were frequently discussed by the youths, relatively few expressed serious concerns about pressing financial barriers that could jeopardize their PSE access. Youths who did express financial concerns demonstrated loan aversion in the sense that they were uncomfortable taking on debt. These youths were aware of the financial aid available to support their studies but were wary of accepting it. They discussed the importance of having strong grade performance and earning scholarships, which would not need to be repaid. One student suggested she had chosen to pursue college rather than university because of cost considerations and may choose to delay her studies to work and accrue savings.

Youth from under-represented groups (including low-income and first-generation students) often have incomplete or inaccurate information bias about the costs, benefits, and outcomes associated with PSE (Cassidy, 2015; Palameta & Voyer, 2010; Usher, 2005; McElroy, 2008). Palameta and Voyer (2010) used a high-stakes laboratory experiment to illustrate that youth from low-income backgrounds, first-generation students, and Aboriginal youth all demonstrate greater price sensitivity toward PSE – meaning they had a lower willingness-to-pay threshold than other groups. The authors also found evidence of loan aversion among participants, especially those who expressed doubts about the returns to PSE. Other research did not find that loan aversion is a particular barrier for certain subgroups, but did demonstrate that upwards of 12 percent of high school students in Canada are truly loan averse and show absolutely no willingness to accept a loan to support their education – although they will accept grants that do not need to be repaid (Johnson & Montmarquette, 2011).

The findings concerning the affordability of PSE for the youths in the present study suggest that for the most part, the student financial aid system is perceived by youth from low-income families as being effective in facilitating the pursuit of PSE. Many of the participants

planned to use OSAP to fund their PSE studies and were comfortable in doing so. The few youths who did perceive financial barriers to higher education were not actually concerned that they would not be able to get a student loan or a student loan of a sufficient amount to pursue PSE. Instead, these students seemed to have been expressing loan aversion – specifically, a discomfort with taking on debt. Understanding the true source of financial barriers for youth is important to developing programs and policies that effectively address issues affecting PSE access. For example, recently-approved changes to the OSAP program mean that students will now only receive communication on the net tuition price when they apply to a PSE program or receive an offer of admission, rather than the gross or “sticker price” amount of tuition. Net tuition reflects the up-front OSAP grant and any additional aid provided by the PSE institution. For many low-income students in the 2017/2018 academic year, net tuition will be nil. This change in communication strategy is expected to combat the fact that many students are unaware of the net tuition price and are prone to overestimating the costs of pursuing PSE (Jonker & Hicks, 2016).

Benefits of the Youth Futures Program

The youths in the present study frequently referred to the impact of hearing personal stories from the people with PSE experience to whom they were exposed through the Youth Futures program. Program mentors, employers, colleagues, and presenters were all described as important sources of information who ensured that youth had realistic, well-rounded views of the PSE experience. The youths vividly remembered the stories of the people they encountered in the program and credited them with influencing their beliefs and attitudes toward PSE, as well as their decisions about which program of study to pursue.

Bringing youth into contact with others who have experienced PSE success may be particularly influential because of the way in which youth tend to make PSE decisions and judgements. Finnie (2012) has previously suggested that the availability heuristic can influence the PSE decision-making process of youth, who are likely to give more weight to the information that is readily available to them and easily remembered. Existing research has described the benefits of interventions that increase the bridging social capital of students through exposure to the diverse life experiences of others in the broader community, outside of their immediate network (Ellison et al., 2014; Petty, 2014; Yan et al., 2008). Previous qualitative research by Wang (2012) has documented the impact of memorable messages received from on-campus mentors. Salient stories and messages boost students' motivation and sense of solidarity, influence their PSE decision-making, and encourage them to value school and pursue academic success.

Several youths in the present study described developing stronger interpersonal skills because of their experience in the program. This personal growth is likely to benefit them in the future, as they may be better able to seek out social support from others. They may also continue to network and establish relationships with positive PSE role models and mentors. In this way, both their bonding and bridging social capital will be enhanced. Previous research has demonstrated that students with a broader range of social and emotional competencies are more likely to persist in PSE (Parker et al., 2006). Finnie and Mueller (2007) also found that access to social support was related to PSE participation, particularly for male students.

Suggestions for Program Improvement

The findings of the present study provide insight into the first-hand experiences and perspectives of youth, which may be useful in modifying and improving Youth Futures and other

programs like it. Taken as a whole, the findings suggest that the youths in the current study are on a pathway to PSE and are well-positioned to experience positive educational outcomes. The findings also indicate that the youths had largely positive experiences as participants in Youth Futures. However, based on this study's findings, it is not possible to conclude that the Youth Futures program is increasing access to PSE for participating youth. There was no evidence from the qualitative interviews to suggest that the program resulted in the youths changing course from not pursuing PSE to pursuing PSE. The following suggestions for program improvement may serve to increase the effectiveness of Youth Futures in impacting the pursuit of PSE by its participants.

Recruit youth at risk of not accessing PSE. The findings of the present study suggest that the youths participating in the Youth Futures program were highly motivated, competent high school students acutely aware of the value of PSE, with significant cultural capital accrued from their families. They generally came from families with parents, siblings, and other relatives who had PSE experience. Youth Futures should instead try to recruit needier students who are not well-positioned to pursue PSE because they are facing multiple challenges – including both cognitive and non-cognitive skill deficits – with fewer resources. Family income level is not the most effective variable to base the recruitment strategy of the Youth Futures program on because it is not the most predictive of PSE access (Dooley et al., 2016; Finnie & Mueller, 2007; Frenette, 2007).

Reaching first-generation students whose parents lack direct post-secondary experience is one suggested approach to recruiting youth at risk of not accessing PSE (Erisman & Looney, 2007; Reddick et al., 2011). First-generation Aboriginal students are another high-risk group, particularly male students, female students with dependents, and students from rural areas or

living on-reserve (Orr et al., 2008). Further, youth in foster care or other out-of-home care situations are likely to lack exposure to PSE culture, and stand to benefit from programs like Youth Futures (Finnie, 2012).

If the program continues to target newcomer youths for recruitment, efforts should be made to reach high-risk immigrant groups, including refugees, whose families are less likely to have high levels of parental education (Boyd, 2009). Other high-risk groups include youth who arrive in Canada between the ages of 13 and 19 years and youth who are the children of live-in caregivers in the family admission immigrant class. These two groups of youth have the lowest rates of educational attainment of any immigrant group, as a result of the unique pre- and post-migration circumstances experienced by them and their parents (Hou & Bonikowska, 2016; Erisman & Looney, 2007).

If the program adjusts its target population of participants, it may also be necessary to adjust the program inputs and activities. Needier youths from high-risk groups may require more intensive support, including a lower mentor-to-participant ratio and more emphasis on cognitive skills, like reading and math (Finnie & Mueller, 2007; Frenette, 2007). Older, non-traditional students may have dependents and family and work responsibilities that the program would need to accommodate (Erisman & Looney, 2007; Orr et al., 2008). High-risk immigrant youths may need specific supports to assist them in improving their proficiency in English or French, overcoming gaps in their education, submitting transcripts to PSE from foreign institutions, and applying to financial aid without Canadian citizenship or permanent residency (Rai, 2015). The Youth Futures program may need to provide multilingual program staff who are familiar with foreign educational systems and settlement issues (Erisman & Looney, 2007). Refugee youths, in

particular, may have experienced trauma pre-migration, as a result of war, civil unrest and family disunity, and may need support and counselling (Rai, 2015).

If the Youth Futures program targets Aboriginal youths for recruitment, the program should be modified to reflect Aboriginal cultural beliefs and values (Favell, 2013). Aboriginal students are likely to benefit from the presence of Aboriginal instructors, staff members and Elders, and the inclusion of cultural activities.

Intervene earlier. The youths in the present study had already developed high PSE aspirations, and, in many cases, had decided on their program of study and future career path, all prior to their involvement in Youth Futures. Finnie (2012) has argued that PSE decisions are made early in a child's life, rather than at or near the end of high school. Thus, if an intervention comes too late, youth may have already dismissed PSE as a future option. Further, youth need to begin PSE preparation at the outset of high school, by selecting the proper courses and attaining sufficient marks required for entry into their chosen program. Interventions that reach youths at the end of high school will not be effective unless they are already on-track toward PSE.

One example of a promising early intervention PSE access program in the Canadian context is the ABACUS Grad Track program in Hamilton, Ontario. Recognizing that the middle school age group is often under-served, despite being a critical developmental time period for youth, this program targets Grade Six students who are facing many barriers and are at risk of disengaging from school. The multi-component intervention includes academic support, mentorship, goal setting and financial incentives for progress. A dedicated education/learning coach works with students to set goals, focus on future thinking, and identify role models in the community. The intervention takes place during school hours and is delivered in partnership with

teachers. Students receive support throughout middle school and into Grade Nine and are eligible for financial support for PSE (HEQCO, 2017).

Early interventions are particularly important for Aboriginal youth and youth in care. Research has shown that Aboriginal students who graduate from high school succeed in PSE at the same rate as other students (Mendelson, 2006). The barriers to higher education that are producing the gap in educational attainment between Aboriginal and non-Aboriginal Canadians lie almost entirely in the primary and secondary school sectors, rather than the PSE sector: “the failure to complete high school explains 88 percent of the variation in PSE” (Mendelson, 2006; p. 31). To close this gap, programs need to intervene early to address the dire high school drop-out rates among Aboriginal youth, particularly those students living on reserve.

High school drop-out rates are similarly high among youth in care (OACAS, 2012). Programs targeting youth in care are best implemented during primary school, so that they become familiar with PSE and consider it as an option for the future and are academically prepared to pursue PSE following high school (Finnie, 2012).

Promote parental engagement. The youths described their parents as being highly influential and supportive of their educational aspirations. Youth Futures should tap into this valuable resource by continuing to engage parents in program activities. Reaching parents with information about the many PSE options available to youth may also help to alleviate some of the challenges identified by the youths in the present study. Some youths suggested that the expectations of their parents resulted in feelings of pressure and a sense of obligation to acquiesce to their parents’ preferred PSE pathways, rather than their own (Griffin et al., 2012; Lehmann, 2009).

Previous research indicates that it is important for student and parental goals to be aligned with one another (Maxwell et al., 2016). The Youth Futures program can support both youths and their parents in working toward a common goal and making informed decisions about PSE pathways, so that youth feel free to pursue programs and careers that suit their interests and strengths, without straining the parent-child relationship (Paat, 2013; Taylor & Krahn, 2013).

Changes to program curriculum. The Youth Futures program should continue to educate and inform youths and their families about the student financial aid system, so that financial barriers and concerns about PSE affordability are alleviated. The program should specifically target the issue of loan aversion through program curricula that emphasize the value of PSE as an investment and correct any misperceptions or biases youth or their parents may have about the financial returns on PSE (Finnie et al., 2016; Johnson & Montmarquette, 2011). Loan aversion can be further combatted by educating youths and their parents on the details of loan repayment through OSAP, including the cap on debt for full-time students, interest-free grace periods, and repayment assistance plans (Palameta & Voyer, 2010). A focus on educating students about the cost of net tuition, rather than gross tuition, is also advisable (Jonker & Hicks, 2016). The Youth Futures program should also be cognizant of the role that culture may play in the financial decisions of some youth. Some Muslim students may be opposed to taking on interest-bearing loans, which may be considered forbidden under traditional interpretations of Islamic Law (Usher, 2012). Although this issue was not discussed by youth in the present study, it may be relevant to some youth in the program.

Youth Futures should also consider introducing program curricula that offer practical time management and study skills training. The youths in the present study indicated that the academic and time management demands of PSE could be a barrier for them. They described

challenges associated with procrastination, distractions, and maintaining focus. Previous qualitative research has suggested that student success in PSE is supported by executive functioning skills like time management and organization, and that stress, distractions, and inadequate academic skills can interfere (Stelnicki et al., 2015).

It is also well-known that conscientiousness – the ability to exercise self-control and self-discipline – has been linked to academic performance and motivation (Duckworth & Seligman, 2005; Conard, 2006; Komarraju & Karau, 2005; O'Connor & Paunonen, 2007). Farrington and colleagues (2012) have similarly argued that to improve academic outcomes, interventions should target students' academic mindsets and learning strategies (e.g. time management, goal setting, self-regulation). Youth Futures should prepare students for PSE by bolstering their ability to manage their time, balance school and social commitments, and maintain their focus in class and while studying.

Limitations

Some limitations in the current study merit comment. The sampling method and size of the sample did not allow any claim of generalization. It is unknown how representative the purposefully-selected sample was of the overall Youth Futures group. Data were only collected from participants at a single time point, which may have limited the detection of differences or changes experienced as a result of participation in Youth Futures. Further, the completeness and accuracy of the data may have been affected by participants' ability to recall the past. Data may also have been susceptible to response biases. A social desirability bias may have motivated participants to speak highly of the program. Data were collected from only one source – the youths – and not from other parties, such as parents, which could have provided a means of triangulating the findings. The description of the sample was limited by a lack of detailed

information about socioeconomic and family background characteristics, family structure (e.g. single parent family), age of immigration, immigrant classification (e.g. refugee), or academic performance (e.g. marks). Such information may have had implications for contextualizing the study and interpreting the findings.

The present study was conceptualized as a program evaluation of the outcomes of the Youth Futures program, rather than an in-depth descriptive narrative of the lived experiences of the youths. In this context, some limitations arose with regard to asking the youths questions of an overtly sensitive or personal nature. The questions posed in the interview were generally broad. For example, the youths were not asked specifically about their Aboriginal, immigrant, or visible minority identities, and were not asked about any experiences of systemic bias or racism and discrimination. These limitations may explain why themes pertaining to cultural and social transitions, identity development, and systemic barriers that have emerged from other qualitative research did not arise in the present study.

Conclusion

The present study offers insight into the first-hand experiences and perceptions of high school youths from low-income families who are in the early stages of transitioning into PSE. The youths themselves identified the factors that have shaped their PSE aspirations and decision-making, as well as what helps and hinders their ability to reach their educational and career goals. Understanding the perspectives of youth is important for programs like Youth Futures that promote access to higher education. Youth Futures should maximize the assets and resources available to youth, while minimizing the barriers they encounter. The findings of the present study suggest several useful program improvement strategies that may be used to modify the

Youth Futures program, to ensure that students in need of the intervention receive programming tailored to their needs, and that the timing of the intervention is effective.

The findings of the present study contribute to the emerging body of research focused on the identification of interventions that can contribute to closing the gap in PSE access for special population students. Experts have called for reliable, empirical evidence in this area to improve our understanding of what governments, educational institutions and community partners can do to overcome PSE access barriers (Barnett et al., 2012; Miner, 2011; OUSA, 2011; Shultz & Mueller 2006; Slobodin, 2010; Tierney & Hagedorn, 2007). The evaluation research presented here may help to modify and improve Youth Futures and other programs intended to ensure that all Canadian youth have an equitable opportunity to benefit from higher education.

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CHAPTER NINE

Longer-term Outcomes*Contributions*

Jennifer Rae developed the research presented in this manuscript and conducted the data collection, data entry, data analysis and write-up of the results and discussion. Dr. Tim Aubry supervised the research. In their capacity as stakeholders of the Youth Futures program, Dr. Caroline Andrew, Dr. Elizabeth Kristjansson and Dr. Vivien Runnels provided input on the development of the research design and methods.

