

# YOUTH WHO THRIVE:

A REVIEW OF CRITICAL FACTORS  
AND EFFECTIVE PROGRAMS FOR  
12-25 YEAR OLDS



**Final Report**

April, 2014

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# Youth who Thrive: A review of critical factors and effective programs for 12-25 year olds

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ISBN 978-0-9694789-2-8

## ABSTRACT

The purpose of this report is to analyze the critical factors that support youth, ages 12 to 25, through critical life stage transitions and thriving throughout life. We adapted the most salient theoretical premises of Developmental Assets™, the Five Cs Model, and Self-Determination Theory to create a youth thriving model. We used an 8-stage process: identifying key search words, collecting academic and non-academic articles, establishing inter-rater reliability (Kappa score ( $K = .77$ )), selecting 257 academic and 223 non-academic articles to be reviewed, extracting initial data into tables, writing a scoping report for client review, creating appropriate standards of evidence criteria, analyzing critical factors and outcomes with a secondary review of literature, and identifying promising practices. Through a review of the major relevant theory and frameworks, we identified three critical factors as consistent and recurring: autonomy, relatedness, and competence. These critical factors are congruent in terminology with the three basic psychological needs posited by Self-Determination Theory but are supported by additional evidence from Developmental Assets™ and the Five Cs Model and are furthermore not conceptualized as needs (i.e., innate and required for survival). These critical factors change in prominence through critical transitions to promote long-term thriving. Eighteen direct interventions (evidence-based and promising) and relevant studies and reviews of interventions are detailed, six for each critical factor, in terms of key aspects of program design, key program components critical to success, impact measures, and applications for informing future program design. The report concludes with a synthesis and possibilities for next steps.

### *Keywords:*

**Assets, Outcomes, Critical Factors, Thriving, Youth Development, Youth Engagement, Program Evaluation, Competence, Autonomy, Relatedness**

### *Acknowledgement:*

The research team would like to express sincere appreciation and gratitude to the following members of the Advisory Committee for invaluable support and feedback at key stages of the project and development of this report:

Uzo Anucha, ACT for Youth/York University  
Joanna Henderson, CAMH  
Sarah Butson, YATI, Ontario Lung Association  
Malik Musleh, UNITY Charity  
O'Neil Edwards, Pathways to Education/Ryerson University

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## CHAPTER 1: INTRODUCTION

The purpose of this report is to analyze the critical factors that support youth ages 12-25 in thriving throughout life and through critical life stage transitions<sup>1</sup> through reviewing evidence pertaining to the: (i) nature of these critical factors; (ii) theoretical frameworks supporting these factors; (iii) outcomes linked to these factors; (iv) interventions supporting growth of these factors; and (v) contextual influences on the relationships among factors, outcomes, and interventions with a focus on the GTA and Ontario. This research is founded on three beliefs: (i) youth face significant challenges if they do not have access to the supports, services, and opportunities they need to thrive; (ii) youth have significant assets upon which to build; and (iii) a coherent evidence base is required to determine the optimal nature of these supports, services, and opportunities. These beliefs are captured within the Request for Proposals (RFP) that initiated this report and represent the philosophies of the partners in this work (the funders and the researchers). They underlie the methodologies, foci, and analyses of the data.

The study was commissioned by the YMCA of Greater Toronto, United Way Toronto, and the Ontario Ministry of Children and Youth Services to update a research foundation for practice and programming decisions. Five reports initially framed this report: (i) *Community Programs to Promote Youth Development* (Eccles & Gootman, 2002); (ii) *Review of Roots of Youth Violence* (McMurtry & Curling, 2008); (iii) *Youth Impact Plan: Evidence Review* (Cohen & McDonough, 2012); (iv) *Stepping Stones* (Ministry of Children and Youth Services, 2012); and (v) *Stepping Up* (Ministry of Children and Youth Services, 2013). The current report is one part of a comprehensive initiative to develop evidence-based resources for youth-serving agencies in creating, measuring, and improving their programs.

### Methodological Overview

We used several methods (see Chapter Two) to conduct this research, beginning with a major search of the literature databases (ERIC, PsycINFO, PubMed, Queen's Summons, and Google Scholar) with relevant inclusion/exclusion keywords as determined through our collaboration with the Advisory Committee for this project.<sup>2</sup> Through this search, we identified 257 articles from recent (2000-2013) peer-reviewed, academic sources ("black literature") and 223 articles from recent non-peer-reviewed sources ("grey literature"), encompassing both intervention and non-intervention literature. The intervention literature was rated using a Standards of Evidence Criteria, which was created in collaboration with the funder's Advisory Committee for this purpose, with the non-intervention literature analysed for content (e.g., purpose, findings, research method, keywords) to select articles with the best evidence. Using this literature and our analysis of three major theoretical frameworks (Developmental Assets™, Five Cs, Self-Determination Theory), we identified critical factors that appear key for youth development and achievement as they help youth experience positive cognitive/learning, behavioural/social, and psychological/emotional development and well-being, and navigate through life stage transitions. Interventions that have been developed to promote youth thriving were evaluated based on these critical factors. Thriving, defined as intentional and purposeful optimal youth development across a variety of life domains (Heck, Subramaniam, & Carlos, 2010), can be seen through: 1) school success, 2) leadership, 3) helping others, 4) maintenance of physical

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<sup>1</sup> We use critical factors as a generic term that represents concepts such as needs, assets, and resiliency without subscribing to any particular framework.

<sup>2</sup> An Advisory Committee was established with representatives from community-based organizations, academic researchers, and provincial government.

health, 5) delay of gratification, 6) valuing diversity, and 7) overcoming adversity (Scales, Benson, Leffert, & Blyth, 2000).

## Background and Significance of the Review

This review builds upon five framing reports. *Community Programs to Promote Youth Development* (Eccles & Gootman, 2002) is a comprehensive review of available data on community programs to promote positive outcomes for adolescents. In collaboration with a committee of experts, Eccles and Gootman developed a set of core concepts. The acquisition of personal and social assets—in the domains of physical, intellectual, psychological and emotional, and social development—lead to positive adolescent development (see Appendix Chapter 1 for a summary of assets in each domain). Adolescents with more personal and social assets in each of these domains have a greater chance of both current well-being and future success. Personal and social assets are enhanced by positive developmental settings.

Eight features of settings promote adolescent development of these assets: physical and psychological safety; appropriate structure; supportive relationships; opportunities to belong; positive social norms; support for efficacy and mattering; opportunities for skill building; and opportunities for integration among family, schools, and community efforts. The more settings wherein adolescents experience these features, the more likely they are to acquire the personal and social assets linked to both current and future well-being.

Community programs for youth should take adolescent developmental changes into account when promoting these assets (Eccles & Gootman, 2002). Programs are developmentally appropriate when they provide greater opportunities for autonomy, participation in program decision-making, leadership, and exposure to intellectually challenging material as youth mature. Community programs for youth should be based on a developmental framework that supports the acquisition of personal and social assets in an environment and through activities that promote both current adolescent well-being and future successful transitions to adulthood. However, more comprehensive longitudinal and experimental research would focus on a wider range of populations to understand which assets are most important to adolescent development, which patterns of assets are linked to particular types of successful adult transitions in various cultural contexts, and which program elements contribute in which ways to successful outcomes (Eccles & Gootman). The current *Critical Factors for Youth Thriving* review continues the synthesis of Eccles and Gootman's report conceptualizing in the ARC model a simplified framework from the major theories, assets, and program features identified in their review.

