

Interventions for At-Risk Youth in High Poverty Neighbourhoods

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Summary Abstract

The objective of this project was to review research on effective interventions for at-risk youth in high poverty neighbourhoods from the academic literature. The research project looked at risks and interventions associated with improving school outcomes for at-risk children and youth with a focus on Hamilton, Ontario, Canada. Specifically, this project reviewed the literature on family socioeconomic status (SES) inequalities, parenting, social capital, neighbourhood effects, cognitive development, kindergarten experiences, emotional functioning, mentoring, school engagement, mental health, dropping out, LGBT youth, the Fraser Mustard Early Years Study, a meta-analysis of cognitive-behaviour therapy, and the Ontario Child Health Study. We explored four research questions. First, how does evidence-based research define risks for children and youth? Second, how does the academic literature define risks for children and youth living in high poverty neighbourhoods? Third, what does the academic literature tell us about interventions that are effective in helping at-risk youth living in poverty succeed academically? Fourth, what does evidence-based research tell us about interventions that are effective in helping at-risk youth living in poverty succeed academically? To address these questions, we examined 149 studies in English-language refereed journals between 1990 and 2011.

Table of Contents:

Summary Abstract.....	1
Introduction	4
Roadmap	4
Posing Research Questions	4
Setting the Context	5
Population	5
Family Socioeconomic Status Inequalities in Hamilton	5
Methods	6
Conference Attendance	6
Literature Searches	7
First Round	7
Second Round	7
Community Feedback	7
Brown Bag Lunch	7
Findings	9
Risks	9
Relationships:.....	9
Location:.....	10
Early Interventions.....	10
Cognitive:	10
Kindergarten:	11
Socio-Emotional:	11
Later Interventions.....	11
Mentoring:	11
Engagement:	12
Research Gaps Identified by Stakeholders	12
Mental Health:	12
Drop-Outs:.....	13
LGBT Youth:.....	13

Fraser Mustard Early Years Study:	13
A Meta-Analysis of Cognitive-Behaviour Therapy:	14
Ontario Child Health Study:	14
Conclusion.....	14
Highlights	14
Successful Programs	15
References	16
Links	19

Introduction

The McMaster Community Poverty Initiative is a group of faculty, staff, and students that are working on ways to reduce poverty in Hamilton. One of the ways we are hoping to do this is by building bridges between our research ability and the community. This research project focuses on what we can learn from the academic literature about programs that are the most effective at helping at-risk youth succeed academically by reducing the achievement gap in elementary and high school.

Roadmap

- Report begins by outlining the research questions that guided the academic literature searches.
- Discusses family socioeconomic status (SES) in Hamilton as the context for the report – Red Zone and Vital Signs.
- Defines the at-risk youth population.
- Discusses methods – Sandbox Conference attendance, literature searches, and community feedback.
- Findings
- Conclusions – highlights, successful programs, and commonalities across risk and intervention domains.

Posing Research Questions

1. How does evidence-based research define risks for children and youth?
2. How does the academic literature define risks for children and youth living in high poverty neighbourhoods?
3. What does the academic literature tell us about interventions that are effective in helping at-risk youth living in poverty succeed academically?
4. What does evidence-based research tell us about interventions that are effective in helping at-risk youth living in poverty succeed academically?

Setting the Context

Population

- Children in early childhood
- Youth in their teen years
- Elementary and high school students with low levels of academic achievement and school outcomes.
- High school students at-risk of dropping out
- Street involved youth
- Mainstream youth

Family Socioeconomic Status Inequalities in Hamilton

Family socioeconomic status (SES) is one of the main variables used in social sciences to discuss a variety of issues. Family SES is typically understood as being comprised of at least one or more of several related variables, including family income, poverty level, parental education, parental employment status, and occupational prestige. There is a huge research literature that clearly shows that SES is related to a range of social-emotional and cognitive/educational outcomes (e.g., Lemstra, 2008; Sirin, 2005). Davies and Janus (2009, p. 4) argue that “while it is difficult to neatly summarize this vast literature, few dispute the following generalizations: SES has robust effects across a variety of developmental outcomes; those effects interact in varying ways by gender, race, and family structure”.