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Promoting Access to Post-Secondary Education among Youth from Low-Income Families: A
Study of Longer-Term Outcomes Experienced by Alumni of the Youth Futures Program

Abstract

There have been long-standing concerns that access to post-secondary education (PSE) in Canada is inequitable (Berger, Motte, & Parkin, 2009). Personal characteristics contributing to an individual's pursuit of PSE include cultural background, parental education, and family income levels (Vacarro, 2012). Youth Futures is a bilingual (French and English), community-based intervention intended to improve educational outcomes among high school-aged youths from low-income family backgrounds. Program alumni were briefly interviewed via telephone (interviews lasted approximately five minutes) to investigate outcomes, including enrolment and persistence in PSE, as well as employment. A total of 79 (63.7%) Youth Futures alumni participated in the study. Almost all participants ($n = 70$, 94.6%) had at least one parent born outside of Canada, and 72 percent ($n = 57$) had at least one parent who was born in an African country. Participants had a mean age of approximately 19 years old. Findings from descriptive analyses suggested that almost all participants (96.9%) in the Youth Futures program went on to pursue PSE after high school, although a significant number of program alumni remained uncertain about their educational and career goals, and cited financial barriers that may interfere with their education. Findings from open-ended qualitative questions, analyzed using a general inductive approach, showed that program alumni overwhelmingly described positive overall impressions of Youth Futures and identified a range of positive program components. Implications of these findings for Youth Futures and other programs promoting PSE access and persistence are discussed.

Post-secondary education (PSE) occupies an increasingly important role in Canadian society. Over the next decade, about two-thirds of job openings in Canada are expected to be in occupations requiring PSE (Department of Finance Canada, 2014). PSE graduates experience improved employment opportunities, increased earning potential, and improved health and well-being (Canadian Council of Learning, 2006). Most young people in Canada are pursuing PSE. In 2012, 75 percent of people in Canada aged 25 to 44 had post-secondary experience of some kind (Statistics Canada, 2016c). However, youth from low-income families, youth whose parents do not have PSE experience (referred to as "first-generation" students), youth from rural areas, youth in out-of-home care, and youth who are Aboriginal are all significantly less likely to attend PSE (Norrie & Zhao, 2011).

To address these inequalities, innovative interventions aimed at increasing PSE attendance amongst marginalized youth have been developed (Swail, 2012). Youth Futures, established in 2008, constitutes one such intervention. Youth Futures participants are high school youths from low-income family backgrounds living in Ottawa. The bilingual program spans seven months and consists of mentoring by university students; leadership training; workplace training and skill development activities; paid summer employment; and exposure to college and university settings. The primary goal of the program is to raise PSE access rates among participants.

The current research study investigated outcomes for two cohorts of participants in the Youth Futures program by conducting a brief interview via telephone with program alumni 18 to 30 months after their graduation. Key outcomes, including enrolment and persistence in college or university, as well as employment, were explored.

Literature Review

This literature review will provide an overview of evidence about the value of higher education in Canada, and the rates of access and persistence in PSE among various groups of youth in Canada. The review will focus on access and persistence rates among youth from low-income families, first-generation students, and immigrant youth, because these are the primary groups represented within the Youth Futures sample. The review will also summarize evidence of the relationship between student employment and educational outcomes, because the Youth Futures program activities consist of workplace training, job skill development, and a paid employment opportunity. The review will conclude with an examination of interventions promoting equal access to PSE, including evidence of their effectiveness.

Value of Higher Education

In Canada, acquiring PSE credentials is vital to finding secure employment with promising earning potential. Findings indicate rapid growth of high-skilled, high paid jobs, while demands for medium-skilled segments of the employment market decrease (Burleton, Gulati, McDonald, Scarfone, 2013; Statistics Canada, 2016a). People in Canada with either college or university degrees experience lower rates of unemployment, fewer layoffs, and are more likely to be covered by an employer-sponsored pension plan (Frenette, 2014; Statistics Canada, 2016a). Individuals with PSE credentials, particularly a bachelor's degree, earn substantially more than their counterparts with a high school diploma, and the wealth of families headed by a university-educated income recipient continues to grow (Ferrer & Riddell, 2002; Finnie et al., 2016; Morissette & Zhang, 2006; Ostrovsky & Frenette, 2014; Statistics Canada, 2008).

The financial return on investments in PSE can also be seen in the form of reduced costs incurred by the health care system, justice system, child protection system, and social assistance system (Cabinet Committee on Poverty Reduction, 2008). Research has shown that people with

more years of formal education are more likely to access preventative healthcare, have improved health statuses, and have lower rates of obesity, smoking, and mortality (Baum, Ma & Payea, 2013; Levin, Belfield, Meunnig, & Rouse, 2007). The Canadian Council of Learning (2009) summarized research findings on PSE, concluding that higher education is associated with positive health effects and greater longevity, higher life satisfaction, reduced poverty and crime, increased community volunteerism and charitable giving, and increased civic participation and democratization.

Access to Higher Education

Distinct patterns of PSE accessibility have been consistently identified in the existing literature. The strongest evidence for trends in Canada has originated from the Survey of Labour and Income Dynamics (SLID) and the Youth in Transition Study (YITS) (Zhao, 2012). These nationally representative longitudinal studies, undertaken by Statistics Canada, track thousands of participants over time as they progress through major life transitions. Research using this data strongly indicates that access to PSE is not equitable across all groups of qualified youth, and that gaps in university participation rates tend to be particularly pronounced (Finnie, Wismer, & Mueller, 2015; Finnie, Childs, & Wismer, 2011a). Youth from low-income families, youth whose parents did not attend PSE, youth from rural areas, youth in out-of-home care, and youth who identify as Aboriginal are all less likely to participate in PSE. Conversely, both first-generation immigrants (born outside of Canada) and second-generation immigrants (born in Canada to parents born outside of Canada) are more likely to access PSE compared to non-immigrants, and similarly, youth with a language other than English as a mother tongue have a higher PSE participation rate than youth with English as their mother tongue (Berger et al., 2009; Norrie & Zhao, 2011; Finnie et al., 2015; Finnie et al., 2011a).

In Ontario, these trends observed on the national level hold true, although some effects are more or less striking. The effects of grades and student test scores are particularly strong in Ontario, suggesting Ontario is relatively “meritocratic” (Finnie, Childs and Wismer, 2011b; p. 43). The effects of parental education are even greater in Ontario than in other regions, while the effects of family income are diminished (Finnie et al, 2011a). The effect of parental education is larger than any other effect of interest. Youth whose parents have no PSE experience are 28 percentage points less likely to attend university and 18 percentage points less likely to attend PSE of any kind. These effects persist even when membership in other under-represented groups is accounted for. The role of family income is much more limited by comparison. Finnie and colleagues’ analysis shows that “a single year of parental education has a greater impact on the likelihood of a son/daughter attending PSE than does an extra \$50,000 in parental income” (2011b; p.12). Over 50 percent of the effect of being from a low-income family is offset when other factors – including parental education – are accounted for, leaving only a seven percent gap in PSE participation rates attributable to family income. When high school grades are added to the analysis, the family income effect is further reduced to just 3.6 percent (Finnie, 2011a). Thus, it appears that examining family income as a determinant of PSE is useful primarily because income serves as a proxy for other aspects of family background which also impact the probability of PSE participation, such as parental education (Frenette, 2007; Mueller, 2008). Higher income is associated with higher education, such that both parental education and family income can be used as measures of socio-economic status, with the use of either revealing a similar trend in PSE access for youth (Berger et al., 2009).

The relationship between family finances and PSE access was explored further by Finnie and colleagues (2015) in their recent examination of the specific reasons reported by youth to

explain why they did not access PSE. They focused their analysis on the approximately 20 percent of youth who have not accessed PSE by the age of 21, but do express PSE aspirations. They found that only a small proportion of youth (just 22% of the sample who do not access PSE, and 5.5% of the overall sample) report that their financial situation is a barrier preventing them from obtaining the PSE experience toward which they aspire. Only 8.1 percent of youth citing financial barriers to PSE report that they were either not able to get a student loan at all or not able to get a student loan of a sufficient amount to pursue PSE.

Further analysis reveals that there is a very limited relationship between family income itself and the likelihood of not accessing PSE due to a financial barrier. The authors interpret the results as an indication of the importance of cultural factors, rather than actual financial or affordability barriers, as determinants of PSE access. They posit that some students (specifically, youth whose parents have PSE experience, and visible minority youth) are less likely to report financial barriers, not necessarily because their actual financial situation differs from other groups, but because their family background has influenced their perceptions of the costs and benefits of PSE, and they regard tuition fees as a reasonable investment in a valuable PSE degree. These findings underscore the importance of education about the costs and benefits of PSE and the details of the student loan system (Finnie et al., 2015).

Educational disadvantage does not pass from parent to child in immigrant families in the same way that it appears to in non-immigrant families. Children of immigrant parents with no PSE experience go on to pursue PSE at rates that are much higher than those observed for children of Canadian-born parents with no PSE experience (Childs, Finnie & Mueller, 2015; Corak, 2008). On many measures of educational attainment, both first- and second-generation immigrants outperform non-immigrants (Childs et al., 2015; Norrie & Zhao, 2011). Immigrants

are less likely to drop out of high school and are more likely to pursue PSE, especially at the university level (Finnie & Mueller, 2009; Gilmore, 2010; Norrie & Zhao, 2011). The educational successes of the children of immigrants have been at least partially attributed to cultural factors and the high value placed on education in immigrant families, which has been described as “a strong pro-PSE ethos” (Finnie and Mueller, 2009; p. 20; Gilmore, 2010). The effects of this cultural orientation toward education can be observed even if other factors are controlled for, including geography (urban/rural), family income, parental education level, high school grades, literacy scores, and high school engagement (i.e. sense of academic identification and participation, as well as social engagement at school) (Childs et al., 2015; Finnie & Mueller, 2009; Finnie et al., 2011a).

Persistence in higher education

Facilitating equitable access to PSE is an important policy priority. However, simply accessing PSE is not enough to bring about the positive long-term impacts associated with higher education. To reap the full benefits of PSE, youth must succeed in persisting toward graduation. Research on student retention has revealed that the factors influencing student persistence are not always the same as those that influence student participation. Again, much of the research relies on data collected through the YITS. An additional data source, the Post-Secondary Student Information System (PSIS), contains student information collected by post-secondary institutions and passed on to Statistics Canada (Parkin & Baldwin, 2009). Persistence is a dynamic process, so it is necessary to obtain longitudinal data across institutions to capture student mobility, including switching, leaving, returning and other ways of moving through the system.

Parkin and Baldwin (2009) provided a useful review of Canadian research on persistence rates and determinants of student success. They concluded that the Canadian post-secondary

drop-out rate is among the best of the OECD countries, with only about 15 percent of those who begin post-secondary studies abandoning PSE altogether. Most students “drop-out” only temporarily, transferring to other programs or institutions, or taking a break before re-enrolling again. In-depth examination of patterns of switching, leaving, and re-entering PSE indicates that about 58 percent of college students and 55 percent of university students graduate from their original program within five years (Finnie and Qiu, 2008; Childs et al., 2016).

Total persistence rates, which account for switching programs or institutions and for temporary drop-outs who then re-enrol, indicate that 82 percent of college students and 90 percent of university students persist in PSE to graduation (Finnie and Qiu, 2008). Thus, most students graduate, but many take complex pathways to get there. Students are at the highest risk of leaving PSE (switching programs or institutions, or dropping out) during their first year of studies (Childs et al., 2016; Finnie et al., 2012; Mueller, 2008). Drop-out rates are lower among university students (Childs et al., 2016). In Ontario, students are more likely to switch to a different program within the same institution, rather than switch to a different institution all together. Approximately 84 percent of Ontario PSE graduates graduate from their first program at their first institution (Finnie et al., 2012).

A number of demographic, behavioural, and attitudinal factors associated with PSE persistence have been identified in the literature. Groups of students that are more likely to drop out include: men; students who identify as Aboriginal; older students; students who are parents; students with poor academic performance and engagement (both at the high school and post-secondary level); students who have an inadequate financial aid package, or accumulate high levels of debt; and students who express uncertainty about their career goals (Parkin & Baldwin, 2009). Students with lower grades in their first year of PSE and students who were less engaged

and integrated into campus life (e.g. did not volunteer, did not have someone on campus to talk about personal issues with, lacked a sense of belonging to their institutions, thought regularly about dropping out) are also more likely to drop out (Ma & Frempong, 2013).

In contrast to the extensive body of research examining family income and parental education in relation to PSE access, the relationship between these two factors and PSE persistence is not well understood, with several studies suggesting that neither factor is related to persistence (Dooley, Payne & Robb, 2012; Parkin & Baldwin, 2009; Mueller, 2008). Some data suggests that certain groups of students – including Aboriginal students, students with disabilities, students from low-income or single-parent families, first-generation students, and students from rural backgrounds – have higher drop-out rates from either college or university, while other groups – including first and second generation immigrants, and Francophones outside of Quebec – have lower drop-out rates. However, the drop-out rates among any of these groups of students are not identifiably different once high school and PSE grades and membership in other groups is accounted for (Finnie et al., 2012).

Other research indicates that parental income and education levels are positively related to graduation rates, particularly among students who switch out of their original PSE program: students from higher income, higher educated families are more likely to successfully re-enroll and graduate from a second or later program or institution, thus contributing to higher overall graduation rates (Childs et al., 2016; Martinello, 2007). Parental income and education appears to influence students' ability to overcome adversity and persist in PSE despite leaving an initial program of study, possibly because parents are able to provide security and support to students during this transition, or share more resources and knowledge of alternative PSE opportunities (Childs et al., 2016; Martinello, 2007).

In addition to exploring factors associated with PSE persistence, research has also focused on the self-reported reasons given by youth who discontinue their studies. The most prominent reasons given by youth who drop out of PSE relate to lack of interest, satisfaction, or “fit” with their program of study, or lack of career direction (Parkin and Baldwin, 2009; Finnie et al., 2012). A smaller group of students who drop out of PSE cite financial reasons for having done so (Parkin and Baldwin, 2009; Finnie et al., 2012). Only 8.2 per cent of Ontario college students and 3.1 per cent of Ontario university students who drop out of PSE say that they did so because of a lack of money. Overall, this means that less than 2 percent of college students and less than 1 percent of university students who access PSE leave their programs and cite money as a deciding factor in doing so (Finnie et al., 2012).

These findings have led researchers to generally conclude that non-financial reasons are more important determinants of persistence than financial reasons (Mueller, 2008; Parkin and Baldwin, 2009; Finnie et al., 2012). However, there is some research which suggests this pattern may differ depending on whether students borrowed to finance their studies. Students who did not borrow tend to indicate they dropped out because of program dissatisfaction, while students who did borrow report both program dissatisfaction and financial reasons at equal rates (Parkin and Baldwin, 2009; Shaienks & Gluszynski, 2007). Students collecting social assistance, and students who did not obtain scholarships or receive loans from their parents are also at greater risk of dropping out of PSE (Ma & Frempong, 2013). Contrarily, other researchers have found no evidence of any causal impact between entrance scholarships and bursaries on PSE outcomes (Dooley, Payne & Robb, 2013).