The *Roots of Violence* report (McMurtry & Curling, 2008) outlines the societal conditions that produce risk factors for violence involving youth. These conditions are the context for the *Critical Factors for Youth Thriving* review, with many barriers to thriving including poverty, racism, inaccessible and inadequate community design, failures of the education and justice systems, family issues, health issues, a lack of a youth voice, and a lack of economic opportunity. The *Roots of Violence* specifically recommends youth engagement as a key part of the strategy to improve the social context, with a focus on skill-building, a sense of belonging with at least one adult who provides nurturing and support, and youth voice in matters that affect them. These recommendations are directly reflected in the critical factors in our ARC model: autonomy, relatedness, and competence.

The program frameworks, critical factors, and interventions described in the *Critical Factors for Youth Thriving* review provide evidence and examples that build on the *Roots of Violence* recommendations for programs. Specifically, the evidence gathered in this report reinforces and examines program factors and designs that (a) address multiple risk factors; (b) operate across social settings (including family, schools, peer groups, and the wider community); (c) contain skill-based components that increase educational attainment and improve employment prospects; (d) build social competence skills



because violent offending is linked to deficiencies in thought processes and poor problem-solving skills; (e) focus on the way school-based classes are run with their emphasis on behavioural skills; and (f) are culturally specific.

The United Way Toronto's *Youth Impact Plan: Evidence Review* (Cohen & McDonough, 2012) identified three strong contributors to youth well-being: engagement, educational attainment, and economic security. Four features underscore the success of programs taking a positive youth development approach: build strong relationships between youth and non-family adults; ensure youth have agency and engagement in decision-making and program design to influence their communities; promote skill building across physical, emotional, intellectual, psychological, and social domains; and clearly state high expectations for youth. *The Youth Impact Plan: Evidence Review* concluded that the success of particular interventions depended more on how the program was conducted than its content with program success more related to the application of positive youth development approaches than to a particular type of intervention.

Most program indicators and outcomes described in the evidence review were related to the content of the program and rarely measured asset development directly. Few programs attempted to evaluate their impact on factors such as competence, confidence, character, connection, or contribution (the 5 Cs). The link between the development of assets and the content of interventions was generally weak (Cohen & McDonough, 2012). Like Eccles and Gootman's (2002) review, the findings indicated a lack of rigorous program evaluation. Moving towards a collaborative approach to youth programming and a shared positive youth development approach would help to address this gap, an approach supported by the current review.

*Stepping Stones: A Resource on Youth Development* (Ministry of Child and Youth Services, 2012) for 12- to 25-year-olds was created through a multi-phased approach that included an open call for 13 research papers, a synthesis of current research, and an extensive youth and community engagement process. Developmental maps described key developmental events for early adolescents, adolescents, and young adults with corresponding suggested supports for each stage. Tips for implementation of the supports complemented these maps. As *Stepping Stones* was published as a user-friendly resource for practitioners, its usefulness for the purposes of this review was limited, although, when applicable, we have referenced directly the research papers that helped inform its development.

*Stepping Up: A Strategic Framework to Help Ontario's Youth to Succeed* (Ministry of Children and Youth Services, 2013) identifies 20 evidence-based outcomes and related indicators across seven themes that are important to enhancing the well-being of young people (see Appendix Chapter 1 for a summary). The Ontario government has committed to tracking and reporting on these outcomes annually. *Stepping Up* received input from the 18 provincial Ministries that have programs affecting youth, building upon the past consultations and research done for the *Roots of Violence* Report and *Stepping Stones* resource. The framework has seven guiding principles: a positive-asset based view of youth; targeted support for those who need it; collaboration and partnership; meaningful youth engagement and leadership; diversity; evidence-informed choices; and transparency. In addition, the framework outlines seven themes thought to be important when considering the development and thriving of youth ages 12-25 throughout life and critical life stage transitions: (i) health and wellness; (ii) strong, supportive friends and families; (iii) education, training, and apprenticeships; (iv) employment and entrepreneurship; (v) diversity, social inclusion, and safety; (vi) civic engagement and youth leadership; and (vii) coordinated and youth-friendly communities.

The *Critical Factors for Youth Thriving* review continues the work by Eccles and Gootman (2002) by bringing together the strongest evidence between 2000 and 2013, combined with a simplified and overarching model to assist in the development of a common framework called for by all these foundational reports. Youth engagement was an additional recurring recommendation in all of the

foundational reports. *Critical Factors for Youth Thriving* provides evidence and a theoretical conceptualization for the role of youth engagement in facilitating the three critical factors.

## Theoretical Overview

Since the recognition of adolescence as a formative life course transition in the 20<sup>th</sup> century, policy-makers, researchers, and social scientists have been developing their understanding of what youth need to thrive. Since the 1950s, literature from the mental health and criminal justice models has tried to address the issue of delinquent behaviour (Damon, 2004). Policies based on those approaches have been effective in reducing juvenile crime (Eccles & Gootman, 2002) and have extensively expanded in an attempt to address issues such as substance abuse, graduation rates, and teenage pregnancy (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004). Community psychology emerged in the 1960s in response to the reactive deficit model pervading these initial models by emphasizing strength development (Trickett, Barone, & Buchanan, 1996). In the mid-1980s, the focus moved from the “causes” of delinquency to the etiological factors that influence social development (Hawkins & Weis, 1985). Instead of examining ways to respond to existing crises, interventions were developed to support youth to avoid particular problem behaviours.

While early preventative literature was often concentrated on a single measureable behaviour, the focus has shifted from single factors to the co-occurrence of predictors of multiple behaviours (Catalano et al., 2004). A variety of frameworks from a range of areas of study has been developed over the past three decades to provide more comprehensive pictures of what helps youth thrive. For example, according to the social development model, factors directly relating to family (attachment to parents) or indirectly relating to family (moral order) influence delinquent behaviour (Hawkins & Weis, 1985). A series of longitudinal studies in the 1980s represent the beginning of another line of research on resiliency (Werner, 1982). Instead of focusing on the inhibitors of youth success, resiliency research focuses on the factors that foster “flourishing in spite of every prediction to the contrary” (Damon, 2004, p. 16).

Resiliency research was successful in focusing the discussion around the positive attributes, but it did not create a fully scoped model of universal youth development. Benson (1997) at the Search Institute extended the field by creating “developmental assets”: a model that includes internal and external components that represent what youth require to thrive. The Developmental Assets™ model has been used for the development of comprehensive approaches to research and practice by focusing on the unique talents, strengths, and potential of each individual.

While the Developmental Assets™ model provides a list of 40 assets for thriving, equally divided between internal and external assets, the Five Cs Model focuses on five core internal principles: competence; confidence; connection; character; and caring/compassion (contribution is sometimes added as a sixth C when the previous five Cs are satisfied; Armour & Sandford, 2013; Lerner, Lerner, et al., 2005). Youth with higher levels of the five Cs tend to have better outcomes (Bowers et al., 2010).

Self-Determination Theory (SDT) outlines three innate psychological needs (autonomy, relatedness, and competence) to explain youth thriving (Deci & Ryan, 2000). Autonomy relates to the extent that an individual feels that circumstances are under volitional control. Relatedness concerns constructive relationships with others in one’s environment. Competence is based on self-appraisals of ability to achieve desired outcomes. A more comprehensive analysis of contemporary frameworks that have been developed to support youth programming can be found in Chapter 3.