Code Red

http://media.metroland.com/thespec.com/statistics_flash/

- *Code Red*, which is published through the Hamilton Spectator, highlights how disparities in wealth and health are on the rise in Hamilton.
- Where you live in Hamilton has an impact on your health.
- A 21-year difference in life expectancy separates some of Hamilton’s neighbourhoods.

- In some Hamilton neighbourhoods, nearly half of all babies are born underweight, which is three times greater than some Third World countries; 662 of every 1,000 adults have a university degree; only seven of every 1,000 adults have a university degree.

Findings from Vital Signs Hamilton:

http://www.hamiltonvitalsigns.ca/images/hamilton_vital_signs_insert.pdf

- Great disparities between neighbourhoods.
- Shift of Hamilton's economy from a manufacturing base highlights the need to prepare the workforce.
- Hamilton citizens fall below the provincial average in school readiness.
- There are fewer individuals in the labour force.
- Poverty is far reaching and impacts health, employability, and access to housing.
- Sub-populations such as recent immigrants, single parent families, Aboriginal people, and women are particularly susceptible to poverty.

Methods

The goal of this project is to bring together the collaborative efforts of McMaster University's research capabilities and community research; therefore, the methodology for this research project involved both traditional data gathering techniques and more informal and exploratory efforts.

Conference Attendance

- First, as a preliminary method of gathering search terms the Research Assistant for the MCPI attended The Sandbox Project Inaugural Annual Conference, "Action through Collaboration" on January 19, 2011 in Mississauga.
- This conference brought together leaders from numerous sectors to collaborate on driving social behaviour and generating effective public policy to positively impact children and parents.
- The conference focused on raising awareness through education, knowledge transfer, and an Annual Report on child and youth health.
- Based on discussions at the conference, an initial *keyword* search list was compiled that touched on two domains: *risks and interventions*.

- *Risks*: location, immigration, health (physical, mental, psychological, and psychiatric), relationships, social environments, cognitive, emotional, social capital, social determinants of health, and income.
- *Interventions*: education, psychological, psychiatric, justice system, physical health, social development, after-school programs, leadership, self-concept, communication, behaviour, engagement, emotional development, mental health, income, and mentoring.

Literature Searches

See Appendix 1 and 2 for a visual representation of search limits and histories. Note that while the articles compiled for this systematic review comprised predominantly American research, the literature is applicable and relevant to the Canadian context.

First Round

- First round of systematic review searches was completed in Sociological Abstracts (SA) – a large academic data base – and Google Scholar using the *keywords* acquired through the Sandbox Conference.
- A total of 64 articles were found that fit within the *risk* domain.
- A total of 85 articles were obtained for the *intervention* domain.

Second Round

- Preliminary review of the articles yielded the following themes under the risk and intervention domains:
- *Risks*: cognitive, emotional, immigration, income, location, mental health, relationships, social capital, and social environments.
- *Interventions*: after-school programs, cognitive, emotional, engagement, leadership, mental health, mentoring, peers, self concept, and social capital.

Community Feedback

Brown Bag Lunch

- A Brown Bag Lunch information session was held on March 9, 2011 to discuss the general findings from the first round of systematic review searches in the academic literature, while soliciting stakeholders, community members, and knowledge brokers for feedback on evidence-based research.

- The purpose of holding a Brown Bag Lunch at this early stage of the report writing was to get into the field and determine whether what was found in the first and second round of systematic review searches was representative of evidence-based research in Hamilton.
- Attendees at the Brown Bag Lunch included Hamilton Wentworth District School Board, Hamilton Catholic District School Board, and The Early Years Research Team.
- The feedback gave shape to the final project, with dissemination through the final report and PowerPoint presentation circulated among the community.

Best Practices

- One of the themes that emerged during the Brown Bag Lunch was that of *best practices* as an important concept that needed to be established among the community members working with at-risk youth in the city of Hamilton.
- Part of understanding what 'best practices' are, is to recognize that it is difficult to measure the success of programs in the community.
- The perception of those working in the field is that it is difficult to remain objective when programs are evaluated by staff members in the organizations receiving funding.
- Those in attendance at the Brown Bag Lunch agreed that there is not a lack of programs in Hamilton aimed at at-risk youth; however, interventions need to be given time to work effectively.
- Having a stable staff is paramount in running a successful program. If a program is funded for a period of time and then dismantled shortly afterwards because of lack of funding, it is not possible to determine if the program had indeed worked or not.
- The community members who attended the Brown Bag lunch argued that more research is needed to determine how programs can be implemented more effectively in Hamilton.