The Role of Student Employment

Working for pay during the school year has become increasingly common among Canadian students. Nearly two-thirds of high school students are employed during their last year of high school, with most working a moderate amount (between 1 and 19 hours of paid work per week). Approximately 35 percent work over 20 hours per week (Bushnik, 2003). Almost one in two full-time PSE students are employed (Junor & Usher, 2004; Marshall, 2010). On average, students work about 16 hours per week while in school. The rate of employment among PSE students during summer break has consistently remained around 70 percent. Working while in PSE is less common among immigrant students, and among students living outside of large urban centres. Almost all working PSE students are employed in the same sector: 96 percent of working students have jobs in the service sector, including retail trade and food services (Marshall, 2010). Students report that they are working because of financial need. One third of PSE students indicate that if they did not work, they could not afford to attend school (Junor and Usher, 2004).

Relatively little is known about how student employment may impact access and persistence in PSE, or the eventual career and employment prospects of PSE graduates. One of few studies on the relationship between student work and PSE access was conducted by Finnie, Lascelles, and Sweetman (2005). The authors examined whether student employment in an outside job while in high school mediated family background characteristics in predicting PSE access. The results showed that working a moderate number of hours is associated with higher levels of PSE access, but working too many (over 20 hours) is associated with lower levels of PSE access (Finnie et al., (2005).

Other researchers have focused on examining the relationship between student work and PSE persistence and drop-out patterns. Most existing research has documented a U-shaped

relationship between dropping out and the number of hours worked, suggesting that both non-working students and students who work a high number of hours are at an increased risk of dropping out of PSE (Looker & Lowe, 2001; Moulin, et al., 2013). However, such research has typically relied on cross-sectional data, making causal relationships difficult to infer. Motte and Schwartz (2009) overcame this limitation by using YITS data to examine PSE persistence between the first and second year of studies. Their work indicated a negative casual impact of employment on PSE persistence. The PSE persistence of students who worked at all, as well as students who worked longer hours, was negatively affected.

Later work by Moulin and colleagues (2013) yielded different findings. Instead, the authors offered causal evidence indicating that students who worked more than a critical threshold of 24 hours per week experienced a negative impact that resulted in higher rates of dropping out of university, but importantly, this effect was only observed among students who dropped out with no intentions of enrolling in another PSE program. Further, students who did not work at all, or worked relatively few weekly hours, were not negatively affected. The authors concluded that while work intensity matters, having a student job in and of itself did not result in problems, nor benefits, for students.

Multiple explanations for the effects of student employment on PSE access and persistence have been put forth. Some research has indicated that working long hours limits the time available to attend class or study. Work obligations may lead students to take smaller course loads, resulting in more time taken to complete their studies, which may in turn affect persistence to graduation (Junor & Usher, 2004). Work may also affect student engagement, particularly for university students. Those who work longer hours report less involvement in volunteer activities, extracurricular activities, or social and cultural groups (Junor & Usher, 2004).

In addition to the intensity of hours worked, it may also be important to consider the nature of the job students have. Co-operative education programs or other paid opportunities in a field related to one's field of study may have more positive impacts on PSE persistence and employment prospects for PSE graduates, compared to a job in an unrelated field (Mueller, 2008). At the same time, PSE persistence may be positively impacted by involvement in work-study programs, which allow students to cover financial needs while increasing the amount of time spent in the campus environment (Engle & Tinto, 2008)

Expert Recommendations for Effective Interventions

A growing number of interventions are using new and innovative strategies to tackle the issue of inequitable access to PSE in Canada. Schultz and Mueller (2006) conducted an extensive search of the available literature on “pre-college outreach programs”. The authors concluded that programs with the best evidence for effectiveness contain the following key features: early intervention (eighth or ninth grade or earlier); support for academic, personal and social enrichment; engagement of parents/family members; help navigating the PSE admissions process; financial assistance; comprehensive, long-term support (at least four years); and adoption of a systemic reform approach (such as linking secondary and post-secondary education systems, or reforming curriculums). Other researchers have made similar recommendations, suggesting that programs must start early, offer frequent, sustained, age-appropriate support, and consist of multiple-component interventions.

These components may include academic support (such as tutoring, mentoring, and academic enrichment); one-on-one, consistent positive contact with supportive adults, including counselling; coordination among different programs and services; peer support and connections to role models and mentors; financial assistance and advice; exposure to college or university

environments; information about higher education opportunities; support in developing time management, note-taking, and test-taking skills; activities aimed at improving self-esteem and motivation; and a means of engaging parents and other family members to support their children's education (Brock, 2010; Cunningham, 2002; Engle & Tinto, 2008; Kuh, 2006; Tierney & Hagedorn, 2007; Swail, Quinn, Landis & Fung, 2012; Smith & Gottheil, 2011). A review of summer bridge programs, which target PSE retention by promoting "readiness", suggests that key program curriculum components include remediation in core subjects; skill development in areas like time management, studying and note taking; financial literacy; and support in navigating campus resources (Sablan, 2014).

One critical factor contributing to the success of a program is its ability to meet the informational needs of students. Conley (2010) referred to college knowledge, or the "privileged information" about the PSE system and culture that students need to apply for PSE and successfully navigate the PSE context (p. 40). De Broucker (2005) notes that students may have distorted or misinformed views of PSE and are likely to be overwhelmed by the massive amount of information available and the complexity of the PSE system. These disadvantages can be offset by interventions offering students support and instruction about PSE prerequisites, tuition costs, the returns of higher education, and the resources available to help fund their studies (de Broucker, 2005).

Brock (2010) agreed that students require guidance to shape their expectations of PSE and to determine which courses to take and in what sequence, how to add or drop courses, how to apply for financial aid, and what resources and supports are available to ease the transition into campus life. In their review of "pre-college encouragement programs", for low-income and first-generation students, Kuh and colleagues (2006) found that the most effective programs

provide participants with information, including information about financial aid. Students also benefit from encouragement to take academically challenging courses in high school and to prepare themselves for PSE (Choy, 2001).

Lack of Research

Interventions to promote PSE access, readiness and retention are becoming increasingly common. However, few studies of such interventions exist, especially within the unique Canadian PSE context. Those evaluations that are conducted frequently lack comparison groups and do not address questions about the importance of specific program elements (Sablan, 2014). Experts have called for a stronger evidence base in this area to facilitate sound decision-making about which potential program models to establish or expand, and how to match students to the programs that best address their particular needs (Barnett et al., 2012; Shultz & Mueller 2006; Tierney & Hagedorn, 2007). External evaluations of community-based programs are particularly scarce, likely due to limited availability of resources, and less demand for evidence and accountability compared to government or institution-based programs (Le, Mariano & Faxon-Mills, 2016). One of the few community-based programs to be rigorously evaluated is the College Bound program in St Louis, Missouri, which offers individual, student-level supports to students for up to nine years, starting in Grade Nine and continuing until completion of a PSE degree. An outcome evaluation of the program revealed positive effects, including improved grades, enrolment in PSE-preparation high school courses, and attendance at a four-year post-secondary institution, among students in the program (Le et al., 2016).

The Youth Futures Program

Youth Futures is a community-based intervention intended to improve PSE access rates among under-represented youths. The program activities, inputs, outputs and outcomes are described in detail in the program logic model presented in Chapter Four of this thesis.

The Youth Futures program is supported by a partnership comprised of the City of Ottawa, five local post-secondary institutions, and a number of community-based organizations, including Ottawa Community Housing, a coalition of community health and resource centres, and several immigrant settlement and integration service organizations. The program is offered at no cost to high school students aged 16-21 from low-income families and communities.

The program targets students who live in publicly-funded social housing and/or have a parent who is receiving social assistance in the form of Ontario Works (OW) or the Ontario Disability Support Program (ODSP). The rationale for this recruitment approach is tied to the broader literature base documenting the achievement gap between high- and low-income students, as well as local data suggesting that educational outcomes are diminished for youths living in particular neighbourhoods. For youths living in one low-income social housing neighbourhood in the west-end of the city, the high school drop-out rate was found to be 49% (Pathways to Education Ottawa, 2013). PSE completion rates in this neighbourhood were also low: 14 percent of adults aged 25 to 64 had a Bachelor's degree, compared to 40 percent of this age same group in the municipality as a whole (Pathways to Education Ottawa, 2006).

Youths are recruited into the program through multiple channels, including community partners' websites OW and ODSP workers, and local schools, neighbourhoods and community centres. Interested youths are required to submit an application to the program. Applicants are screened for eligibility on the basis of age/grade level in school and family income (postal code

is used to identify applicants living in social housing or a low-income neighbourhood). In-person interviews with program stakeholders are conducted with roughly twice as many eligible applicants as there are spaces available in the program. Offers to participate in the program are made on the basis of these interviews. The interviews serve to identify the youths who are considered most suitable for the program – generally speaking, those applicants with academic potential who express interest and motivation in participating in Youth Futures. Emphasis is also placed on ensuring that youths who appear to face multiple barriers to education are offered a chance to participate in the program. First-generation students and youths from recent-immigrant families are frequently accepted into the Youth Futures program, in addition to small numbers of Aboriginal youths and youths in out-of-home care.

The program spans seven months each year, from February to August. During the academic year, program activities take place on Saturdays and during the week long-school break in March each year. The program participants are divided into smaller groups, each led by two mentors, who are university students hired to provide support and encouragement to participants. Program activities include workplace training and skill development activities focused on job search and employability, as well as direct exposure to PSE settings. On-campus activities include lectures given by university professors on a variety of different subjects, and workshops on topics such as budgeting, financing, and applying to PSE. The PSE preparation component of the program consists of 10 half-days of activities, as well as one full week of activities at the end of the program in August. During the summer months, youths go through a formal hiring process with the City of Ottawa and other local employers, and complete six weeks of full-time employment.

Program Theory

The Youth Futures program aims to promote access to higher education among youths from low-income families by nurturing various socio-emotional and behavioural characteristics. This approach is supported by two distinct but related bodies of literature. The first pertains to the Positive Youth Development (PYD) perspective, and the second pertains to the role of non-cognitive factors in producing positive education outcomes.

The PYD perspective serves as a conceptual framework guiding the Youth Futures program. The PYD view of adolescent development emerged in the 1990s as a conceptual alternative to the problem-centered, deficit focused approaches that previously dominated the field of youth research and practice (Bowers et al., 2010; Damon, 2004; Lerner et al., 2010). PYD is a holistic approach to maximizing the inherent strengths and positive qualities of youth (Damon, 2004). The PYD approach focuses on aligning young people with positive growth-promoting resources – termed developmental assets – through targeted interventions (Bowers et al., 2010). Programs that adhere to a PYD philosophy nurture the core attributes and competencies that youth rely on to navigate the transition into adulthood, supposing that this type of nurturance may not be readily available to some groups of youths in their existing family, school and community settings (Heckman, 2008; Naudeau, Cunningham, Lundberg, & McGinnis, 2008; Roth & Brooks-Gunn, 2003).

Beyond the broader goal of promoting positive youth development, the Youth Futures program has adopted a focused, instrumental goal of promoting equal access to higher education. It is to this end that the research base on the importance of non-cognitive factors is relevant to the Youth Futures program theory. Experts now recognize that additional student attributes, beyond cognitive and intellectual abilities, impact the capacity to learn and succeed in school. These attributes have been referred to as non-cognitive factors, a term used to represent sets of

behaviors, skills, attitudes, feelings, thoughts and strategies that play a role in fostering positive outcomes for youth (Farrington et al., 2012; Garcia, 2014). As the Youth Futures program logic model suggests, the program targets a number of non-cognitive factors. The intended short-term outcomes of the program include self-confidence, self-mastery, sense of competence, persistence, social connectedness, motivation, optimism, and conscientiousness. A growing body of literature has established a strong relationship between these types of non-cognitive factors and positive outcomes for youth, particularly academic performance and educational achievement (Gutman & Schoon, 2013). Further, evidence suggests that various inter-related non-cognitive factors (including self-efficacy, motivation, academic expectations) are malleable and open to improvement through intervention activities (Farrington et al., 2012; Gutman & Schoon, 2013)

The Present Study

The present study contributes to the small body of literature on the outcomes and effectiveness of community-based programs promoting equal access to higher education for youth, including youth from low-income families, first-generation students, and first- and second-generation immigrants. This study is valuable because it explores longer-term outcomes, which are rarely investigated in evaluations of adolescent interventions (Heckman & Kautz, 2013). Short-term follow ups can lead to upwardly-biased estimates of program returns if program effects dissipate over time. This is often the case with programs that alter participants' environments and incentives during an intervention, but do not successfully influence long-term behaviour after the intervention ends (Heckman & Kautz, 2013). At the same time, this study of longer-term outcomes may offer insight into outcomes that might appear later on and may not be captured by short-term evaluations immediately following the program. This study of program

participants who are further along in their transition into PSE may improve our understanding of factors that support youth in successfully accessing PSE, as well as factors that present challenges for youth. As a whole, this study offers a more complete picture of the outcomes of the Youth Futures program.

A brief interview was conducted via telephone with two cohorts of program alumni 18 to 30 months after their graduation from the Youth Futures program. The present study was intended to offer an indication of whether participants in the Youth Futures program experienced positive outcomes in line with its program logic model. Key longer-term outcomes, including enrolment and persistence in college or university, as well as employment, were explored. The research questions guiding the present study were as follows: 1) What are the academic and employment outcomes experienced by Youth Futures program alumni post-graduation? 2) Do sub-groups of Youth Futures program alumni (namely, first-generation students and youth born outside of Canada) experience different academic and employment outcomes post-graduation? 3) What changes, if any, do alumni perceive in themselves as a result of their involvement in the Youth Futures program?

Method

Sample Recruitment Procedures

A total of 124 youths who participated in the Youth Futures program during 2012 and 2013 were invited to participate in the study. Contact information for these program alumni were obtained from program records. The available contact information typically included telephone number and e-mail address, as well as parent(s)'s telephone number. However, it is important to note that the records had not been well-maintained over time and thus contact information was

frequently out of date (e.g. telephone numbers disconnected or out of service, email addresses non-existent).

The telephone was the preferred modality for data collection because it was considered more convenient and practical than scheduling an in-person interview, but also more personal than e-mail, allowing for the researcher to adequately explain the study and gain participants' verbal consent, answer any questions participants may have, and improve the accuracy of the data collected. While the interview itself was conducted by telephone, participants were also contacted by email to inform them of the study. The principal investigator (PI) of the present study, as well as two Francophone research assistants, attempted to contact each alumnus or alumna. At minimum, each alumnus or alumna was contacted three times via telephone and three times via email.

The recruitment process was guided by various aspects of the Tailored Design Method, an empirically validated set of procedures that increase response rates in electronic and telephone surveys (Dillman, Smyth & Christian, 2007). Participants were contacted about the study by both phone and email. Emails contained simple text with no graphics, so that they could be easily accessed on mobile devices. Emails were sent individually to ensure that they would not be filtered as spam. Positively targeted messaging of respondents was demonstrated through personally-addressed communications in both French and English.

Participants were contacted multiple times, but each contact was unique and varied, and all communications were positive in tone. To appeal to helping tendencies and norms of social responsibility, requests to participate were framed as requests for help (e.g. "As an alumni of the program, your feedback is vital for the continued success of the program.") or advice ("Your recommendations are needed to improve the program in the future."). Requests to participate

also made reference to the fact that all alumni were being asked to participate and that many already had responded, so that potential respondents felt a sense of social validation knowing that they were participating alongside their peers.