This report looks to consolidate decades of evidence and theory to create a model by which program designers can create impactful programs to support adolescent development through examining the

most salient theoretical premises of Developmental Assets™, the Five Cs Model, and Self-Determination Theory to create a youth thriving model by discussing three critical factors: autonomy, relatedness, and competence. The evidence for autonomy, relatedness, and competence as critical factors for thriving is robust.

*Autonomy* (Deci & Ryan, 1985) is a critical factor for having one’s behaviour be self-sanctioned; autonomy is demonstrated when behaviour is regulated and choices are made with a high level of volition. *Relatedness* is a critical factor for being connected within beneficial relationships; relatedness is demonstrated when secure and caring attachments are developed with others (Deci & Ryan, 2000). *Competence* (Deci & Ryan, 1985) is a critical factor for being effective; competence is demonstrated when optimal challenges engage the capacity of skill and illicit an extension of skills. Optimal challenge occurs when the challenge of an activity is highly balanced with an individual’s abilities to successfully perform the task. Satisfaction of all critical factors is associated with success in a range of environments and greater personal achievement (Jang, Reeve, Ryan, & Kim, 2009).

## Outcomes

For youth to thrive, they need to thrive in three domains: cognitive/learning, behavioural/social, and psychological/emotional. These domains are adapted from Pan-Canadian Joint Consortium for School Health (JCSH) report that identified similar domains: cognitive, behavioural, and affective (Morrison & Peterson, 2013). Outcomes represent success in these domains. Thus a comprehensive picture of youth thriving examines the three critical factors as they align with these three outcome domains (shortened to outcomes in this report; see Table 1.1).

**Table 1.1: The intersection between critical factors and outcomes**

| Critical Factors | Cognitive / learning outcomes | Behavioural / social outcomes | Psychological / emotional outcomes |
|------------------|-------------------------------|-------------------------------|------------------------------------|
| Autonomy         |                               |                               |                                    |
| Relatedness      |                               |                               |                                    |
| Competence       |                               |                               |                                    |

*Cognitive/learning outcomes* refer to cognitive-related achievements such as higher achievement test scores, effective learning strategies, and commitment to lifelong learning. Collectively, autonomy, relatedness, and competence predict cognitive achievement (Reeve, 2002; Vansteenkiste, Zhou, Lens & Soenens, 2005) and successful adaptive learning (Vansteenkiste et al., 2005). *Behavioural/social outcomes* refer to success relating to interpersonal exchanges including positive social interactions, community involvement, and assumption of leadership roles. Satisfaction of the critical factors is a predictor of perceived social competence (Reeve, 2002) and meaningful engagement in civic activities (Joselowsky, 2007). *Psychological/emotional outcomes* refer to healthy intrapersonal achievements, for example, healthy self-image, contentedness, and low levels of depression. Satisfaction of the critical factors is a predictor of higher self-esteem (Reeve, 2002, Vansteenkiste et al., 2005), psychological well-being (Ryan & Deci, 2000), and better coping (Vallerand & Bissonnette, 1992). The relationships between critical factors and outcomes are explored in Chapters 4-6.

## Moving Forward to Our Goals

In moving forward to our goal of promoting youth thriving, it is insufficient to understand the historical and theoretical underpinnings of the three critical factors (autonomy, relatedness, and competence) without additionally understanding the underlying influences that contextualize these factors, the transitions young people experience, and the range of interventions that may affect these factors.

### **Contextual Influences**

Young people are products of their genetic inheritance and their environment, and the interactions between them. While some youth live on the streets, others live in affluent homes in affluent neighbourhoods. Some youth struggle with questions of sexual orientation and gender identity more than do others. Some youth face discrimination because of race, ethnicity, religion, and gender. Some youth cope with chronic health issues, whereas others cope with significant sudden health events. The experiences of young people vary across neighbourhoods within the GTA, between the GTA and the rest of Ontario, between Ontario and the rest of Canada, and between Canada and the rest of the world.

### **Transitions**

Young people go through developmental changes from the age of 12-25. Early adolescents are undergoing pubertal changes and are confronted by a rapidly changing body. Middle adolescents are trying to navigate their future possibilities within a shifting social landscape. Late adolescents and young adults seek even greater independence than they have previously attained.

Transitions represent crucial junctures where environment and development intersect. Just as young people are moving from early to middle adolescence, they are moving from the elementary/junior high school system to the secondary school system. As they go from middle to late adolescence, they leave the secondary school system. After secondary school, destinations vary from post-secondary institutions to apprenticeships to the world of work. Additional transitions that may occur at any time during adolescence, although generally in late adolescence if they do occur, encompass, among others, moving in and out of systems of care, becoming a parent, entering a long-term relationship, understanding one's sexual orientation and gender identity, and moving out of the family home. Transitions of various natures are discussed in Chapter 7.

### **Evidence-based and Promising Interventions**

In seeking interventions that best promote the critical factors, two types of data are most helpful. Scholarly literature provides information about evidence-based interventions that have undergone reviews by experts and have met the standards for publication by a particular journal. As such, these interventions carry a certain level of evidence and are generally viewed as "evidence-based." However, publication can be a lengthy process and often such published interventions do not align with the most recent thinking in the field. Furthermore, there may be a publication bias against innovative practices. Problems with currency and publication are alleviated by examining grey literature to find "promising" interventions, interventions with the best likelihood for success that have yet to accumulate traditional evidence of such success. Both evidence-based and promising interventions, as well as relevant studies and reviews of interventions, are examined in Chapter 8.

### **Synthesis**

The information accumulated in the previous chapters is brought together in Chapter 9 to inform future initiatives from YMCA of Greater Toronto, United Way Toronto, and the Ontario Ministry of Children and Youth Services. We describe the key elements that will promote cognitive/learning, behavioural/social, and psychological/emotional success through interventions targeted at autonomy, relatedness, and competence. We provide information about the challenges to implementation of these elements in interventions for adolescents generally, for each subgroup of adolescents, and for

young people in transition. We put forward the most comprehensive analysis currently possible to ensure youth success for young people in the greater GTA and beyond the GTA in other regions of Ontario, while suggesting directions for future research and practice.

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## CHAPTER 2: METHODOLOGY

This project was designed to address three research objectives: (i) review and synthesize the developmental and life course needs and the critical transitions that youth need to navigate to thrive; (ii) identify key outcomes on which programs for youth should focus to address developmental needs and transitions; and (iii) identify promising interventions and aspects of program design that have been developed and evaluated with respect to the identified key outcomes. To achieve these objectives, five research questions guided our data collection:

1. What are the main developmental and life course needs 12- to 25-year-olds must meet to thrive? What are the critical transitions that they have to navigate?
2. What are the main developmental and life course frameworks that have been developed to support youth programming, how do they compare, and how sound is their evidence base? What are the implications of the findings for the validity of developmental asset approaches?
3. What implications does the research have for understanding the key outcomes on which youth programs should focus?
4. What promising interventions have been developed to address the key outcomes identified? What are the key aspects of program design? Are there certain elements of program design that are critical to success? How have these programs measured their impact? How are these findings applicable to programming moving forward?
5. What role does context play in the generalizability of the research findings? What barriers and differences for youth exist? Are there differences in programming needs? How generalizable are the findings within the GTA and Ontario?

The key concept uniting these research objectives and related research questions is *thriving*. Thriving goes beyond the simple absence of disease to encompass physical, emotional, and social well-being. When youth thrive, they manage successful transitions to adulthood through cognitive, emotional, social, and physical development (Ministry of Child and Youth Services, 2012). For youth, thriving can be tracked along common developmental events, but is unique for every individual and is culturally specific (Eccles & Gootman, 2002).