Early Interventions

- All in attendance agreed that early interventions are imperative for youth at-risk.
- The academic literature reflected this view as well, which confirmed that the systematic searches were indeed reflective of the realities of the Hamilton experience.
- The significance of the caring adult/ mentor/ role model for at-risk youth also emerged in the literature searches and was confirmed by the Brown Bag lunch attendees.

Brown Bag Lunch Suggestions

- Once the common themes were determined, the attendees made suggestions for further searches of the academic literature.
- These included taking a larger perspective of possible interventions, such as mental health issues, methods of engaging high school drop-outs and LGBT youth.

Findings

Risks

Relationships:

Parenting

- Low maternal self-esteem are associated with child behavior problems (Dubow & Luster, 1990).
- Low maternal educational levels are correlated with low child academic test scores (Dubow & Luster, 1990).
- Even with impediments such as poverty some children develop positively due to close familial relationships (Chase-Lansdale, Wakschlag, & Brooks-Gunn, 1995).
- Mother's low emotional responsiveness and regular use of physical punishment explains the effect of current poverty on mental health of children; these findings do not vary by race or ethnicity (McLeod & Shanahan, 1993).
- Living in a two-parent family, stronger parent-child bond, and more employed adults in a child's social network reduces the risk of early sexual activity and pregnancy (Moore & Chase-Lansdale, 2001).
- Family rules and parental monitoring are significant factors in buffering adolescent substance use of drugs and alcohol (Stewart, 2002).

Main message: Accounting for family processes, specifically the parent-adolescent relationship is imperative for analyses of poverty, trajectories of socioeconomic status, mental health, and substance use among children and youth.

Social capital

- Social capital is described as "obligations, expectations, and information channels" (Coleman, 1988, p. 95).
- Social capital helps youth negotiate their way out of disadvantage (Ainsworth, 2002; Crosby, Holtgrave, DiClemente, Wingood, & Gayle, 2003; Furstenberg & Hughes, 1995).

Main message: The absence of social capital networks and ties, such as inclusion in a collectivity, a family, a peer group, a church, or social organization limits children's and youth's educational potential.

Location:

Neighbourhood effects

- Living in poor and segregated neighborhoods has detrimental effects on children's life chances (Kohen, Oliver, & Pierre, 2009; Niles & Peck, 2008; Zigler, Pfannenstiel, & Seitz, 2008).
- From a policy standpoint, the complexity of enhancing low-income minority children's educational outcomes is underscored by the multiple dynamics involved--family, neighborhood, housing, and school (Leventhal, Fauth, & Brooks-Gunn, 2005).
- Exposure to neighbourhood poverty reinforces the damaging consequences of individual disadvantage (Crowder & South, 2003).
- Neighbourhood effects operate indirectly via their effect on parenting and peer groups, and are transmitted through neighbourhood collective efficacy. Collective efficacy is a measure of the neighbours' ability to keep their community safe, clean, and appealing. Parental monitoring is higher in neighbourhoods with greater collective efficacy (Ainsworth, 2002; Rankin & Quane, 2002).

Main message: The effects of neighbourhood poverty are far reaching. Neighbourhood effects operate indirectly through parenting, housing issues, and schools.

Early Interventions

Cognitive:

- Intensive early childhood education can have long-lasting effects on cognitive and academic development (Campbell, Pungello, Miller-Johnson, Burchinal, & Ramey, 2001; Ou, 2005).
- Particularly, early childhood education develops working memory and attention control for academic learning (Welsh, Nix, Blair, Bierman, & Nelson, 2010).
- Early childhood intervention has been shown to support the acquisition of numeracy (Martin, 2010).
- Preschool participation is associated with significantly higher rates of literacy skills in kindergarten and avoidance of grade retention later on (cognitive advantage hypothesis) (Reynolds, Ou, & Topitzes, 2004).
- Early-childhood educators must be properly prepared to deliver preschool with sound cognitive standards (Finn, 2009).