Within the recruited group, a total of 79 (63.7%) Youth Futures alumni participated in the interview: 53 of whom had completed the program in English, and 26 of whom had completed the program in French. This recruitment rate was comparable to previous attempts by the program to follow-up with program alumni – for example, in 2013, the program successfully contacted 37 (63.8%) of the program alumni from 2012. Data collection took place from November 2014 to August 2015. Most participants had graduated from the program 18 to 30 months prior to the time of the interview.

University of Ottawa Research Ethics Board approval was obtained prior to the commencement of participant recruitment and data collection. Informed consent was obtained verbally (via telephone) from all participants in the study.

Measures

A brief interview protocol was administered to participants via telephone. The interview began with questions about educational experiences developed specifically for the purpose of the present study. Questions were open-ended, so participants could respond with a free-form answer. Interviewers then categorized these answers into pre-determined response alternatives. Participants were first asked about their high school graduation status, and whether they had pursued a college-preparation or university-preparation diploma. Questions included: “Have you graduated from high school?”, “When did you begin high school, and when did you graduate from high school (or when do you expect to graduate?)”, “In high school, did you take mostly Academic courses, mostly Applied courses, or a mixture of both?”, and “Which high school

grade level (Grade Nine, Ten, Eleven or Twelve) were you enrolled in while you were participating in the Youth Futures program?” Participants were then asked to describe their participation in PSE following high school. Questions included, “Have you pursued a Training and Apprenticeship program, a College program, or a University program?”, “What is the name of the program you have pursued?”, and “What is the name of the institution where the program is/was offered?”, “What stage of the program are you at?” and “What is the job or career that you think you will have as an adult?”

Educational aspirations and perceived barriers were then explored using two single-item measures previously used in the Youth in Transition Survey (Statistics Canada, 2011a). The first measure assessed PSE aspirations. Participants were asked, “As things stand now, what is the highest level of education you think you will get?” A multiple-choice type response scale ranging from “Less than a high school diploma” to “Doctorate Degree or higher” was used. The second measure assessed perceptions of barriers to PSE. Participants were asked, “Is there anything standing in your way of going as far in school as you would like to go?” A response scale permitting participants to check all applicable responses was used. Possible responses included No barriers, Financial situation, Marks too low, Not enough interest or motivation, I want to stay close to home, Getting a degree takes too long, I want to work, I have dependents to care for, My own health, I’m not sure what to do, and Other (an open-ended response was permitted).

Questions about participants’ employment status and recent work history followed. These questions were developed specifically for the purpose of the present study. Questions were open-ended, so participants could respond with a free-form answer. Interviewers then categorized these answers into pre-determined response alternatives. Questions included, “Are you currently

employed?”, “What is your current job title and place of work?”, “Are you currently working full or part time?”, and “Since completing the Youth Futures program, what is the total number of months you have spent employed, either full or part time?”

Participants were then asked two open-ended questions about the perceived impact of the Youth Futures program. Questions included: “In your own words, please describe the impact that the Youth Futures program had for you, if any.”, “Which aspects of the program did you find most valuable?”, “Which aspects of the program did you find least valuable?”, and ‘What changes to the program would you recommend to make it more effective?’

Finally, the interview concluded with demographic questions about participants’ background. Participants were asked about their age, gender, birth country, parents’ birth country, parents’ education level, and whether they identify as Aboriginal.

The design of the interview was also informed by the Tailored Design Method (Dillman et al., 2007). Specifically, it was brief (approximately five to ten minutes) and easy to complete. Related questions were grouped together, and questions about events, such as high school graduation and PSE enrolment, were asked in the order the events occurred. Skip patterns were incorporated into the interview, so that each participant was only asked questions applicable to their individual situation. Requests for personal or sensitive information were minimized. Ordinal or Likert-style questions, which require visual information to be communicated effectively, were avoided in favour of questions with free-form response options (Dillman et al., 2007). Depending on the language preference of respondents, the interview was conducted in either English or French.

Data Analysis

Data were analyzed using IBM SPSS Statistics 23.

Attrition. Chi-square tests of independence were conducted to determine whether differences existed between the Youth Futures alumni who participated in the study and those who did not. Differences on gender and language were examined. No significant differences were found.

Educational and Employment Outcomes. Descriptive analyses were conducted to determine the number and percentage of alumni who experienced the educational and employment outcomes of interest. The background information collected in the interview was then used to divide the alumni into different sub-groups for further analysis. Specifically, the educational and employment outcomes of first-generation students and youth born outside of Canada were examined. These outcomes were then compared to the Ontario access rates established by previous research using Chi-square tests of independence.

Qualitative. The open-ended questions about perceived program impact and recommendations for improvement were analyzed using a general inductive approach, as described by Thomas (2006). The researcher reviewed a subset of responses and developed an emergent set of codes (i.e. category labels) that identified and defined important information contained within the various responses. Similar codes were grouped into categories and sub-categories, forming an organized coding scheme. The responses were coded using this coding scheme to allow for a summary of participants' responses. Descriptive analyses were then conducted to determine the number and percentage of program alumni whose responses contained each given code.

Sample Characteristics

Baseline sample characteristics for participants are presented in Table 1. More than half of the sample was female ($n = 46$, 58.2%). Participants' ages ranged from 17 to 23 years old, with most participants ($n = 63$, 80.8%) being 18, 19, or 20 years old at the time of the interview.

About half of the participants ($n = 37$, 51.4%: note that 7 participants were unsure of their parents' education level) indicated they were first-generation students, meaning they reported that they did not have a parent with any college or university experience. About a quarter ($n = 22$, 27.8%) of the participants reported that at least one of their parents had university experience.

Most participants were either first- or second-generation immigrants. Only a small proportion of participants indicated that they were born in Canada and that their parents were born in Canada as well ($n = 4$, 5.4%). The majority of the Youth Futures participants reported that they were born in an African country, and/or had a parent who was. Half of participants ($n = 39$, 50%) were born outside of Canada, and 38 percent ($n = 30$) were born in an African country. The single most common birth country, outside of Canada, was Congo, where approximately 10 percent ($n = 8$) of participants were born. Almost all participants ($n = 70$, 94.6%) had at least one parent born outside of Canada, and 72 percent ($n = 57$) had at least one parent who was born in an African country. The most common parental birth country was Somalia ($n = 24$, 30.4%).

Table 1

Sample Demographic Characteristics (N = 79)

Characteristic	<i>n</i>	% ¹
Gender (Female)	46	58.2
Age (18-20 years old)	63	80.8
First-Generation Students	37	51.4
Parent with University Experience	22	27.8
Aboriginal	2	2.5
Born outside of Canada	39	50.0
Born in African Country	30	38.0
Born in Congo	8	10.3
Parent born outside of Canada	70	94.6
Parent born in African Country	57	72.2
Parent born in Somalia	24	30.4

¹ % of valid responses on each variable

Results

Educational and Employment Outcomes for Overall Sample

Descriptive (frequencies) analyses were conducted to summarize participant responses to questions pertaining to educational and employment outcomes. Results of these analyses for the overall group of participants are presented in Table 2.

High school. Most participants ($n = 64$, 81.0%) had successfully graduated from high school at the time of the interview and had completed high school in the standard time span of four years or were on track to do so ($n = 69$, 87.3%). Of the fifteen participants who had not graduated high school at the time of the interview, thirteen expected to graduate from high school at the end of the academic year they were currently enrolled in (i.e. by June, 2015), one expected to graduate at the end of the following academic year (i.e. by June, 2016), and one indicated that they did not expect to receive a high school diploma because they had already proceeded to college as a mature student. Of the thirteen participants expected to graduate by June, 2015, six indicated that they had already applied to attend some form of PSE program starting in September, 2015.

Most participants ($n = 57$, 72.2%) reported that they had been enrolled in academic courses in high school, receiving (or on track to receive) a university-preparation high school diploma. Among participants who reported that they had been enrolled in college courses in high school, almost half ($n = 8$, 47%) stated that they expected that they would go on to achieve a Bachelor's degree or higher as their highest level of education.

PSE access. Almost all of the 64 participants who had already graduated high school at the time of the interview were currently enrolled in a PSE program ($n = 59$, 92.2%). Only one participant had graduated from high school but not applied to any PSE program. Another

participant who had graduated high school three years prior to the time of the interview reported that they had not attended PSE but had applied to a PSE program. One participant had dropped out of two PSE programs without completing them, and was currently unemployed and not in school at the time of the interview. This participant cited language barriers as the reason for dropping out. Two participants had completed a PSE program (one a three-month apprenticeship, and the other a two-year college program) and were no longer enrolled in any PSE program at the time of the interview.

University was the most common form of PSE being pursued by the participants. Of the 70 participants with PSE experience (i.e. those that had applied to, enrolled in, and/or completed PSE), 49 (70.0%) had university experience, 20 had college experience (28.6%), and one (1.4%) had experience in a training and apprenticeship program. All of the participants' PSE experience was concentrated at local institutions located in Ottawa/Gatineau, with the exception of two participants who reported attending other institutions located in Ontario. Participants reported pursuing a wide range of PSE programs of study. The most common programs were social science and humanities programs ($n = 21$, 30%); business and economics programs ($n = 13$, 18.6%); health and science programs ($n = 13$; 18.6%); engineering programs ($n = 8$, 11.4%); and childhood education programs ($n = 5$, 7.1%). Some participants ($n = 10$, 14.3%) reported that they were thinking of switching programs, or already had.

Educational aspirations. The participants had high expectations for their future educational achievements. Almost all participants ($n = 77$, 98.7%) indicated that they thought they would achieve a PSE credential as their highest level of education. The majority of the participants ($n = 49$, 62.8%) reported that they thought the highest level of education they would achieve would be a Master's degree, PhD degree, or university-level professional degree (e.g.

teaching, law). The majority ($n = 14$, 70%) of participants currently pursuing college reported that they thought they would achieve a Bachelor degree or higher, suggesting they intended to transition from college to university over the course of their PSE career.

When asked about the job or career they thought they would have as an adult, almost a quarter of the participants ($n = 18$, 23.4%) did not respond with a specific career goal, saying that they did not know or were unsure, or responded vaguely (e.g. “I would like to work in my field of study”). In a small number of cases ($n = 4$, 5.2%), participants’ current educational pathway was not closely aligned or consistent with their stated career goals. For example, one participant who aspired to be an architect was currently enrolled in a college welding program.

Almost half of the participants ($n = 38$, 48.1%) reported that they were not facing any barriers to education. The most common barrier to education reported by the participants was financial. For example, in their free-form responses, the participants reported feeling concerns about student loans, debt, the cost of tuition, and paying for books. Four participants said that they were receiving OSAP, but were concerned about debt repayment. Two participants said that they struggled to understand the financial aid system and were unaware of how to find and apply to bursaries or scholarships. Two participants said that they needed to work to pay for their studies. One participant said that no one in his family was currently employed.

A relatively small number of the participants ($n = 4$, 5.1%) indicated that low marks presented a barrier to higher education. In their free-form responses, the participants’ reasons for low marks included language barriers, trouble understanding, challenging course material, and having attended an alternative high school receiving special education credits. One participant specifically reported a fear of being kicked out of his PSE program due to low grades.

Employment. Almost half of the participants ($n = 37$, 46.8%) reported that they were not currently working at the time of the interview. Most participants who were currently employed were working part-time hours ($n = 29$, 36.7%). Some participants indicated that they had not worked at all since the end of the Youth Futures program ($n = 18$, 22.8%), or had worked a total of four months or less ($n = 16$, 20.3%). Nineteen participants (24.1%) reported that they had worked in a retail, cashier, or food services job since Youth Futures. Twelve participants (15.2%) reported that they had been re-employed in the same job they had during Youth Futures.

Table 2

Frequency of Responses on Employment and Educational Outcomes for Alumni (N = 79)

Measure	<i>n</i>	% ¹
High School: <i>Graduated from high school at time of interview</i>	64	81.0
High School: <i>Graduated/on track to graduate from high school within 4 years</i>	69	87.3
High School: <i>Received/on track to receive a university-preparation high school diploma</i>	57	72.2
PSE: <i>Currently enrolled in PSE</i>	59	74.7
PSE: <i>Pursuing a university program</i>	49	70.0
Expected Level of Future Education: <i>Expects to obtain PSE credential</i>	77	98.7
Career Goals: <i>Did not articulate a specific career goal</i>	18	23.4
Barriers to Education: <i>No barriers</i>	38	48.1
Barriers to Education: <i>Financial</i>	27	34.2
Barriers to Education: <i>Marks too low</i>	4	5.1
Employment: <i>Unemployed at time of interview</i>	37	46.8
Employment History: <i>Continuously unemployed since Youth Futures</i>	18	22.8

¹ % of valid responses on each variable

Educational and Employment Outcomes for First-Generation Students

A comparison of the frequency of educational and employment outcomes of first-generation students and non-first-generation students are presented in Table 3. Chi-square analyses found no significant differences between the two groups on educational and employment outcomes.

Table 3

Frequency of Responses on Employment and Educational Outcomes for First-Generation Student Participants and Participants with a Parent with PSE Experience

Measure	First-Generation Student (No Parent with PSE Experience) (N = 37)		Parent with PSE Experience (N = 35)	
	n	% ¹	n	% ¹
<i>High School: University-Preparation</i>				
<i>Diploma</i>	26	70.3	28	80.0
<i>PSE: Currently enrolled in PSE</i>	30	85.7	24	80.0
<i>PSE: Pursuing a university program</i>	22	62.8	24	80.0
<i>Expected Level of Future Education:</i>				
<i>Expects to obtain PSE credential</i>	36	100.0	35	100.0
<i>Career Goals: Did not articulate a</i>				
<i>specific career goal</i>	7	19.4	9	26.5
<i>Barriers to Education: No barriers</i>	18	48.6	15	42.9
<i>Barriers to Education: Financial</i>	11	30.5	15	42.3
<i>Employment: Unemployed at time of</i>				
<i>interview</i>	18	48.6	15	42.9
<i>Employment History: Continuously</i>				
<i>unemployed since Youth Futures</i>	7	20.0	8	22.9

¹ % of valid responses on each variable

Educational and Employment Outcomes for Participants Born Outside of Canada

A comparison of the frequency of educational and employment outcomes for participants born outside of Canada and participants born in Canada are presented in Table 4. Chi-square analyses found no significant differences between the two groups on educational and employment outcomes.

Table 4

Frequency of Responses on Employment and Educational Outcomes for Participants Born Outside of Canada and Participants Born in Canada

Measure	Born outside of Canada (N = 39)		Born in Canada (N = 39)	
	n	% ¹	n	% ¹
High School: <i>University-preparation diploma</i>	27	69.2	30	76.9
PSE: <i>Currently enrolled in PSE</i>	31	79.5	28	71.8
PSE: <i>Pursuing a university program</i>	24	61.5	25	64.1
Expected Level of Future Education:				
<i>Expects to obtain PSE credential</i>	38	97.4	38	100.0
Career Goals: <i>Did not articulate a specific career goal</i>	9	23.7	9	23.7
Barriers to Education: <i>No barriers</i>	20	51.3	17	43.6
Barriers to Education: <i>Financial</i>	12	30.8	15	38.5
Employment: <i>Unemployed at time of interview</i>	18	46.2	19	48.7
Employment History: <i>Continuously unemployed since Youth Futures</i>	8	21.1	10	25.7

¹ % of valid responses on each variable

Comparison with Provincial Access Rates

Table 5 provides an overview of the PSE access rates among Youth Futures alumni, in comparison to the access rates among Ontario youth aged 21 or younger, as determined by Finnie and colleagues (2011a). To facilitate an accurate comparison, the Youth Futures sample is limited to program alumni who had already graduated high school at the time of the interview.