To ensure a variety of resources was accessed for this report, we used a systematic eight-stage approach through: (i) creation of keyword list; (ii) collection of literature; (iii) measurement of inter-rater reliability; (iv) extraction of initial data; (v) creation of Scoping Report; (vi) development of standards of evidence criteria; (vii) analysis of critical factors and outcomes; and (viii) identification of evidence-based and promising interventions (see Card, 2012).

### Eight-Stage Approach

#### Stage 1: Creation of keyword list

We identified the relevant inclusion/exclusion keywords through collaboration with project partners and review of foundational documents and literature reviews provided by the YMCA of Greater Toronto Area, United Way Toronto, and the Ontario Ministry of Children and Youth Services. Final keyword lists were developed through further review of foundational documents and expanded through a collaborative analysis with the Advisory Committee. Our master list of keywords included two sections: (i) youth or adolescen\* or early adult or emerging adult and 183 content-specific



keywords including autonomy, decision-making, and health; and (ii) framework or approach or model and 24 theory-specific keywords such as assets-based, positive youth-development, and resilience (see Appendix Chapter 2 for the content-specific and theory-specific keywords). The keyword master list was instrumental in plotting the range of topics within the scope of this report.

## **Stage 2: Collection of literature**

The standard inductive method for conducting a review of the literature of a particular field broadly involves four steps: (i) look back through abstracts and titles of articles that appear relevant; (ii) collect easily located reference materials; (iii) locate relevant articles found in the reference lists of collected literature; and (iv) analyze collected materials to identify explicit and implicit biases and locate unsubstantiated conclusions (O'Connor, 1992). The advent of digitally accessible databases has increased the convenience of the completion of the standard method; however, it has not helped to reduce the irrelevant materials. Even in the modern digital age, the inductive method of systematic review is time-consuming and non-exhaustive, while offering no guarantee of providing a comprehensive knowledge of the subject base (O'Connor, 1992).

In response to criticisms of the inductive method, alternative methods of systematic review have been designed to optimize review procedures. The Network theory method (Ryan, Scapens, & Theobald, 1991) rectifies the standard method by focusing attention on a few key journals. In this way, the Network theory method first determines the salient positions and retro-analyzes the chronology of ideas to their origins. This process includes four steps designed to bypass the time-consuming flaws in the standard method: (i) identify a few of the leading journals in the field; (ii) scan the title and abstracts of the most recent year to identify relevant articles; (iii) locate keywords and conceptual pillars of the theory; and (iv) conduct specific reviews based on the keywords as determined in the lead journals. This system may ultimately include similar amounts of reading to the standard inductive method, but its earlier focus produces more accomplished reviews. To address the weakness of using the standard method alone, this report conducted a review of the literature using systematic keyword searches (i.e., standard method) and journal specific searches (i.e., Network theory method).

Searches were conducted of the literature for content published in scientific journals and content that was not published in scientific journals. Our search included database searches (ERIC, PsycINFO, PubMed, Queen's Summons, and Google Scholar). Studies were included if they aligned with the keywords that were developed at Stage 1, were published between the years 2000-2013, and included literature focused on youth between the ages of 12-25. As we completed the keyword searches, we found that the keywords were producing a range of items beyond the scope of this program. To optimize the search parameters, we used additional keyword combinations and continuously referred to the original keywords to ensure accurate and focused searches. The nine key word combinations were: (i) *adolescen\* Assets outcomes*; (ii) *adolescen\* Assets impact*; (iii) *adolescen\* Assets evaluation*; (iv) *adolescen\* Positive Youth Development outcomes*; (v) *adolescen\* Positive Youth Development impact*; (vi) *adolescen\* Positive Youth Development evaluation*; (vii) *adolescen\* Youth engagement outcomes*; (viii) *adolescen\* Youth engagement impact*; and (ix) *adolescen\* Youth engagement evaluation*.

As we analyzed the literature we captured in the first cycle of searches, it became clear that we required a second cycle of searches to locate more studies relating with "needs" and "transitions." For the second cycle of searches, we did not limit our focus to particular journals, although we made an effort to include journals from health-related fields whenever possible. Using relevant keywords (e.g., needs, transitions, factors, outcomes, sample age, current), we located 120 studies, which we coded by factor, findings, sample, methodology, effect size, and transitions. The studies were sorted based on correlates (outcomes) and strength of evidence. We eliminated studies that were not relevant to the

12-25 age range and research questions. These studies were used in combination with literature captured during the first cycle of searches.

Further studies were located through digital hand-searches of the last 13 years (since 2000) in journals that specifically inform the field of knowledge surrounding our themes: *Journal of Early Adolescence*, *Journal of Youth Studies*, and *Vulnerable Children and Youth Studies Journal*. The search sources additionally included reference list searches of the articles that provided appropriate citations. After eliminating irrelevant and duplicate studies, our efforts resulted in 298 peer-reviewed research studies published in academic journals (“black literature”) and 278 non-academic or not peer-reviewed studies (“grey literature”) that were downloaded full-text.

### Stage 3: Measurement of inter-rater reliability

Because our team included nine members from multiple sites working to eliminate irrelevant materials simultaneously, we took precautions to ensure consistency. We held conference call meetings within the team and in consultation with the vendor to solidify our collective understanding of the relevant topics. We also conducted inter-rater reliability tests to confirm agreement of the exclusion criteria. Kappa statistic is a quantitative measure of the level of agreement between two observers or raters (Viera & Garrett, 2005). Inter-rater reliability is known as precision and is best represented by statistics such as Kappa that control for agreement that might occur through chance. Calculation of Kappa is based on the difference of the measured agreement compared to the level of agreement expected through chance alone. Kappa is standardized to range from -1 to 1, wherein 1 is perfect agreement, 0 is agreement expected through chance, and any negative results show agreement less than chance. Our Kappa score ( $\kappa = .77$ ) is considered to represent substantial agreement (see Table 2.1 for interpretation of Kappa scores). While Kappa is not recommended for comparisons between different studies, methodologies, or populations, it is a commonly utilized method for inferring precision that goes beyond raw proportional calculations.

Once we had established that consistency across the team members, we were able to eliminate items that fell outside of the scope of this report. Of the 298 “black literature” items from the second stage, we removed 41, for a remaining total of 257. Of the 278 “grey literature” items, we removed 55, for a remaining total of 223.

**Table 2.1: Interpretation of Kappa**

|   | Poor | Slight | Fair | Moderate | Substantial | Near perfect |
|---|------|--------|------|----------|-------------|--------------|
| <b>Kappa</b>                              | 0.00 | 0.20   | 0.40 | 0.60     | 0.80        | 1.00         |
| <b>&lt; 0 Less than chance agreement</b>  |      |        |      |          |             |              |
| <b>0.01–0.20 Slight agreement</b>         |      |        |      |          |             |              |
| <b>0.21– 0.40 Fair agreement</b>          |      |        |      |          |             |              |
| <b>0.41–0.60 Moderate agreement</b>       |      |        |      |          |             |              |
| <b>0.61–0.80 Substantial agreement</b>    |      |        |      |          |             |              |
| <b>0.81–0.99 Almost perfect agreement</b> |      |        |      |          |             |              |

### Stage 4: Extraction of initial data

We created tables of extracted data from the black and grey literature. Those data were organized in five columns: (i) author and date; (ii) purpose; (iii) findings or conclusions; (iv) type of study; and (v) list of thematic words (see Table 2.2 for an example).