- Center-based programs, such as Head Start demonstrate positive increases in cognitive development (Warr-Leeper, 2001).

Main message: Early childhood education before beginning Kindergarten has significant positive implications for cognitive development, which is directly correlated with academic achievement later in life.

Kindergarten:

- Early reported feelings about school during kindergarten or first grade have an impact on children's academic achievement at the end of fifth grade. The implication is that interventions should start early with young children who report early ambivalent or negative feelings about school (Hauser-Cram, Durand, & Warfield, 2007).
- Results indicated that even after controlling for family background, the number of activities in which parents participated in preschool and kindergarten was significantly associated with higher reading achievement, with lower rates of grade retention in grade 8, and with fewer years in special education (Miedel & Reynolds, 1999).

Main message: Kindergarten achievement predicts later school outcomes. Parents can improve outcomes by becoming involved in their child's educational careers early on.

Socio-Emotional:

- School psychologists and others designing interventions to improve achievement of disadvantaged students should address social-emotional competencies and classroom climate, especially teacher support of students (Elias & Haynes, 2008).
- Experience with multiple poverty-related risks increases the odds that children will demonstrate increased emotional difficulties. Social and emotional school curriculum that trains teachers in effective classroom management skills and in promotion of parent-school involvement would be beneficial (Fantuzzo et al., 2007; Webster-Stratton, Reid, & Stoolmiller, 2008).

Main message: Emotional learning must be considered when designing intervention programs in early childhood.

Later Interventions

Mentoring:

- School counsellors are in a unique position to assume leadership roles in reducing academic disparity. The authors argue that in order to increase their effectiveness, they must emphasize a group counselling approach from a multicultural perspective (Bemak, Chung, & Siroskey-Sabdo, 2005).

- Teacher-based forms of social capital reduced the probability of dropping out by nearly half. The students who benefitted most were those most at risk of dropping out of high school. Those from impoverished backgrounds and who experienced academic difficulties in the past found guidance and assistance from teachers especially helpful (Croninger & Lee, 2001).
- Youths with many resources are more likely than are other young people to have mentors, but those with few resources are likely to benefit more from having a mentor – particularly a teacher mentor – in their lives (Erickson, McDonald, & Elder, 2009).
- Mentoring programs can act as a means to reduce resource inequity in low-income school districts (Choi & Lemberger, 2010).

Main message: For older students, mentors are significant in buffering the effects of poverty and academic difficulties, especially for youth without many resources.

Engagement:

- Research supports the connection between engagement, achievement, and school behavior across levels of economic and social advantage and disadvantage (Appleton, Christenson, & Furlong, 2008).
- Poor student-teacher relationships are associated with poor academic engagement (Whannell, Allen, & Lynch, 2010).
- After-school programs geared at disadvantaged elementary school students were successful in increasing school engagement, autonomous motivation, and learning goals (Grolnick, Farkas, Sohmer, Michaels, & Valsiner, 2007).
- Collaborative learning within the classroom increases engagement, motivation, and aspirations of students and teachers (Loughrey & Woods, 2010).

Main message: Intervention programs geared at increasing engagement among older students must consider the teacher-student dynamic by promoting collaborative learning.

Research Gaps Identified by Stakeholders

Mental Health:

- Youth with depression in adolescence were at significantly increased risk of later major depression, anxiety disorders, nicotine dependence, alcohol abuse or dependence, suicide attempt, educational underachievement, unemployment, and early parenthood (Fergusson & Woodward, 2002).
- The associations between early depression and other outcomes can be explained by the presence of confounding social, familial, and individual factors (Fergusson & Woodward, 2002).

- Interventions have focused on school-based suicide prevention programs that are meant to reduce the stigma associated with depression (Swartz et al., 2010).
- Further study into whether young people with increased knowledge about depression are more likely to seek treatment (Swartz et al., 2010).

Main message: Depression is a risk factor to academic achievement. In-school strategies to address depression and suicide are important for school outcomes.

Drop-Outs:

- Intervention programs that are most effective address student engagement and mobility, alternative routes to high school completion, and they identify and track youth at-risk of dropping out early on (Christenson & Thurlow, 2004; Crowder & South, 2003).