Overall sample. For the first comparison, the Youth Futures sample is compared to the provincial access rates among students whose family income is below \$50,000. Provincially, 39.3 percent of youth from families with an income below \$50,000 access college (4 percent higher than that of youth whose family income is greater than \$50,000) and 35.2 percent access university (14 percent lower than that of youth whose family income is greater than \$50,000). Youth Futures alumni are also assumed to be from low-income families due to the recruitment strategy of the program. However, their PSE access rates are much higher than the Ontario access rates. A larger proportion of Youth Futures participants attend PSE overall, and the results of the Chi-square test indicate that this discrepancy is statistically significant (96.9 percent compared to 74.5, $\chi^2 = 16.08$, $p < .001$, OR = 10.57, 95% CIs [2.32, 48.15]). Similarly, Youth Futures alumni are significantly more likely to access university (70.3 percent compared to 35.2 percent, $\chi^2 = 34.59$, $p < .001$, OR = 4.36, 95% CIs [2.08, 9.16]). Youth Futures alumni are also less likely to access college (26.6 percent compared to 39.3 percent, $\chi^2 = 4.35$, $p < .05$, OR = .56, 95% CIs [.26, 1.18]). However, in this case the confidence interval for the odds ratio includes the null value (OR=1) so the null hypothesis cannot be rejected. This suggests that the difference between groups may not be significant.

First-generation students. Among first-generation students (i.e. youth whose parents have no PSE experience), first-generation Youth Futures alumni are significantly more likely to

access PSE overall (100 percent, compared to 69.2 percent, $\chi^2 = 14.24$, $p < .001$, OR = 28.04, 95% CIs [1.55, 505.97]) and university in particular (62.5 percent compared to 25.7 percent, $\chi^2 = 22.695$, $p < .001$, OR = 4.82, 95% CIs [1.66, 14.02]), compared to first-generation students provincially⁴. Differences in college access are not statistically significant (37.5 percent of Youth Futures alumni compared to 43.5 percent provincially).

Immigrant youth. Among first-generation immigrant youth (i.e. youth who were born outside of Canada), immigrant Youth Futures alumni are more likely to access PSE overall, (100.0 percent compared to 88.5 percent, $\chi^2 = 4.42$, $p < .05$, OR = 8.71, 95% CIs [.44, 172.2]), compared to immigrant youth provincially. However, the confidence interval for the odds ratio includes the null value (OR=1), suggesting that the difference between groups may not be significant. University access rates are also higher, but do not reach the level of statistical significance (67.6 percent compared to 58.4 percent). Differences in college access are minor and are not statistically significant (32.4 percent of Youth Futures alumni compared to 30.1 percent provincially).

It is important to note that the above-mentioned comparisons of PSE access rates among Youth Futures alumni and the provincial averages generally produce wide confidence intervals around the odds ratios. Confidence interval width reflects a number of aspects of the precision of a study, including the amount of variability in the population, the sample size and thus sampling error, and the amount of error in the dependent variable. (Cumming & Finch, 2001).

⁴ In instances where 100 percent of Youth Futures participants were pursuing PSE, and zero percent were not, 0.5 was imputed into the zero cell so that the OR could be calculated (Durlak, 2009).

Table 5

Rates of Accessing PSE: Comparing Youth Futures Alumni to the Ontario Access Rates for Various Groups of Youth

Type of PSE	Youth Futures Alumni			Ontario ¹		
	% of Alumni	% of First-	% of First-	% of Youth	% of First-	% of First-
	Overall	Generation	Generation	Overall	Generation	Generation
	(N = 64)	Student Alumni (N = 32)	Immigrant Alumni (N = 34)		Student Youth	Immigrant Youth
College	26.6	37.5	32.4	39.3	43.5	30.1
University	70.3	62.5	67.6	35.2	25.7	58.4
Any PSE	96.9	100.0	100.0	74.5	69.2	88.5

¹ Based on data from Finnie and colleagues (2011a)

Results of Open-Ended Qualitative Questions. The participants' qualitative responses to open-ended questions about their perceptions of the impact of the Youth Futures program and recommendations for improvement are summarized according to coded themes in Table 6 examples of quotations from participants relating to these themes. Overall, the majority of the participants had positive perceptions of the program, often saying they would recommend the program to others. The most common components of the program that participants discussed favourably were work experience ($n = 25$, 31.6%), leadership training ($n = 23$, 29.1%) job search skills and resources ($n = 19$, 24.1%), CPR/First Aid training ($n = 16$, 20.3%), help choosing a program/course/career path ($n = 16$, 20.3%), and making friends ($n = 12$, 15.2%). Several participants offered suggestions for program improvement, such as offering a wider variety of PSE presentations and job placements, and providing longer-term follow-up support to alumni. When reflecting on their experience in the Youth Futures program, several participants suggested that the program had contributed to their personal growth, impacting the aspirations they had for their futures, as well as their motivation, confidence, and sense of responsibility.

Table 6

Summary of Participants' Perceptions of Youth Futures Program (N = 79)

Category			n	%	Example Quotes
Overall Impression of the Program	Positive		69	87.3	“Youth Futures was a turning point for me, a milestone, a big deal.” “I really loved the program, I wouldn’t change anything.” “For me it was a great experience.”
	Neutral		8	10.1	“I guess it had an impact.”
	Negative		2	2.5	“It wasn’t helpful for getting a job. I spent months unemployed and couldn’t find work. I couldn’t contact you guys for help.”
Positive Program Components	Employment	Work Experience	25	31.6	“It taught me how to behave in the working world.” “It showed me how it was to work.”
		Job Skills	5	6.3	“It taught me how to be a leader, which helps in my job.”

	Job search skills/resources	19	24.1	“I learned how to network, which will help me get a job in the future.” “I learned how to find jobs myself, how to write a resume.”
	Saving money	2	2.5	“I worked at a company and saved money for first year expenses.”
Education	Exposure to PSE settings	9	11.4	“I didn’t know anything about college or university or what it would be like. I decided after going to the campuses with the program that this is what I would like to do.”
	Learn what to expect in PSE	8	10.1	“It was helpful to learn what to expect, it prepared me.”
	Encouragement to pursue PSE	6	7.6	“The program guided me toward making the choice to go to university and educated me about my choices.” “It got me interested in post-secondary.”

Help choosing	16	20.3	“It showed me how to choose my career path.”
program/course/career			“It made what would have happened happen smoother.
path			It got me on a good path, gave me resources.”

Understanding student	6	7.6	“It helped me with scholarships and finance guidance.”
finances			

Direct contact with	6	7.6	“It was helpful to hear from others who had gone to
people with PSE			university talk about their experiences. It gave me more
experience			of an idea of what I want to do.”

Academic skills	3	3.8	“It prepared me with skills for post-secondary.
			Leadership skills were relevant to group work in my
			program.”
			“I was struggling, I had issues with time management,
			but he mentored me and I have been following all of his
			advice and it has been working for me... it has really
			had an impact on my studies.”

Social,	Having fun	3	3.8	“It was really fun.”
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Recreational	Making friends	12	15.2	“I met a lot of people who I’m still really close with.”
	Communication/Social skills	6	7.6	“I benefited from having the different experiences. I built social skills and communication skills, and got better at building relationships with others.”
Skills Training	Leadership training	23	29.1	“Those classes taught me how to take a leadership role in my life, especially in my community. I have been volunteering a lot.”
	CPR/First Aid	16	20.3	“All of the training was helpful and made me more valuable.” “The CPR was good because for my program I need it... it was perfect that I had received it from Youth Futures instead of spending lots of money to take the course.”
Supportive Relationships	Mentoring/Supportive staff	9	11.4	“Staff were very helpful and told us to email them anytime with questions, they were there to support us.”
Program Activities	Age-appropriate activities	2	2.5	“The childish games were something I didn’t like about the program – like during the training exercises.”

Recommendations for Program Improvement	Slower-paced curriculum	1	1.3	“The training was so fast-paced that if you missed a day you were lost and confused.”
	Variety of PSE presentations and job placements	5	6.3	“More emphasis on college would be useful.” “During the academic presentations it would help to hear from more different faculties, like nursing.”
	Information about student finances	1	1.3	“The whole finance situation and figuring out OSAP, if we could learn more about how to manage that, how to take financial aid. That’s a difficult thing.”
	Test to ensure knowledge retention	1	1.3	“Test our knowledge to make sure we are retaining what we are learning during Youth Futures lectures.”
Program Structure	Recruiting youth in need	2	2.5	“I appreciate what Youth Futures is doing for youth, but it didn’t have much of an impact on me because I wasn’t in a bad neighborhood or position.”
	Flexible hours	1	1.3	“I would suggest more flexible hours. It was hard to start so early; a lot of people would work the night before.”

	One-on-one support	1	1.3	“Some participants need more support on their level, people they can relate to. They feel out of place. It’s hard to speak to people they don’t relate to. More one-on-one time with mentors is needed...just an email is not enough, need that relationship. There are so many youth, so few mentors.”
	Follow-up	3	3.8	“There needs to be more follow-up after the program ends, on-going support.”
	Contributions to Personal Growth			
	Aspirations	4	5.1	“It was a big deal for me, made me realize I can do big things and not just do what everyone else does.” “I understood that I could become anything, and understood the steps to take to get there. I improved myself, matured.”
	Motivation	2	2.5	“The program motivated me to pursue a life of education.”

Confidence	3	3.8	“Youth Futures gave me a confidence boost. I’m comfortable and aware with post-secondary, not lost and confused like other peers.”
Responsibility	2	2.5	“I learned the responsibilities that come with having a job.”

Discussion

The results of the present study indicate that youths who graduated from the Youth Futures program had very high rates of overall PSE involvement, which far exceeded provincial rates. Only one participant had graduated from high school but not applied to any PSE program. Youth Futures participants were also much more likely to access university, rather than college. These patterns are consistent when the overall sample is divided according to parental education level or birth country. The high rates of PSE access among Youth Futures alumni stand in contrast to research that consistently finds lower rates of access among youth from low-income families, particularly in university (Berger et al., 2009). Findings also suggest that most Youth Futures participants had taken a relatively linear PSE pathway thus far. Only one participant reported a significant gap between high school graduation and applying to PSE, and only one participant had dropped out of a PSE program altogether. This indication of persistence early in the high school-to-PSE transition is promising, given that students are at the highest risk of leaving PSE during their first year of studies (Childs et al., 2016; Finnie et al., 2012; Mueller, 2008). Overall, the PSE access and persistence rates of Youth Futures alumni are encouraging because they suggest that the youths were well on their way to experiencing the range of benefits associated with higher education. However, there are uncertainties about the role that the Youth Futures program might have had in producing these positive outcomes.

The lack of differences between first-generation students and non-first generation alumni in the present study is unusual, given that parental education is considered the most important predictor of PSE access (Finnie et al., 2011a). It appears that the two groups of alumni may not have differed because both were primarily comprised of first- and second-generation immigrant youth, mostly from African countries. Research has shown that educational disadvantage does

not pass from parent to child in immigrant families to a strong degree, likely because of an overall cultural orientation toward education (Childs et al., 2015; Corak, 2008). The lack of differences between alumni born in Canada and alumni born outside of Canada is similarly unrepresentative of the broader literature base on PSE access, but this is likely because the vast majority of alumni born in Canada had parents who were born elsewhere. Thus, the comparison was essentially between first- and second-generation immigrants, rather than between immigrants and non-immigrants.

Research has shown that both first- and second-generation immigrants outperform non-immigrants in terms of educational attainment (Childs et al., 2015; Norrie & Zhao, 2011). The high educational aspirations of youths in the present study – the majority of whom intended to pursue a graduate or professional degree – may reflect the high expectations that immigrant parents typically hold for their children, and the specific career pathways that are most valued in immigrant families (Kanouté & Lafortune, 2010). As Griffin and colleagues (2012) explain, immigrant students have PSE expectations, rather than aspirations.

When it comes to employment outcomes, the findings of the present study suggest that the Youth Futures alumni were working a moderate number of hours at about the same rate as the average high school or PSE student, in similar types of jobs. About half of the alumni were employed at the time of the interview and about three-quarters had been employed at some point since completing Youth Futures 18 to 30 months previously. These rates are roughly comparable to existing research, which suggests that about two-thirds of high school seniors and one-half of PSE students are employed (Bushnik, 2003; Junor & Usher, 2004; Marshall, 2010). Previous research has suggested that immigrant youth are less likely to work during school, which may explain the finding that some youths did not pursue employment (Marshall, 2010).

Few Youth Futures alumni were working full-time, and those that were did not generally do so during the school year. Thus, there was no evidence to suggest that program alumni were at risk of exceeding the critical threshold of 24 hours of work per week that has previously been identified as having a deleterious effect on educational persistence (Moulin et al., 2013). Most Youth Futures alumni were working in retail, cashier positions, and food services, which is consistent with research indicating that almost all working PSE students are employed in the service sector (Marshall, 2010).

Suggestions for Program Improvement

The findings of the present study suggest several areas of improvement for the Youth Futures program and others like it. The first area of program improvement pertains to the importance of offering a comprehensive financial literacy curriculum to participants. The most common barrier to education cited by Youth Futures alumni was financial, and in the qualitative portion of the interview, a number of alumni suggested that the program should offer more help in understanding PSE-related finances. Previous research has shown that youth from under-represented groups are more likely to have incomplete or inaccurate information bias about the costs, benefits, and outcomes associated with PSE (Cassidy, 2015; Palameta & Voyer, 2010; Usher, 2005; McElroy, 2008). Experts have suggested that cultural factors, rather than actual financial or affordability barriers, may influence students' perceptions of PSE accessibility.

Some students (specifically, youth whose parents have PSE experience, and visible minority youth) are less likely to report financial barriers, not necessarily because their actual financial situation differs from other groups, but because their family background has influenced their perceptions of the costs and benefits of PSE, and they regard tuition fees as a reasonable investment in a valuable PSE degree (Finnie et al., 2015). Understanding students' perceptions

about the cost-benefit ratio of PSE is important, because research suggests such perceptions can be predictive of university attendance (Côté, Skinkle & Motte, 2008). The Youth Futures program should prioritize financial literacy instruction, and should specifically target participants' understanding of the value of PSE as an investment, while also highlighting available financial aid and student loan options (Finnie et al., 2015; HEQCO, 2017; Palameta & Voyer, 2010).

The second area of program improvement pertains to the importance of educating and assisting participants in choosing an educational and career path. In the qualitative portion of the interview, a considerable number of alumni recalled that a positive component of the program was that it offered help choosing which courses to take, which program of study to select, and/or which career path to pursue. However, at the time of the interview, almost a quarter of the alumni did not articulate a specific career goal when asked about the job or career they would have as an adult. Many said they did not know, or were unsure.