**Table 2.2: Example of Extracted Data**

| Author and Date     | Purpose   | Findings or Conclusions   | Type of Study           | List of Thematic Words  |
|---------------------|---|---|-------------------------|---|
| Lerner et al., 2005 | To provide preliminary evidence for the first wave of the 4H study; to conduct a longitudinal test of the developmental-contextual model of PYD | All measures and scale scores derived behaved as expected, based on previous adolescent lit; baseline was established for longitudinal analyses | Intervention evaluation | PYD, 4H study, plasticity, developmental assets, youth development programs, thriving |

### Stage 5: Creation of Scoping Report

For the purposes of the Scoping Report, we organized the initial findings to align with the seven developmental outcomes in the *Stepping Up Strategic Framework* (Ministry of Child and Youth Services, 2013): (i) health and wellness; (ii) strong, supportive friends and families; (iii) education; training and apprenticeships; (iv) employment and entrepreneurship; (v) diversity, social inclusion, and safety; (vi) civic engagement and youth leadership; and (viii) coordinated and youth-friendly communities. The Scoping Report presented the results of our initial literature findings in nine chapters: an introduction chapter, seven chapters addressing the seven themes, and a final chapter that outlined the work plan. The Scoping Report was submitted to the Project Vendor, YMCA of Greater Toronto, United Way Toronto, and the Ontario Ministry of Children and Youth Services. The feedback from the Project Vendor provided for the Scoping Report suggested further critical exploration of these themes by reviewing the literature to identify outcomes that corresponded to the developmental needs/critical factors. Furthermore, as noted in the feedback, a set of standards of evidence criteria to match the specific requirements of this report was to be developed.

### Stage 6: Development of standards of evidence criteria

At this stage, we determined which of the captured items had the strongest evidence. Finding relevant and impactful research is challenging due to the ever-increasing quantity of published and unpublished scientific literature. For example, the number of academic journals doubles every 20 years (1981: 74 000, 2003: 172 000; Trimble, Grody, McKeveley, & Gad-el-Hak, 2010). At the same time that the amount of literature is increasing, the quality of the literature has been decreasing (Flay et al., 2005). These trends have created obstacles for policy-makers, program-designers, and researchers who are held accountable for the expenditure of public funds on interventions and therefore must rely on sophisticated standardized criteria to determine the most rigorous and relevant literature.

Choosing a standard of evidence criteria is another complex challenge. While many standards of evidence criteria have been developed, each criterion is applicable according to its design purpose. For example, criteria designed to isolate the most scientifically sound evidence may inadvertently exclude interventions that were not published in academic journals. Therefore, criteria have to be chosen to reflect the unique goals of the research parameters.

To address the challenges surrounding the quantity and quality of research and the under-generalizability of findings, standards of evidence criteria had to be designed for the unique

purposes of this project. Our Standards of Evidence criteria were informed by five sets of criteria (see Table 2.3) established in the literature: (i) program evaluation standards developed by the American Joint Committee on Standards for Educational Evaluation (EJCSEE); (ii) Realising Ambition Standards of Evidence (Catch 22); (iii) Promising Practices criteria for Evidence Based Programs (Mattox & Kilbern, 2013); (iv) Furlong and Oancea’s (2005) Assessing Quality in Applied and Practice-based Educational Research; and (v) Tyndall’s (2010) AACODS checklist.

**Table 2.3: Commonalities of Sets of Criteria**

|                             | Utility / Impact | Quality/ Feasibility | Propriety | Accuracy | System readiness | Accountability |
|-----------------------------|------------------|----------------------|-----------|----------|------------------|----------------|
| <b>JCSEE</b>                | X                | X                    | X         | X        |                  |                |
| <b>Realizing Ambition</b>   | X                | X                    |           | X        | X                |                |
| <b>Promising Practices</b>  | X                | X                    |           | X        |                  | X              |
| <b>Furlong &amp; Oancea</b> | X                |                      | X         | X        | X                | X              |
| <b>AACODS</b>               | X                | X                    |           | X        |                  | X              |

- The criteria developed by the Joint Committee on Standards for Educational Evaluation (JCSEE) have been sponsored by 17 organizations including the American Psychological Association, Canadian Evaluation Society, and Canadian Society for the Study of Education for their value in formulating evaluation design. They include the evaluation of four clusters: (i) utility in serving information needs of users; (ii) feasibility to ensure realistic and prudent intervention; (iii) propriety to ensure legal and ethical regard for its participants; and (iv) accuracy in conveyance of technical and adequate information.
- The Realizing Ambition Standards of Evidence criteria were developed through the Social Research Unit (Darlington, UK) and were adopted by Allen Review on Early Intervention, a review commissioned by the Cabinet of the United Kingdom government to investigate the prospects of early intervention in economic contexts. The intervention criteria emphasize four clusters of factors: (i) intervention specificity; (ii) evaluation quality; (iii) intervention impact; and (iv) system readiness.
- The Promising Practices criteria were designed by researchers at the Promising Practices Network in California to assist program designers in identifying top-tier evidence-based practices for family and child services. To address the range of resource allocation project designs within the field of family and child services, Promising Practices includes the evaluation of eight factors: (i) topical focus; (ii) research design; (iii) statistical significance; (iv) practical significance; (v) attrition; (vi) quality of outcome measure; (vii) publication requirements; and (viii) replication.
- The quality criteria known as Assessing Quality in Applied and Practice-based Educational Research (Furlong & Oancea, 2005) was developed as a multi-dimensional approach to evaluate the innovative modes of research within applied and practice-based research. Their

approach emphasizes high level of achievement in five criteria: (i) trustworthiness; (ii) contribution to knowledge; (iii) explicitness in design and report; (iv) propriety; and (v) paradigm-dependent criteria.

- The AACODS checklist was developed by Tyndall (2010) based on the critical appraisal model by Burls (2009) to evaluate the rigour of scientific literature that has not been published, also known as 'grey literature'. Typically, the publication process of scientific journals offers some assurance of quality through peer-review. However, not all rigorous and useful information has been submitted to scientific journals. The AACODS checklist uses six criteria by which to grade grey literature: (i) authority; (ii) accuracy; (iii) coverage; (iv) objectivity; (v) date; and (vi) significance.

Based on the above sets of criteria, we developed the Standards of Evidence criteria that allowed us to assess the evidence of items selected as part of this project. All intervention studies were processed using our Standards of Evidence criteria. The results of the criteria were used in Stage 8 to create Chapter 9: Interventions (see Table 2.4).

### **Stage 7: Analysis of critical factors and outcomes**

We conducted a secondary review of the literature to substantiate our critical factors and critical outcomes findings. The search was based on keywords from the foundational documents (i.e., belonging, relatedness, connection, attachment, autonomy, control, achievement, competence, self-efficacy combined with adolescent/youth, outcomes). We gathered articles (n=110) and then filled in the gaps by adding another set of 50+ articles to develop the chapters in this report. While not focusing on particular journals, we made an effort to include journals from health-related fields whenever possible. We created tables for the articles coded by five characteristics: (i) findings; (ii) samples; (iii) methodology; (iv) effect size; and (v) transitions. The characteristics were coded based on correlates (outcomes) and strength of evidence starting with those that reported effect sizes and coefficients, had either large sample sizes or representative/relevant samples, those that were strong methodologically (e.g. longitudinal, multiple measures for each variable). A qualitative approach to reliability was employed that included the creation of critical factors through synthesis of multiple meanings and resolving difference in interpretations, tracing back to the original literature when necessary to reach consensus (Denzin & Lincoln, 2005). The critical factors were used to conduct a second round of analysis to determine the outcomes. The co-investigators used discussion to explore biases and settle disagreements. Final analysis was conducted during the drafting process of this report.