Main message: There is no one common solution for addressing youth at-risk of dropping out. Drop-outs and students at-risk of dropping out require their own specialized interventions.

LGBT Youth:

- This qualitative study looks at the impact of belonging to a high school Gay/Straight Alliance (Lee, 2002).
- The results support previous research that Alliances positively impact academic performance, school/social/and family relationships, comfort level with sexual orientation, development of strategies to handle assumptions of heterosexuality, sense of physical safety, increased perceived ability to contribute to society, and an enhanced sense of belonging to the school community (Lee, 2002).

Main message: LGBT youth struggling with feeling accepted in high school can benefit from Gay/Straight Alliances. These alliances provide an important system of support for all students and can buffer other risk factors to school outcomes such as depression.

Fraser Mustard Early Years Study:

- The first Early Years Study (Hon. Margaret Norrie McCain & Mustard, 1999) began a surge of interest in early brain development.
- The Early Years Study 2: Putting Science into Action (Hon. Margaret Norrie McCain, Mustard, & Shanker, 2007) was produced by the Council for Early Child Development as a follow-up to the Early Years Study.
- The reports argued that children's early experience has far-reaching and determining effects on the development of their brains and behaviours.

- Varied experiences in early life affect that architecture – all of which mediate cognitive, emotional, and social behaviours later in life.

Main Message: Developing early child development is imperative to providing children with equal opportunity to maximize their potential.

A Meta-Analysis of Cognitive-Behaviour Therapy:

- The objective of this meta-analysis was to determine the variables that moderate the effectiveness of cognitive-behaviour therapy for dysfunctional children (Durlak, Fuhrman, & Lampman, 1991).
- The hypothesis was that the child's cognitive developmental level would be the most important moderator.
- This hypothesis was confirmed.

Main Message: A link exists between cognitive processes and adjustment for dysfunctional children. Children entering treatment at more advanced levels of cognitive functioning benefit more from cognitive behavioural therapy than do children at lesser advanced levels.

Ontario Child Health Study:

- Funded by the Canadian Institute for Health Research (CIHR) in collaboration with McMaster University.
- A long term survey designed to evaluate the impact of early childhood experiences and development on later adult health, quality of life, and functioning.
- Initial data was collected in 1983 when children were between 4-16 years old; follow up surveys were conducted in 1987 and 2001.

Main message: The Ontario Child Health Study raises awareness of overall child health prompting change in social, health, and educational policy in Ontario. By raising the profile of children in the province, the study motivates government initiatives of child health, and changes how services are delivered.

Conclusion

Highlights

- Risk factors for children and youth include low parental control and minimal social capital ties. Exposure to neighbourhood poverty is mediated by these risk factors. Therefore, individual disadvantage is reinforced by poverty.

- Interventions for at-risk children and youth can be effectively divided into early and later life interventions.
- Experiences in early childhood have life lasting effects on brain development and behaviours. These early experiences mediate cognitive, emotional, and social behaviours later in life.
- Primary prevention for emotional and social behaviour disorders is imperative.
- Early interventions fall under the cognitive domain; gaps in early childhood accumulate over time and form learning trajectories for children later in adolescence. Early interventions include quality early childhood education, parental involvement in kindergarten education, and socio-emotional programs.
- Later interventions include mentoring and promoting school engagement. Mentoring is particularly meaningful for youth with few social resources. The teacher-student dynamic is especially important for establishing positive school engagement for at-risk youth.
- Stakeholders identified a number of research gaps from the first round of academic literature searches.
- Depression in adolescence is a particularly salient risk factor that should be more readily addressed within the school context.
- Youth at-risk of dropping out or those who have dropped out require a specialized set of interventions that address issues such as mobility and student engagement. Early tracking of youth at-risk of dropping out can be particularly useful.

Successful Programs

- Preschool programs that develop memory, attention control, literacy, numeracy, and cognitive development. A key component of successful early childhood education programs are having qualified and well paid staff.
- Parental involvement in early schooling.
- After school programs with a particular focus on engagement, mentoring, and support. These programs are effective in building social capital networks and exposing children and youth to positive relationships and interactions with meaningful adults.
- Collaborative learning in the classroom that considers the teacher-student relationship.
- In-school access to mental health supports and gay/straight alliances among students, teachers, and staff.

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Links

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