It is also important to note that alumni had very high expectations about the highest level of education they would achieve. The majority of alumni stated that they thought they would study beyond the Bachelor level, achieving a Master's degree, PhD degree, or University professional degree. These goals are impressive, but may be improbable, given that less than 10 percent of individuals attain degrees beyond the Bachelor level (Statistics Canada, 2011b). In some cases, there appeared to be a mismatch between students' career and educational goals and their current PSE pathway or academic qualifications. A number of alumni stated that they intended to switch academic programs or institutions, or already had.

Effective career guidance is important for student success. Previous research has suggested that certainty about career goals can positively affect educational persistence, and that

students benefit from recognizing a clear connection between their studies and their intended career path (Parkin & Baldwin, 2009). The primary reasons cited by students who discontinue their PSE studies pertain to lack of interest in their studies, the program of study not meeting their expectations, or being undecided about their career. Reasons related to lack of interest, direction, or satisfaction with studies far outweigh financial reasons or academic difficulties as the source of drop-out behaviours (Parkin & Baldwin, 2009).

Helping students determine a practical pathway between their education and their career goals is particularly important in the current PSE context, which has been critiqued as lacking adequate transitional support for the high numbers of students who switch programs and institutions (Slobodin, 2010). For students who wish to transition between college and university, pathways are particularly ill-defined (Childs et al., 2016). Some groups of youth are particularly vulnerable during such transitions. Research has shown that students with higher family incomes and/or PSE-educated parents are better able to successfully transfer across institutions and programs (Childs et al., 2016; Parkin & Baldwin, 2009). American researchers have determined that community college commonly serves as a PSE entry point for low-income first-generation students. However, although the majority (63%) of these students say that they intend to earn a Bachelor's degree one day, only 5 percent successfully do (Engle & Tinto, 2008). Universities and colleges have partnered to develop pathway programs that provide students to access both types of institutions, but awareness about these programs remains low among high school students. Students who are informed about pathway programs express a high degree of interest. In particular, 40 percent of first-generation students reported interest in attending both college and university (Academic Group, 2017).

PSE programs like Youth Futures should prepare students to progress through PSE by outlining the various PSE pathways available, including bridging programs, and addressing issues such as credit transfer between institutions (Slobodin, 2010). Youth should be encouraged to adopt a clear vision of the long-term pathway through PSE and into a career (Engle & Tinto, 2008).

Youth Futures should consider ways in which it can provide longer-term support to its alumni group beyond the seven-month duration of the program while they are seniors in high school. Longer-term support was recommended by several program alumni in the qualitative portion of the interview. Assisting youth in accessing PSE is important, but students also need on-going support in persisting toward graduation. To ensure PSE program completion and success, programs like Youth Futures could offer on-going financial aid advice, and academic and social support, as well as strong transfer counseling for students switching programs or institutions (Engle & Tinto, 2008; Slobodin, 2010)

A third area of program improvement pertains to the importance of emphasizing educational outcomes, not just employment. When asked about the impact that the Youth Futures program had on them, most responses from alumni were related to employment, and not about the effect of the program on their academic orientation. The most commonly-cited positive program component was work experience, followed by skills training (leadership) and job search skills and resources. These findings suggest that the Youth Futures program may have been perceived by alumni as being more focused on providing employment-related activities to participants, rather than educational support. In the existing literature on pre-college outreach programs, any financial assistance is provided in the form of a direct scholarship or bursary that is then specifically applied to the student's education (Schultz and Mueller, 2006). Youth Futures

appears to be unique in that its stated mandate is to improve PSE access; yet, its program activities include providing employment-related activities and experiences. The available literature presents a mixed picture of the impacts of student employment on educational outcomes (Finnie et al., 2005; Motte & Schwartz, 2009; Moulin, et al., 2013). Youth Futures incorporates education and employment into a single program, but this broad program structure may be detracting from participants' experience of Youth Futures as a focused intervention promoting the pursuit of PSE.

The findings of the present study also raise questions relevant to research on the effectiveness of interventions targeting non-cognitive factors predictive of positive educational outcomes. When asked to reflect on changes they perceived in themselves as a result of their involvement in the Youth Futures program, only a small number of alumni reported that the program had impacted some of the non-cognitive factors that the intervention is designed to target. A handful of youths said that their motivation, self-confidence, sociability, sense of responsibility, and academic skills had been affected by the program. Of course, alumni were not asked directly about non-cognitive factors during the research interview, and it is beyond the scope of this study to conclude whether or not participants did experience change in this area. However, the finding that program alumni did not generally identify non-cognitive factor development as a program outcome may suggest that Youth Futures should further emphasize program activities that directly nurture important non-cognitive factors like academic behaviours, mindsets and learning strategies.

A fourth area of program improvement pertains to the importance of offering culturally-relevant support to participants. It appears that the Youth Futures program primarily serves youth who are first- or second-generation immigrants from African countries. However, the program

does not explicitly acknowledge this particular group of youth in its mission statement, program logic model, or promotional materials (e.g. the Youth Futures website). The program may not be providing programming that is culturally-specific or tailored toward the unique needs of immigrant youth. If the program continues to focus its recruitment on immigrant youth, the program design should be responsive to their experiences, needs, and aspirations. The PYD model indicates that interventions should be culturally tailored for target populations, emphasizing the importance of individual values, choice and culture (Durlak et al., 2007).

Immigrant youth have reported facing unique challenges, such as language issues (Anisef & Kilbride, 2003). One of two students in the present study who reported dropping out of university stated that his reasons for doing were directly related to a lack of proficiency in the language of his program of study. Other unique barriers encountered by immigrant youth include identity development, discrimination and negative stereotypes, and tensions based on conflicting values, expectations and cultural practices between home/family life and their peer group, school, and larger community (Anisef & Kilbride, 2003). Immigrant families may adopt certain measures which help youth succeed in school, but which may also pose challenges for the youth themselves. For example, immigrant parents may have particularly high expectations for academic achievement for their children, and may be more demanding and vigilant, as well as more specific about their views on what constitutes success for their child. At the same time, immigrant parents may be less equipped to understand the school issues their children experience in Canada, and may be unfamiliar with the Canadian PSE context (Kanouté & Lafortune, 2010). This combination of parents' intense, specific expectations for academic success, coupled with lack of experience or familiarity with the Canadian context, may be difficult for youth to navigate. Some youths may feel pressured by the expectations of those around them, or burdened

by the thought that family members migrated to provide opportunities for them (Roderick, Janzen, Ochocka & Jenkins, 2007).

Previous research has demonstrated that relevant cultural programming is an integral tool of youth engagement, and an effective strategy to engage youth and improve outcomes across a range of indicators (Fix & Sivak, 2007). The Youth Futures program already offers important supports, such as peer mentorship and role models, as well as communication strategies and partnerships with parents. Youth Futures should emphasize these program components and further adapt them in culturally relevant ways that acknowledge and value the potential and skills of newcomer youth and their families (Roderick et al., 2007).

A final recommendation for program improvement pertains to the importance of recruiting youths who are at risk of not pursuing PSE and are truly in need of the intervention. It is important to note that some characteristics of the Youth Futures alumni raise questions about whether this group of youths would have been considered at risk of not pursuing PSE when they were initially accepted into the program. The demographic information collected in the present study indicates that many of the Youth Futures alumni had parents with PSE experience, especially university experience. Research suggests that youth whose parents have PSE experience are 28 percentage points more likely to attend university and 18 percentage points more likely to attend PSE overall (Finnie et al, 2011b). Similarly, the majority of Youth Futures participants were either first- or second-generation immigrants from African countries, another group that research identifies as highly likely to achieve higher education. Compared to non-immigrants, first-generation immigrants from Africa are 24 percentage points more likely to attend university. Among second-generation immigrants from Africa the achievement gap widens to 39 percentage points (Childs et al., 2015).

Youth Futures participants were also recruited from an urban area within commuting distance of multiple colleges and universities, suggesting a further advantage. Urban youth are more likely to attend PSE than their rural counterparts (Finnie et al., 2011a). All but two of the alumni with PSE experience reported that they were accessing local PSE institutions. Attending PSE locally allows many youths the opportunity to live at home with their families, which can alleviate the cost of living expenses, and provide continuity in existing relationships and support systems (Friesen & Purc-Stephenson, 2016).

Lastly, most of the Youth Futures alumni reported that they took Academic-level high school courses. Taking university-preparation courses at the high school level suggests that participants were already on the path to higher education when they were recruited into the Youth Futures program. Course selection is an important predictor of PSE attendance: 90 percent of students who take Academic courses attend some form of PSE within one year of leaving high school (King, 2009).

Considering these findings and the available literature, it is advisable for the Youth Futures program to adjust its recruitment strategy to ensure that the program reaches needier youth who have more non-cognitive and cognitive skill deficits. Currently, the primary eligibility criteria of Youth Futures are based on estimates of family income level. The evidence suggests that family income level is not the most effective variable to base recruitment on because it is not the most predictive of PSE access, especially among first-generation immigrant youth (Dooley, Payne & Robb, 2016; Finnie & Mueller, 2007; Frenette, 2007).

Limitations

The present study was limited by several design and methodological factors. The most notable limitation is that the present study lacked a comparison group. Further, data were only

collected from participants at a single time point. As a result of these limitations, conclusions cannot be drawn about whether any outcomes experienced by program alumni are a result of the Youth Futures intervention, pre-existing characteristics of the sample, or other factors. The comparison of PSE access rates among Youth Futures alumni to provincial averages was used as a means of reference to contextualize the results. However, this comparison is limited in its usefulness. The small sample of Youth Futures alumni in the present study was not randomly selected – youth self-selected into applying to the program, were then granted admission by the program, and then self-selected into participation in the research interview. Thus, the participants in the present study are a very specific group of youth, who are not necessarily comparable to the average student in Ontario.

The study relied on participant self-report. Thus, data may have been susceptible to response biases. A social desirability bias may have motivated participants to speak highly of the program and their academic and employment outcomes. Further, the completeness of the data may have been affected by participants' ability to recall certain information. For example, some participants may not have been certain about the educational experiences of their parents.

The timing of the data collection and the prolonged data collection period (spanning one year) also placed limitations on the study. The time that had elapsed between graduating from the Youth Futures program and completing the interview varied amongst participants. The grade level of participants while enrolled in the Youth Futures program also varied, which meant that some alumni had not yet reached the point of high school graduation, and had to be omitted from analyses related to PSE enrolment.

The study was further limited by its relatively small sample size, which resulted from difficulties encountered in recruiting participants. The contact information for alumni provided

by the program was often out-of-date or inaccurate. This limitation introduced the possibility of sampling error into the present study, since only some – rather than all—members of the alumni sample were interviewed. Nonresponse error was also a problem in the present study, since there is no way of knowing whether the program alumni who did not participate in the study differed in important ways from their counterparts who did participate. An attrition analysis was conducted, but was limited to only two variables (gender, language), since very little information was available on the alumni who did not participate in the study. There is no way of knowing how representative the participants in the study are of the whole alumni sample. The nonresponse error limits the conclusions that can be drawn about outcome change in the present study. The response rate may have been higher among alumni who had more positive experiences in the program and better outcomes. These alumni may have been more motivated to respond to requests to participate, and may have been more conscientious about returning calls or replying to emails when contacted by the researcher. These alumni may also have been easier to contact because they had experienced more stability since graduating from the program, and had not moved from their family home. Thus, it is possible that the findings about educational and employment outcomes are an overstatement given that more successful alumni may have been more likely to participate in the study.

Conclusions

The results of the present study indicate that youth who graduated from the Youth Futures program have very high rates of overall PSE involvement, particularly university participation. However, the extent to which the Youth Futures intervention contributed to these positive outcomes is unknown. Characteristics of the sample suggest that program alumni may have been likely to access PSE even before participating in the program. Nevertheless, program

alumni tended to report a positive overall impression of the program, and identified many positive program components. In line with previous research in the area and feedback from program alumni, the Youth Futures program may benefit from increasing its focus on culturally-relevant programming, and program activities focused specifically on PSE – especially financial literacy, career guidance, and information about PSE transitions and pathways. Offering longer-term support to participants would also be beneficial in promoting PSE persistence.

The findings of the present study contribute to the emerging body of research focused on the identification of interventions that can contribute to closing the gap in PSE access for underrepresented groups of students. The evaluation research presented here may help to modify and improve Youth Futures and other programs intended to ensure that all Canadian youth have an equitable opportunity to benefit from higher education.

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CHAPTER TEN

Discussion and Conclusions**Summary of Key Findings**

This thesis included two studies investigating short-term outcomes among participants in the Youth Futures program in 2014. The first was a quasi-experimental study, the second a qualitative study. Finally, a mixed-method study investigating longer-term outcomes was conducted with participants who had previously completed the program in 2012 or 2013. Findings were generally consistent across these three studies. The results from each study serve to contextualize each other; in their entirety, the three studies offer a more comprehensive understanding of the outcomes than any one does on its own.

First, findings from the quasi-experimental study did not support the hypothesized outcomes. No differences on primary outcomes were observed between Youth Futures participants and a comparison group of their peers over the course of the study. At baseline, Youth Futures participants already appeared to exhibit many of the non-cognitive factors which previous research has shown to predict success in pursuing post-secondary education. The participants in the Youth Futures program generally had baseline scores that fell in the mid-to-high range on most primary outcome measures. They also indicated high baseline levels of certainty and desire for pursuing PSE. Only a quarter of the participants were taking Applied-level high school courses – most were taking Academic-level courses. Few participants expressed any concerns that their marks might be too low to get into PSE. More than a third of the Youth Futures participants said at baseline that they were not facing any barriers to higher education. Together, these findings suggested that Youth Futures participants may not have been in high need of the intervention because they were not at a high risk of failing to access PSE.

One area in which both Youth Futures participants and the comparison group showed lower levels of performance at both baseline and follow-up was regarding knowledge of PSE finances. Participants in both groups tended to under-estimate tuition costs, financial aid availability, earnings pay-offs of higher education, and employment rates of PSE graduates. Their answers to these questions suggests that participants may lack knowledge about the costs and the value of PSE.

In the second study, data collected through one-on-one qualitative interviews with the Youth Futures participants indicated that from an early age, these youths had placed a high degree of value on PSE and held high expectations about their future PSE involvement. This finding is not surprising given the results of the quasi-experimental study, which demonstrated near-universal certainty and desire for pursuing PSE among the Youth Futures participants. Decisions about which educational and career pathways to pursue were made by the youths during high school and were primarily based on their own personal interests and strengths and, to some degree, on the preferences of their parents. Parents and siblings exerted a strong influence on the youths' PSE expectations and attitudes. This finding is consistent with the results of the quasi-experimental survey, which indicated that the Youth Futures participants reported mid-to-high levels of adult support in their lives at baseline. The qualitative study suggested that most of the youths were being raised in a "culture of PSE" at home, and again, may not have been in high need of the intervention (Finnie, 2012; p. 1163).

In the qualitative study, youths cited several assets and resources available to them, including their own personal values of hard work, perseverance, and self-reliance; their past life experiences; their individual skills and abilities; and their relationships with positive role models, especially older siblings. Some youths also acknowledged barriers and challenges that threatened

their educational aspirations, including financial barriers related to loans and debt, academic demands, and a lack of time management skills.