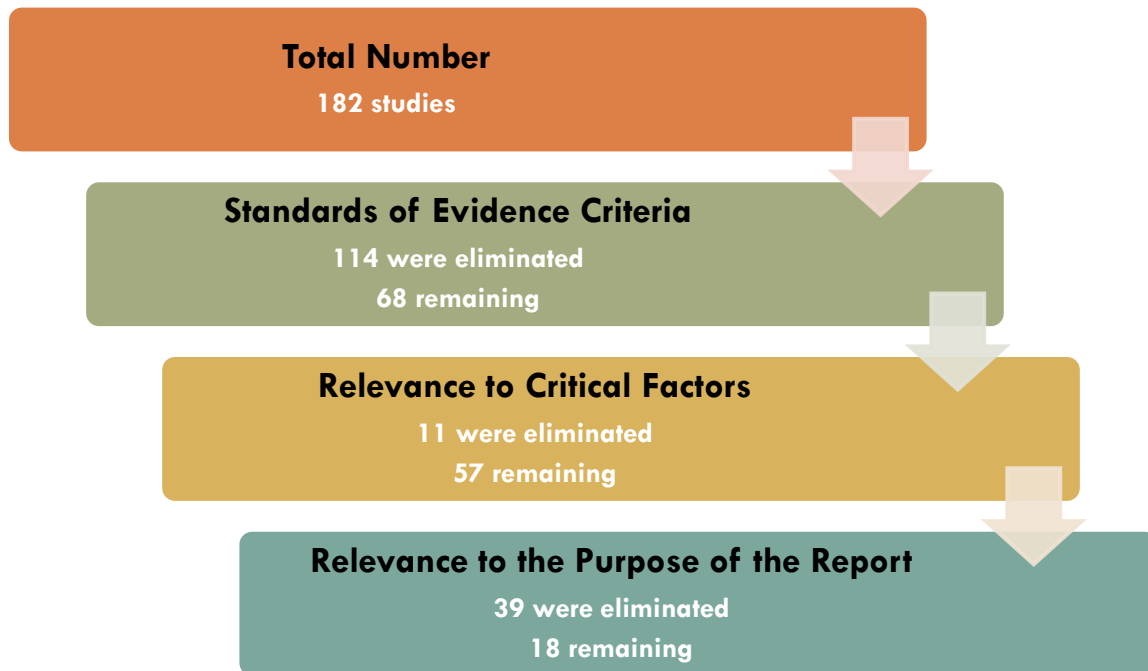
### **Stage 8: Identification of proven and promising interventions**

Following the steps as outlined in the Stage 2, the 182 intervention studies were captured in our initial literature search. These intervention studies were evaluated on our Standards of Evidence criteria. The following steps were used to eliminate studies lacking adequate relevance and rigour: (i) application of standards of evidence criteria; (ii) relevance to critical factors; and (iii) relevance to the purpose of the report (see Figure 2.1).

**Table 2.4: Our standards of evidence**

| Standard of Evidence  | Description  |
|---|--|
| 1. <b>Context, Program, and Individuals Clearly Described</b> | The program being evaluated is clearly described, including its context, purpose, activities, and participants, to the extent that the program is replicable.  |
| 2. <b>Methodology and Findings Clearly Described</b>          | The evaluation methodology (e.g., data collection procedures, data sources) and findings are clearly described so that essential information is provided and easily understood.  |
| 3. <b>Rationale Included</b>                                  | The logic behind the intervention (e.g., the reasoning why the intervention will achieve the outcome/s) is clearly articulated with a program logic model or theory of change).  |
| 4. <b>Reliable Information</b>                                | The program was conducted by people who establish and maintain credibility in the evaluation context either through a peer-reviewed process or association with a credible organization (e.g., Ministry of Education). |
| 5. <b>Quality Information</b>                                 | The program was planned, conducted, and reported in ways that adds clarity and therefore fosters follow-through by stakeholders to encourage use of the evaluation.  |
| 6. <b>Balanced Presentation</b>                               | The presentation of the work provides a contextualized perspective that is meaningful to multiple stakeholders.  |
| 7. <b>Fair Assessment</b>                                     | The program has undergone peer-review or some other ethical review process.  |
| 8. <b>Foundation</b>  | The rationale of the document is based on authoritative, documented references or credible sources.  |
| 9. <b>Purpose addresses an outcome</b>                        | The program's purpose aligns with a framework meaningful to one of our three critical factors.   |
| 10. <b>Findings address an outcome</b>                        | The findings of the program directly impact one of our three outcomes.   |
| 11. <b>Justified Conclusions</b>                              | The conclusions and/or recommendations are justified given the study's findings/results.   |

**Figure 2.1: Process of Determining Best Interventions**



### Summary of Methodology

Conducting systematic reviews can be a time-consuming process that necessitates cross-disciplinary search strategies and clearly articulated inclusion criteria. We support a view that a transparent method is the best option for achieving a thorough review of literature (Card, 2012). Through a thorough and meticulous attention to developing keywords, conducting searches, establishing Standards of Evidence criteria, and analysing the items based on those criteria, we were able to achieve the necessary transparency in our method. These approaches allowed us to decrease the extensive scope of available academic, peer-reviewed sources (“black literature”) to a feasible and manageable sample. The inclusion of unpublished, “grey” literature sources further complicated the work on this project. We attempted to address the challenges presented by “grey literature” by thorough analysis and careful attention to detail (Benzies et al., 2006). Although a very time-consuming process, it was the optimal way to include the important contributions of grey literature.

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## CHAPTER 3: THEORETICAL FRAMEWORK

Theories are the interconnected definitions, propositions, and concepts that collectively represent a perspective of a phenomenon (Kerlinger, 1973). Theories help explain, process, and predict occurrence of particular events. In many cases, researchers create a visual model or framework that represents key concepts and their relationships (Calhoun & Clark-Jones, 1998). Full understanding of such a framework requires an awareness of how its foundational theory formed and how it compares with similar frameworks. The purpose of this chapter is to compare the main developmental frameworks that have been developed to support youth programming, evaluate their evidence base, examine their major critiques, and synthesize their ideas to create a theoretical framework of critical factors for youth thriving.

Heck, Subramaniam, and Carlos (2010) defined thriving as intentional and purposeful optimal youth development across a variety of life domains, such as academic, social, and professional/career, toward a positive purpose. Thriving is therefore often defined as the absence of problem behaviours and the presence of healthy developmental indicators (Dowling, Gestsdottir, Anderson, von Eye, & Lerner, 2003; Scales, Benson, Leffert, & Blyth, 2000). In this sense, thriving is congruent with the World Health Organization's (WHO; 1946) definition of health as "a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity." However, the WHO definition does not encompass the means for achieving optimal health. In contrast, developmental researchers studying thriving tend to be more interested in the process to achieve thriving than in its definition. In this sense, youth who are thriving are discovering and expressing their unique talents and interests, are flexible and able to adapt to a variety of circumstances, and are on a positive journey toward adulthood (Benson & Scales, 2009; Lerner, 2004; Theokas et al., 2005). Similarly, in this report, we envision young people as thriving when they experience positive cognitive/learning, behavioural/social, and psychological/emotional development and well-being, while on the path to reaching their fullest potential. Thriving young people are more likely to be accessing critical factors than are youth who are not thriving.