When discussing the effects of their involvement in the Youth Futures program, the youths in the qualitative study described largely positive experiences in the program. They described the importance of hearing the personal success stories of people with first-hand experience of PSE through the program. They also emphasized the importance of the employment experience. A handful of youths said that they did not experience significant personal changes as a result of their involvement in the program. However, in other instances, youths in the study did perceive positive program outcomes, including affirmation of their PSE choices and personal growth, such as increased self-confidence, an increased sense of responsibility, an increased sense of support, and improved interpersonal skills. However, no youths described the program as having specifically impacted their likelihood of accessing PSE.

In the third and final study, interviews with program alumni indicated that almost all of the participants who had graduated from high school had successfully pursued PSE, with most alumni pursuing university. PSE access rates among Youth Futures alumni far exceeded provincial averages. Consistent with both the quasi-experimental and qualitative studies, the alumni reported very high educational aspirations, with most participants saying they intended to study beyond the Bachelor's level. However, almost a quarter of the alumni did not articulate a specific career goal when asked about the job or career they would have as an adult. Almost half of the alumni reported facing no barriers to education, while approximately 35 percent cited financial barriers. In terms of employment outcomes, the program alumni were found to be working at rates comparable to those of the average high school or PSE student, primarily in retail, food services, and cashier positions. Much like the participants in the qualitative study, the

alumni generally held positive views of their experiences in the Youth Futures program, and they emphasized the importance of the employment-related elements of the program: the most commonly-cited positive program component was work experience, followed by skills training (leadership) and job search skills and resources. However, similar to the findings of the qualitative study, alumni of the program did not frequently describe the program as having specifically impacted their likelihood of accessing PSE.

Program Outcomes Beyond PSE Access

Taken as a whole, the results of the three studies presented in this thesis contribute to a preliminary understanding of the outcomes experienced by participants in the Youth Futures program. The findings from the qualitative and alumni studies suggest that participants have positive perceptions of the program, and found their experience in the program to be valuable. However, across the three studies, there is no evidence to suggest that the program was successful in achieving its specific goal of increasing access to PSE. While the alumni study indicates that almost all program alumni do go on to access PSE after the conclusion of the program, the findings from the quasi-experimental and qualitative studies indicate that the participants were highly motivated students who had established intentions of pursuing PSE, prior to beginning the program. It appears that the participants were already on the path to higher education before becoming involved with Youth Futures, raising questions about the extent to which the program contributes to the high PSE access rates among alumni. Although the program offered youths a positive developmental experience, it did not appear to alter their life course by changing their likelihood of accessing college or university.

While there is no evidence to indicate that the program is contributing to changes in PSE access rates, the qualitative and alumni studies do suggest that the program may be contributing

to other, more general positive outcomes among some participants. The quasi-experimental study suggested that the youths entered the Youth Futures program with mid-to-high levels of the non-cognitive factors that previous research has linked to positive educational outcomes, and as a group, did not experience significant change on these factors over the course of the program. However, the qualitative findings revealed that various youths did perceive themselves to be more open-minded, positive, patient, empathetic, responsible, accountable, focused on their futures, and better problem-solvers as a result of their experiences in the program. In both the qualitative and alumni studies, some youths indicated that the program improved their interpersonal skills. A small number of alumni also said that the program affected their future aspirations, motivation, confidence and sense of responsibility.

These findings from the qualitative and alumni studies suggest that the program may have been contributing to change on some non-cognitive factors for some youths. The null findings of the quasi-experimental study may be because changes were not large enough or pervasive enough among the entire group of youth to be detectable by the measures and analyses used. A number of brief measures were used in the present study, some with only moderate internal reliability. Fewer but longer, more sensitive measures would be have been preferable. It may also be the case that the program produces changes on other non-cognitive factors – such as interpersonal skills – which are not so closely linked to specific academic outcomes, and thus were not chosen for examination in the quasi-experimental study.

The qualitative and alumni studies are also valuable in that they offer insight into the way in which youth define themselves. The youths in the present studies frequently described themselves in terms of their aspirations to help others, give back to their families and be empathetic, responsible, accountable, and hard working. Damon (2004) explains that when a

person defines themselves in terms of moral beliefs – rather than physical, material or intellectual characteristics – they are forming the basis of a moral identity. He argues that when youth adopt moral beliefs as a central aspect of their identity, these moral beliefs can shape behaviour and contribute to life outcomes ranging from personal satisfaction to altruistic behaviour. For this reason, fostering a strong sense of moral identity in young people is considered an essential intervention goal for the positive youth development approach. It appears that some youths in the present studies may have experienced some personal growth and character development, which would be consistent with the general goals of the program as a positive development program.

A large portion of the youths in the qualitative and alumni studies also discussed the influence that the Youth Futures program had on informing them about possible educational and career pathways. In the qualitative study, most youths said that they had already decided to go to PSE and had already made decisions about which programs they would apply to prior to beginning the program. Relatively few youths (approximately 20 percent) in the quasi-experimental study identified *Uncertainty About What to Do* as a barrier to their education. But at the same time, many youths in the qualitative study said that through Youth Futures, they had become more knowledgeable and informed about programs of study in PSE. They said they had become more confident about their choice of PSE pathway, leading them to feel more empowered, excited, and positive about PSE, and alleviating much of the fear, stress and uncertainty that they had felt prior to the program. Similarly, in the alumni study, some youths said that the program provided education and guidance about educational and career pathways, helping them decide what they wanted to do. About a quarter of the alumni were unable to articulate a clear career pathway for themselves at the time of the research interview. These

findings suggest that decision-making is an on-going challenge facing young people throughout the transition from high school to PSE and onwards.

The findings of the qualitative and alumni studies, indicating that the Youth Futures program was a valuable experience for youth because it supported them in making informed decisions about their future education, are important because they may have implications for PSE persistence. Previous research has suggested that certainty about career goals can positively affect educational persistence, and that students benefit from recognizing a clear connection between their studies and their intended career path (Parkin & Baldwin, 2009). So, while the Youth Futures program may not have made the youths more likely to access PSE in the first place, it appears that it may have helped them by promoting PSE persistence in the longer-term. However, it is important to note that the Youth Futures program is a relatively short intervention during high school, so its ability to produce long-term impacts on persistence toward graduation during years-long PSE programs may be questionable.

Youth Futures Participants' Needs

The three studies in this thesis provide some insight into what the needs of Youth Futures participants may be as they transition from high school to PSE. This is valuable information for the program and for other programs aimed at improving PSE access among similar groups of students. Programs may improve their ability to produce change if they deliberately implement program activities that target the needs of youth, while simultaneously building upon the assets and resources already available to them.

The one consistent barrier to education identified by youths across the three studies was financial concerns. About half of the participants in the quasi-experimental study indicated that financial barriers could interfere with their educational goals, and 35 percent of the participants

in the alumni study said the same. However, findings also indicated that these financial barriers may not necessarily be the result of a lack of access to funding for PSE. Instead, youth appeared to perceive financial barriers because of a lack of knowledge and because of an aversion to taking on debt to fund their education.

In the quasi-experimental study the youths tended to under-estimate tuition costs, financial aid availability, earnings pay-offs of higher education, and employment rates of PSE graduates. In the qualitative study, they were aware of financial aid available to support their studies, but were hesitant about accepting money that would have to be repaid, and were reluctant to take on debt. These findings are consistent with research that has shown that youth from under-represented groups (including low-income and first-generation youth) are at a higher risk of holding incomplete or inaccurate information bias about the costs, benefits, and outcomes associated with PSE (Cassidy, 2015; Palameta & Voyer, 2010; Usher, 2005; McElroy, 2008).

Recruiting At-Risk Youth in Need of the Intervention

The three studies in this thesis provide a more detailed picture of who Youth Futures participants are. This is important information to consider as it sheds light on the effectiveness of the recruitment strategy of the program. This thesis raises concerns about whether the Youth Futures program is reaching needy youths – with both cognitive and non-cognitive skill deficits – who are at high risk of not accessing PSE.

The three studies suggest three key defining characteristics of Youth Futures participants, all of which suggest that the youths that are currently being recruited into the program are not a high-risk group. First, across all three studies, the findings strongly indicated that the youths recruited into the program had high educational aspirations for themselves, and were determined to pursue college or university. In the qualitative study, the youths described their PSE

aspirations with such conviction that they could be more accurately described as PSE expectations. The youths in the three studies were also relatively confident in their academic performance. In the quasi-experimental and alumni studies, most youths said they were taking Academic-level high school courses, and few indicated that their high school marks would be a barrier to the achievement of their educational goals. In the quasi-experimental study, the youths indicated mid-to-high levels of academic self-efficacy. While it is important to note that high school marks were not explicitly assessed in any of the three studies, these preliminary findings about academic performance warrant mention because research shows that high school grades are a strong predictor of PSE access in Canada, especially in Ontario. Each 10-point increase in average overall high school grades results in a 23 percent increase in the probability of attending university (Finnie, Childs & Wismer, 2011).

Second, in many cases, the youths came from highly-educated families, with parents who had attended college or university. In the quasi-experimental study, only 11 percent of the Youth Futures participants said that they were first-generation students. More than half reported that at least one of their parents had university experience. In the alumni study, a higher proportion of first-generation students were identified. About half of the participants in the study said they were first-generation students. It is important to examine whether youths recruited into the Youth Futures program are first-generation students because research has established that parental education is the most significant determinant of participation in PSE (Berger et al., 2009; Finnie, Childs, & Wismer 2011).

Third, almost all Youth Futures participants were either first or second-generation immigrants, primarily from African countries. Only about 15 percent of youths in the quasi-experimental study said that they as well as their parents were born in Canada. This number was

even smaller among youths in the alumni study, with only 5 percent saying both they and their parents were Canadian-born. These findings are important to note because research has consistently shown that immigrant youths pursue PSE at higher rates than non-immigrant youths, even if they come from low-income families, or if their parents do not have PSE experience (Childs, Finnie & Mueller, 2015; Corak, 2008; Dooley et al., 2016). Compared to non-immigrants, first-generation immigrants from Africa are 24 percentage points more likely to attend university. Among second-generation immigrants from Africa the achievement gap widens to 39 percentage points (Childs et al., 2015).

All things considered, the evidence suggests that family income level is not the most effective variable to base the recruitment strategy of the Youth Futures program on because it is not the most predictive of PSE access, especially among first-generation immigrant youth (Dooley, Payne & Robb, 2016; Finnie & Mueller, 2007; Frenette, 2007). The limitations of the Youth Futures recruitment strategy are likely to become even more apparent in the future, as the fastest growth in PSE enrolment rates in Ontario is currently occurring at the bottom of the income distribution (Frenette, 2017). If the program is not effective in recruiting needy, at-risk youths, the program will not achieve its stated purpose of increasing access to PSE. It is essential that the program ensure its recruitment strategy is in line with the intended outcome of the program – if not, there will be a lack of fit between what the program purports to do and what it actually does. Given that the youths who participated in this thesis appeared to be on track to pursuing PSE even prior to their involvement in Youth Futures, it is unclear what the value-added of the program might be for them. If the program does change its recruitment strategy and effectively recruits at-risk youths, it will also be important to adjust the program activities to meet their needs. Adopting an early intervention strategy and focusing on fundamental cognitive

skills – like reading and math – in addition to non-cognitive skills is recommended important (Finnie & Mueller, 2007; Frenette, 2007; Schultz & Mueller, 2006).

Limitations

The three studies in this thesis were limited by several design and methodological factors. First, the studies relied on a singular source of participant self-reported data. Thus, the data may have been susceptible to response biases, including social desirability, that may have motivated participants to respond more positively to questions about themselves and/or the program. The completeness of the data may have been affected by the participants' ability to recall certain information, especially in the qualitative and alumni studies, which asked participants about the past. Collecting data from other sources, such as parents, would have provided a means of triangulating findings, offering multiple perspectives and more comprehensive results.

Second, the quasi-experimental and alumni studies in particular were limited by difficulties in recruiting participants. Although all 77 Youth Futures participants in the 2014 cohort were invited to participate in the quasi-experimental study, the analyses were based on data obtained from only 44 youths in the program who participated in both the baseline and follow-up surveys. Similarly, in the alumni study, a total of 124 youth who participated in the Youth Futures program during 2012 and 2013 were invited to participate in the study, with only 79 (64%) actually taking part. It is possible that in both the quasi-experimental and alumni studies, results were affected by these recruitment issues, because higher-performing, more successful program participants are more likely to take part in the research than program participants who were struggling. The ability to draw conclusions about outcome level or change in this thesis is limited by the failure to reach or retain the entire Youth Futures sample. It is impossible to know how representative the youths who participated in these studies were. The

effects of attrition need to be examined carefully in any future research on the program. It is also important to note that in the quasi-experimental study, the non-equivalent groups design poses a threat to internal validity, and introduces a risk of selection threats. However, despite this caveat, non-equivalence of the groups does not appear to have contributed to the interpretation of the overall findings of the quasi-experimental study in this thesis, which suggest equivalent outcomes for both the Youth Futures participants and the comparison group participants.

Third, the qualitative and the alumni studies are limited because they lack a comparison group and because data collection took place at only single time point for each participant. Although the results of these studies offer insight into the first-hand experiences of the youths and their perceptions of the impact that the program had on them, the findings must be interpreted with caution. It is beyond the scope of either of these studies to conclude whether any changes that the youths experienced were attributable to the effects of the Youth Futures program.

Finally, the three studies were somewhat limited in scope and focus. Factors such as the young age of the participants involved in the studies, the methods of data collection used (i.e. data were collected in group settings in the quasi-experimental study, and over the phone in the alumni study), and the context of the research (i.e. the research was situated as an evaluation of program outcomes) all influenced the type and depth of information that was collected. Questions of an overtly sensitive or personal nature were not actively pursued. For example, questions posed in the qualitative interview were generally broad and did not include specific questions about Aboriginal, immigrant or visible minority identities of the youths. In the quasi-experimental and alumni studies, detailed questions about immigration status (including refugee status), family composition or family income were avoided.

Recommendations for Future Directions

Consistent with the *Evolutionary Evaluation* approach, evaluation should continue to be conducted with the purpose of moving the Youth Futures program along to its next phase of development, and informing decisions to expand, continue or revise the program (Urban et al, 2014). The findings of the present study offer only a preliminary understanding of outcome changes and do not allow for any conclusive claims to be made about program effects.

Future evaluations should include a comparison group and adopt a rigorous methodology – namely, an RCT – which would allow for an examination of program effects. Evaluations that capture a longer follow-up period are also critical to understanding whether the program is having a lasting impact over time. Future evaluations should continue to use mixed-method approaches that offer a more contextualized, in-depth understanding of the effects the program may or may not be having, and why. In contrast to the qualitative interviews conducted at a single time point in the present study, qualitative approaches that are structured and comparative in design would be more useful in inferring whether any observed changes can be plausibly attributed to the program.

Future evaluations should examine the efficacy of each component of the intervention. Such a design could clarify the unique contributions of each program activity in this complex, multi-component program. Without this type of information, it is difficult to draw conclusions about why the program does, or does not, produce desired outcomes. It would be particularly interesting to explore the extent to which program activities like the job skills training and the employment placement influence academic and educational outcomes. Future evaluations should also focus on the careful selection of context-specific measures sensitive to the changes most likely to be produced by the program activities. The program may be producing outcomes

beyond the limited scope of its intended goals pertaining to PSE access. Lastly, future evaluation should address questions related to identifying for whom the intervention is best-suited and whether the intervention is more or less effective across various groups of diverse youths. The program should be adaptive and responsive to changing policy contexts in the PSE sector. For example, the needs of low-income students as a group may be changing, given the Canadian government's introduction of a new system of student aid in the 2017/18 academic year that offers larger amounts of non-repayable grant assistance to more students (Liberal Party of Canada, 2016).

Implications and Conclusions

The findings of this thesis indicate that the Youth Futures program may not be having the intended effect of increasing access to PSE among its participants because of the characteristics of the youths selected by the program. To be effective, interventions must recruit and retain the youths who are at greatest risk of not furthering their education, and offer supports that are tailored to their unique needs. Despite the recruitment strategy of the program, which targeted youths from low-income family backgrounds, the youths in the program did not appear to be at a high risk of being shut out of PSE. The findings of this thesis, combined with the latest evidence in the literature, strongly indicate that family income is not an effective basis for recruitment into PSE access programs in Canada. This may be a reflection of the success of Canadian policies aimed at making PSE affordable and accessible for youth regardless of their family income level.

Some experts suggest that interventions should not be targeted toward youths based on their membership in a particular group, because this approach may lead to stereotyping or creating silos (Smith & Gottheil, 2011). Instead, adopting a group-neutral structure may be advisable, because at-risk youths can be effectively identified through their individual academic

records, their attitudes about education, and their own self-identified need for assistance (Finnie, Childs, Qiu, 2012). However, it is important to note that this is a complicated issue and the subject of on-going examination in the field. For example, single-sex education for girls and boys, as well as Africentric alternative schools and historically Black colleges and universities, have long been the focus of research and public discourse (Brown, 2015; Gross-Loh, 2014; Jaschik, 2012). Nevertheless, regardless of whether recruitment strategies are group-specific or group neutral, education interventions should be culturally sensitive and aware of the specific historical, economic and social barriers that groups of students encounter, while also accounting for the diverse individual experiences of each youth (Smith & Gottheil, 2011).

The findings of the present study contribute to the emerging body of research focused on the identification of interventions that can contribute to closing the gap in PSE access. Experts have called for reliable, empirical evidence in this area to improve our understanding of what governments, educational institutions and community organizations can do to overcome PSE access barriers (Barnett et al., 2012; Miner, 2011; OUSA, 2011; Shultz & Mueller 2006; Slobodin, 2010; Tierney & Hagedorn, 2007). The evaluation research presented here may help to modify and improve Youth Futures and other programs intended to ensure that all Canadian youth have an equitable opportunity to benefit from higher education.

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Appendix A

Quasi-Experimental Survey

INSTRUCTIONS

Answer the following questions honestly, to the best of your knowledge and ability. If you are not sure of the correct answer, just take your best guess. If you are uncomfortable answering a question, you may leave it blank.

SECTION A: Knowledge of Post-Secondary Finances**1. On average, how much does university tuition cost in Ontario?**

- ☐ Less than \$3,000 per year
- ☐ Between \$3,000 and \$5,000 per year
- ☐ Between \$5,000 and \$7,000 per year
- ☐ Between \$7,000 and \$9,000 per year
- ☐ More than \$9,000 per year

2. In the Canadian workforce, how much more money do university graduates get paid compared to high school graduates?

- ☐ About \$10,000 more per year
- ☐ About \$20,000 more per year
- ☐ About \$30,000 more per year
- ☐ About \$40,000 more per year
- ☐ About \$50,000 more per year

3. What is "OSAP"?

- ☐ A payment that students receive from the government if they earn an "A" average in their last year of high school.
- ☐ A government program that gives loans and grants to students to help them pay for school.
- ☐ A school-board policy aimed at increasing the number of students who successfully graduate from university or college in Ottawa.
- ☐ A government program that evaluates the quality of colleges and universities in Ontario.

4. What is the maximum amount of financial help that you can receive from the Ontario government if you are a typical, full-time student in college or university?

- ☐ Less than \$5,000 per academic year
- ☐ Between \$5,000 and \$10,000 per academic year
- ☐ Between \$10,000 and \$15,000 per academic year
- ☐ Between \$15,000 and \$20,000 per academic year

- ☐ More than \$20,000 per academic year

5. What is the "Ontario Student Access Guarantee"? The Ontario government's guarantee that...

- ☐ ...If a student does not have enough money to pay for school, the government and the school must provide financial help.
- ☐ ...No students will be prevented from attending college or university just because of their high school grades.
- ☐ ...All students will have access to free healthcare while attending university or college.
- ☐ ...All students will have access to text books and online resources while attending university or college.

6. Two years after graduation, what percentage of Ontario university graduates are employed full-time in a job that is relevant to the educational degree they earned?

- ☐ Less than 25% of students
- ☐ Between 25% and 50% of students
- ☐ Between 50% and 75% of students
- ☐ Between 75% and 100% of students

7. What is a "Work-Study Program"? A program that...

- ☐ ...Allows university and college students to complete their courses at home, during the evenings and weekends, allowing them to work at their regular job during the day.
- ☐ ...Colleges and universities offer to give students a chance to earn extra money by working on campus part-time during the academic year, and full time during the summer months.
- ☐ ...Pays students who complete high-quality work in their university or college classes.
- ☐ ...Teaches students about employment and the labour market.

SECTION B: Plans for Future Education**1. How sure are you that you will get more education after you leave high school?**

- ☐ Very sure I will
- ☐ Probably will
- ☐ Probably won't
- ☐ Very sure I won't
- ☐ Not sure one way or the other

2. If you could go as far as you wanted in school, how far would you like to go?

- ☐ Go to high school, but not graduate.
- ☐ Graduate from high school.
- ☐ Go to trade or vocational school.
- ☐ Go to college for a while.
- ☐ Finish college.
- ☐ Go to university for a while.
- ☐ Finish university.
- ☐ Pursue graduate studies (e.g. Masters, PhD, Law School, Teacher's College).

3. Is there anything standing in your way of going as far in school as you would like to go?
(Check all that apply)

- ☐ No.
- ☐ Financial situation (I need to work/School costs too much).
- ☐ Not able to get into programs/marks too low/not accepted.
- ☐ Not enough interest or motivation.
- ☐ I want to stay close to home/My Family wants me to stay close to home.
- ☐ Getting a degree takes too long.
- ☐ I want to work.
- ☐ I have dependents to care for (e.g. children, younger siblings, sick family member).
- ☐ My own health.
- ☐ I'm not sure what to do.
- ☐ Other: _____

SECTION C: What I Am Like

	Not at all true of me	A little true of me	Pretty much true of me	Very much true of me
1. I can work out my problems.	☐	☐	☐	☐
2. I can do most things if I try.	☐	☐	☐	☐
3. There are many things that I do well.	☐	☐	☐	☐

Now think about yourself at school specifically...

	Never	Rarely	Sometimes	Often	Always
4. I am certain I can understand the most difficult material presented in text books.	☐	☐	☐	☐	☐
5. I am confident I can understand the most complex material presented by my teacher.	☐	☐	☐	☐	☐
6. I am confident I can do an excellent job on assignments and tests.	☐	☐	☐	☐	☐
7. I am certain I can master the skills being taught.	☐	☐	☐	☐	☐

[illegible]

SECTION E: My Life Views

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. Sometimes I feel I am being pushed around in life.	☐	☐	☐	☐
2. What happens to me in the future mostly depends on me.	☐	☐	☐	☐
3. There is really no way I can solve some of the problems that I have.	☐	☐	☐	☐
4. There is little I can do to change many of the important things in my life.	☐	☐	☐	☐
5. I often feel helpless in dealing with the problems in life.	☐	☐	☐	☐
6. I have little control over the things that happen to me.	☐	☐	☐	☐
7. I can do just about anything I really set my mind to.	☐	☐	☐	☐

SECTION F: My Habits

1. How often do you read books, magazines, or newspapers in your free time?

- ☐ Almost every day.
- ☐ A few times a week.
- ☐ A few times a month.
- ☐ Almost never.

2. During an average week, how many hours do you spend on homework?

3. In the past month, how many classes have you been absent from/missed at school?

SECTION G: Relationships

1. How true are these statements about the people in your life who are around your same age (e.g. friends, siblings)? I have someone my age who...

	Not at all true	A little true	Pretty much true	Very much true
a)Really cares about me.	☐	☐	☐	☐
b) ...Talks with me about my problems.	☐	☐	☐	☐
c) ...Helps me when I'm having a hard time.	☐	☐	☐	☐

2. How true are these statements about your friends?

	Not at all true	A little true	Pretty much true	Very much true
a) My friends get into a lot of trouble.	☐	☐	☐	☐
b) My friends try to do what is right.	☐	☐	☐	☐
c) My friends do well in school.	☐	☐	☐	☐

3. How true do you feel these statements are about the adults in your life (e.g. parents, coaches, teachers, employers)? I have an adult in my life who...

	Not at all true	A little true	Pretty much true	Very much true
a) ... Really cares about me.	☐	☐	☐	☐
b) ... Tells me when I do a good job.	☐	☐	☐	☐
c) ... Notices when I'm upset about something.	☐	☐	☐	☐
d) ... Believes that I will be a success.	☐	☐	☐	☐
e) ...Always wants me to do my best.	☐	☐	☐	☐
f) ... I trust.	☐	☐	☐	☐
g) ... Is interested in my school work.	☐	☐	☐	☐
h) ... Talks with me about my problems.	☐	☐	☐	☐
i) ... Listens to me when I have something to say.	☐	☐	☐	☐

SECTION H: My Personality

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I often come into situations without being fully prepared.	☐	☐	☐	☐
2. I keep my belongings neat and clean.	☐	☐	☐	☐
3. I never seem to be able to get organized.	☐	☐	☐	☐
4. Sometimes I'm not as dependable or reliable as I should be.	☐	☐	☐	☐
5. When I make a commitment, I can always be counted on to follow through.	☐	☐	☐	☐
6. I try to perform all the tasks assigned to me conscientiously.	☐	☐	☐	☐
7. I work hard to accomplish my goals.	☐	☐	☐	☐
8. I have a clear set of goals and work toward them in an orderly fashion.	☐	☐	☐	☐
9. I strive for excellence in everything I do.	☐	☐	☐	☐
10. I'm pretty good about pacing myself so as to get things done on time.	☐	☐	☐	☐
11. I'm a productive person who always gets the job done.	☐	☐	☐	☐
12. I waste a lot of time before settling down to work.	☐	☐	☐	☐

SECTION I: Background Information

1. What is your age? _____
2. What is your gender? ☐ Male
☐ Female
☐ Other
3. In what country were you born? _____
4. In what country were your parents born? _____
5. Are you Aboriginal? ☐ Yes
☐ No
6. Did one or both of your parents attend college? ☐ Yes, but not in Canada
☐ Yes, In Canada
☐ No
7. Did one or both of your parents attend university? ☐ Yes, but not in Canada
☐ Yes, in Canada
☐ No
8. What is the name of the high school you currently attend? _____
9. What grade level are you currently in at school? ☐ Grade 9
☐ Grade 10
☐ Grade 11
☐ Grade 12
10. Have you been enrolled in mostly "Academic/University" courses in high school, or mostly "Applied/College" courses? ☐ Mostly Academic
☐ Mostly Applied
☐ Mostly Mixed (University/College)
11. When do you expect to graduate from high school? (Month, Year) _____

Appendix B

Qualitative Interview Guide

This interview is an opportunity for you to discuss your experiences over the last seven months in the Youth Futures program. There are no right or wrong answers to the questions I will ask: I am just interested in your personal experiences, perspectives, and opinions.

Please be aware that your participation in this interview is completely voluntary. You are free not to participate, to withdraw your participation at any time, and to decline from answering any questions that you may not be comfortable with. Your decision to participate or not participate will not affect your standing in the program in any way.

What you share with me in the interview today will be held in complete confidence. I am interviewing a total of 20 youth who participated in the program. When I present the results of these interviews, everyone's responses will be added together and presented as a whole. Your name or any of your identifying information will not be associated in any way with your responses. Only I will have access to the audio recording that I am taking today. There will be no way for anyone – including your parents, the program staff, the mentors, or your fellow participants – to know what you said in the interview today.

Do you have any questions before we get started? I'm going to start the recorder now – is that okay with you?

Introduction

- 1) If you were explaining the Youth Futures program to someone else – for example, one of your classmates who had never heard of the program – how would you describe the program?

Educational and Career Aspirations

- 2) Can you tell me a little bit about your educational and career goals?
 - What are your educational aspirations?
 - (If participant indicates PSE aspirations) What kind of program would you like to take if you went to college or university?
 - What kind of career would you like to pursue?
- 3) When did you really start to think about the education and career you would like to pursue?
 - When did you first start to consider that you would study _____ at college/university, or that you would get a job in the field of _____?
 - What were your reasons for deciding that this was the education and career you would like to pursue?
- 4) Now, I'm going to ask you to think back to several months ago, to the winter time, when you first applied to the Youth Futures program. What were your educational and career goals at that time?

- Can you describe any ways that your goals may have changed since that time?
 - What was the reason for these changes?
- 5) How important is it for you to achieve the educational and career goals that you have for yourself? Why?
- How often do you spend time thinking about your goals?
 - What do you do to work toward your goals?
 - How would you be affected if you did not achieve these goals?
- 6) How important do you think it is for your parents (or guardians) that you achieve your educational and career goals?
- Can you describe any conversations or discussions you have with your parents about your educational and career goals?
 - What do your parents think about the goals you have? How do you know your parents think this way: how do they convey this to you?
 - What could your parents do to support you in achieving your goals? To what extent are they currently offering these types of support?
- 7) How confident are you in your ability to achieve these educational and career goals that you have for yourself?
- 8) What are some of the strengths or resources that you have in your life to help you achieve your goals?
- Who do you discuss your goals with most often?
- 9) What are some of the challenges that you face in achieving your goals?
- What could prevent you, or stand in your way of achieving your goals?
 - What are some of the things that could help you overcome those challenges? (E.g. financial support, advice, a role model, tutoring or academic support).
- 10) Thinking back over the last year, to what extent has your ability to achieve your goals changed?
- Are your goals more within your reach now? Or are they further from reach? Or are they the same (unchanged)? How so?

The Youth Futures Program

- 11) What did you like the most about the program?
- 12) What did you like the least about the program?
- 13) If you could change anything about the program, what would it be?
- 14) To what extent was the program helpful, or not, for you?
- 15) In what ways, if any, have you changed since you started the Youth Futures program seven months ago?
- (If they talk about changes) To what extent are these types of changes important for your future? Why?
- 16) Would you recommend the Youth Futures program to other students your age? Why or why not?

We have talked a lot about the program, and your experiences in the program. Is there anything else about Youth Futures that you think is important for us to discuss? Are there any topics that we have not covered that you think are important? Are there any questions that you hoped I might ask that I did not?

Thank you so much for your time and effort in doing this interview with me. It is very helpful to hear more about your experiences, perspectives, and opinions. This research will be used to continue to improve and expand upon the Youth Futures program, and your participation is an important part of that.