Critical factors are basic for all adolescents, regardless of cultural background. Pathways for fulfilling these factors change throughout young people's lives, depending on individual-context interactions and developmental transitions. Critical factors are related to outcomes that lead to healthy development and lifelong thriving across the life course. Critical factors encompass basic needs, such as water, caloric intake, and shelter. Without these basic needs being met, there is no possibility for individuals to survive, let alone, thrive. In some theoretical frameworks (e.g., Self-Determination Theory [SDT]), needs have been extended to include psychological needs as non-nervous-system tissue deficits that push organisms into action and must be satisfied for the organism to survive (Deci & Ryan, 2000). However, the concept of "needs" within SDT contrasts other needs theories in some aspects (for details, see Deci & Ryan, 2000).

### The Changing Paradigm of Youth Development

Since the middle of the 20<sup>th</sup> century, policy-makers and researchers have been increasingly interested in the factors that influence adolescent development. Early approaches to youth development were based in theoretical frameworks such as child psychoanalysis (Redl & Wineman, 1951) and criminology, and focused on issues such as delinquency and truancy, defaulting to punishment over prevention. The dominant approaches to youth development began to shift in the 1960s as community psychology emerged in response to the reactive deficit model by emphasizing strength development (Trickett, Barone, & Buchanan, 1996).

## **Resiliency**

Over the next 20 years, the concept of resiliency came to the forefront. Resiliency implies: (i) healthy development despite high risk, (ii) continued competence under stress, and (iii) trauma recovery. Long-term longitudinal studies used the concept of resiliency to guide their data analysis. The Kauai Longitudinal Study was designed to monitor the development of a cohort of almost 700 children in 1955 in Hawaii (Werner & Smith, 1982). The research team tracked the developmental patterns of the children from pre-natal stages through to age 40. Thirty per cent of the participants were considered to be “at-risk” because they: (i) were born and raised in chronic poverty; (ii) experienced perinatal trauma; (iii) were raised by parents with ill psychopathology; or (iv) were raised by parents with substance abuse challenges. While two-thirds of the at-risk children developed serious problems, one-third developed into “competent, confident, and caring adults” (Werner, 1997, p. 103). Instead of looking at the causal factors of those who were adversely affected, Werner and colleagues focused on the characteristics of those who were not. In this way, resiliency research shifted the focus of the field from the factors that cause problems to the factors that predict success.

Resiliency research provided a more contextualized view of youth development that extended beyond delinquency-prevention of earlier research theories; however, it did so through an exclusive focus on those young people who were most likely to fail because of their negative view toward challenges (Damon, 2004). At the same time, we know that challenges are a natural part of development for all young people; therefore, how all young people (including those considered most “at-risk”) develop in a positive manner, is of crucial importance to youth-serving organizations. Positive youth development encompasses resiliency and expands upon its scope and premises.

## **Positive Youth Development (PYD)**

Over the past 30 years, contemporary youth development research has created a more comprehensive view of youth development (Eccles & Gootman, 2002) through the emergence of numerous frameworks proposed by foundations, youth-serving organizations, and practitioners (see Table 3.1 for some examples) to promote youth success. While there are nuanced differences across models, they collectively subscribe to a shared understanding of a universal view of youth development that is generally known as positive youth development (PYD).

PYD approaches: a) promote bonding and social, emotional, cognitive, behavioural, and moral competence; b) foster resilience, self-determination, spirituality, self-efficacy, clear and positive identity, belief in the future, and pro-social norms; and c) provide recognition for positive behaviour and opportunities for pro-social involvement (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004). Each of the theoretical frameworks we examine in this chapter (Development Assets™, the Five Cs, and SDT) is conceptually linked to PYD. . They present models for youth development that address the needs of youth as they grow and develop over time (Lerner, Lerner, et al., 2005; Vimont, 2012).

**Table 3.1: Selected Frameworks of Positive Youth Development (PYD)**

| Framework   | Description  |
|---|--|
| <b>Child and Youth Resilience Framework (Resiliency Canada, 2001)</b>   | <ul style="list-style-type: none"> <li>• Based on child, youth, and adult resiliency assessment and developmental protocols that contribute to individuals becoming both productive and responsible.</li> <li>• Outlines resiliency factors in relation to family, peers, learning at school, school culture, and community (e.g., parental support; community cohesiveness) and the developmental strengths (internal and external) nested within.</li> </ul>   |
| <b>Community Action Framework for Youth Development (Gambone, Klem, &amp; Connell, 2002)</b>                                  | <ul style="list-style-type: none"> <li>• A way to understand the pathways that lead youth to positive outcomes and highlight the important steps along the pathways; provide clarity and precision with regards to PYD.</li> <li>• Based on academic and applied research on youth and communities.</li> <li>• Seeks to integrate basic knowledge about youth development and the community conditions that affect it, and what it will take to transform communities into places where youth can achieve their fullest potential.</li> <li>• Presents a systemic approach to planning, implementing, and evaluating activities and investments for youth: build community capacity and conditions for change → implement community strategies to enhance supports and opportunities for youth → increase supports and opportunities for youth → improve developmental outcomes → improve long-term outcomes in adulthood</li> </ul> |
| <b>Framework for Advancing the Well-Being and Self-Sufficiency of At-Risk Youth (Dion, 2013)</b>                              | <ul style="list-style-type: none"> <li>• Draws on risk, resilience, and capital (human, social, cultural, and economic) development research.</li> <li>• Conceptual framework displays the interplay of various elements involved in the development of positive outcomes among at-risk youth (e.g., risk and protective factors; relationships; interventions).</li> <li>• Outlines steps to reaching the overarching goal for all youth to achieve healthy functioning and self-sufficiency in adulthood; recognizes transition to adulthood can be a lengthy process.</li> </ul>  |
| <b>Integrative Model of Risk and Resilience and Positive Youth Development (Kia-Keating, Dowdy, Morgan, &amp; Noam, 2011)</b> | <ul style="list-style-type: none"> <li>• Drawn from, and attempts to combine, resilience and positive youth development research.</li> <li>• Two pathways—protecting and promoting—lead toward the broad category of healthy development.</li> <li>• Believed that assets can prevent the occurrence of risk.</li> <li>• Conceptual model combines resilience and positive youth development within a cultural-ecological transactional theoretical framework.</li> <li>• Individual, family, school, community, and cultural factors thought to influence entire system.</li> <li>• Eight developmental domains (social, emotional, behavioural, moral, physiological, cognitive, educational, and structural).</li> </ul>  |

## Developmental Assets™

### Overview

In 1990, the Search Institute released the Developmental Assets framework, identifying a set of skills, experiences, relationships, and behaviours claimed to help young people develop into successful adults (Search Institute, 2013). Outlining a total of 40 developmental assets<sup>3</sup> (20 external assets and 20 internal assets; see Table 3.2), it has been theorized that “the more Developmental Assets young people acquire, the better their chances of succeeding in school and becoming happy, healthy, and contributing members of their communities and society” (Search Institute, 2013, <http://www.search-institute.org/research/developmental-assets>). The more assets youth possess, the less likely they are to participate in at-risk behaviours (e.g., violence; sexual activity) and the more likely they are to demonstrate thriving behaviours (e.g., prosocial behaviour; resilience; Atkiss, Moyer, Desai, & Rolland, 2011; Benson, 2007). External assets encompass a set of experiences and relationships across the contexts of the lives of young people (support; empowerment; boundaries and expectations; and constructive use of time). Internal assets are the individual qualities (i.e., values, skills, and self-perceptions) that contribute to self-regulation among youth (commitment to learning; positive values; social competencies; and positive identity; Scales, Benson, Roehlkepartain, Sesma, & van Dulmen, 2006). The Developmental Assets framework aims to inform theory and research, as well as possessing practical significance for the mobilization of communities.

The framework synthesizes research in a number of fields with the goal of selecting for inclusion those developmental nutrients that tend to: (a) prevent high-risk behaviour (e.g., substance use, violence, dropping out of school), enhance thriving, or build resilience; (b) generalize across social location; (c) contribute balance to the overall framework (i.e., of ecological and individual-level factors); (d) be within the capacity of communities to affect their acquisition; and (e) be within the capacity of youth to proactively procure (Benson, 2007, p. 40).

Central to the theory are notions of the developing person, the contexts in which the person is embedded, and the dynamic interaction between the two (Benson, 2002). In this respect, the 40 developmental assets can be viewed as benchmarks or targets for PYD, which require both family and community engagement to ensure their acquisition (Benson, 2002; Benson et al., 2012). The 40 assets can be viewed as both a theoretical framework and a research model (Benson, 2002); they are measured using a 156-item self-reporting survey instrument, which also assesses risk behaviours and thriving indicators (Benson, 2007; Table 3.3). Although there is no consensus on the definition of risk behaviour in adolescence, it can be understood as a specific form of inappropriate problem handling, or behaviour associated with undesirable consequences, or a behaviour that can compromise psychosocial aspects of adolescent development (Richter, 2010). Thriving indicators are defined as measurement markers of thriving in adolescence (Benson & Scales, 2009).

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<sup>3</sup> The original Developmental Assets framework outlined a configuration of 30 developmental assets. In 1996, the model was expanded to 40 developmental assets (Benson, 2002; Benson, Leffert, Scales, & Blyth, 2012).

**Table 3.2: Developmental Assets™**

| External Assets  | Internal Assets  |
|--|--|
| <p><b>Support</b></p> <ul style="list-style-type: none"> <li>• Family support</li> <li>• Positive family communication</li> <li>• Other adult relationships</li> <li>• Caring neighbourhood</li> <li>• Caring school climate</li> <li>• Parent involvement in schooling</li> </ul> | <p><b>Commitment to Learning</b></p> <ul style="list-style-type: none"> <li>• Achievement motivation</li> <li>• School engagement</li> <li>• Homework</li> <li>• Bonding to school</li> <li>• Reading for pleasure</li> </ul>                              |
| <p><b>Empowerment</b></p> <ul style="list-style-type: none"> <li>• Community values youth</li> <li>• Youth as resources</li> <li>• Service to others</li> <li>• Safety</li> </ul>  | <p><b>Positive Values</b></p> <ul style="list-style-type: none"> <li>• Caring</li> <li>• Equality and social justice</li> <li>• Integrity</li> <li>• Honesty</li> <li>• Responsibility</li> <li>• Restraint</li> </ul>                                     |
| <p><b>Boundaries and Expectations</b></p> <ul style="list-style-type: none"> <li>• Family boundaries</li> <li>• School boundaries</li> <li>• Neighbourhood boundaries</li> <li>• Adult role models</li> <li>• Positive peer influence</li> <li>• High expectations</li> </ul>      | <p><b>Social Competencies</b></p> <ul style="list-style-type: none"> <li>• Planning and decision making</li> <li>• Interpersonal competence</li> <li>• Cultural competence</li> <li>• Resistance skills</li> <li>• Peaceful conflict resolution</li> </ul> |
| <p><b>Constructive Use of Time</b></p> <ul style="list-style-type: none"> <li>• Creative activities</li> <li>• Youth programs</li> <li>• Religious community</li> <li>• Time at home</li> </ul>  | <p><b>Positive Identity</b></p> <ul style="list-style-type: none"> <li>• Personal power</li> <li>• Self-esteem</li> <li>• Sense of purpose</li> <li>• Positive view of personal future</li> </ul>  |

**Table 3.3: Risk Behaviour Patterns and Thriving Indicators (Benson, 2007)**

| Risk Behaviour Patterns   | Thriving Indicators  |
|---|--|
| <p>Tobacco use</p> <p>Alcohol use</p> <p>Other drug use</p> <p>Sexual activity</p> <p>Depression and/or attempted suicide</p> <p>Violence</p> <p>Antisocial problems</p> <p>Driving and alcohol use</p> <p>Gambling</p> <p>School truancy and absenteeism</p> | <p>School success</p> <p>Pro-social behaviour</p> <p>Affirmation of diversity</p> <p>Leadership</p> <p>Health promotion</p> <p>Delay of gratification</p> <p>Danger resistance</p> <p>Resilience</p> |

## **Evidence for Developmental Assets™**

The primary strength of the Developmental Assets™ framework lies in its dual nature as a theoretical model and a research base. It is designed to help build a community-wide vision of positive youth development by providing an outline for mobilizing and uniting socializing agents (both persons and systems). Also, the Developmental Assets™ framework encourages a comprehensive approach in which multiple elements of positive development can be studied in combination (Leffert et al., 1998). Originally developed in 1989, the Developmental Assets™ survey instrument was revised in 1996 based on a synthesis of child and adolescent research, ongoing dialogue with researchers and practitioners, and an analysis of aggregated data on 254,000 students (Grades 6 to 12). In addition, many of the items used to measure assets and risk variables were originally identified from a variety of standardized and well-validated instruments used in other adolescent surveys and psychosocial research (Leffert et al., 1998).

Since its implementation, several studies have investigated the utility of the Developmental Assets™ framework. Scales and colleagues (2000) examined the contribution of the 40 developmental assets to the prediction of thriving behaviours among 6000 adolescents (Grades 6 to 12; 6 ethnic groups) and found that a core of the developmental assets had reasonable explanatory power in predicting thriving outcomes. Murphey, Lamonda, Carney, and Duncan (2004) similarly examined the utility of developmental assets for predicting risk and health-promoting behaviours among 30,916 adolescents (Grades 8-12). Developmental assets made important contributions to the wellness of students, with a number of internal and external developmental assets negatively related to students' engagement in risk behaviours and positively related to health-promoting behaviours.

Theokas and colleagues (2005) sought to examine the theoretical evidence supporting developmental assets. Using the Profiles of Student Life Attitudes and Behavior (PSL-AB) survey, Theokas et al. explored constructs related to developmental systems theory and to the promotion of positive youth development. Developmental systems theory provides a theoretical explanation of developmental change by describing and explaining positive development as a life-span process in which the individual and context are dynamically fused across time in mutually beneficial interactions (Lerner, 2002). When examining the relation between these assets and the thriving composite, Theokas et al. found that both the individual assets and the ecological assets significantly predicted thriving and accounted for a substantial proportion of variance ( $R^2 = .384$ ). The effect was stronger for individual assets ( $\beta = .45$ ) than for ecological assets ( $\beta = .21$ ); however, both were significant predictors.

## **Critique of Developmental Assets™**

While the theoretical framework of Developmental Assets (DAs) is promising, it has significant limitations. The existing research is correlational in design and based on a combination of convenience samples, self-reports, and inventory-style data (e.g., Theokas et al., 2005). As a result, knowledge generated through this research does not represent a sufficiently persuasive integration of DAs to positive youth development literature; nor can this form of knowledge be used to conclude that a causal orientation exists between DAs and positive health outcomes. Furthermore, Stevens and Wilkerson (2010) have pointed out that much of the knowledge constructed on behalf of this research has been operationalized through large-scale research laboratories (e.g., the Search Institute) and published in non-referred journals (e.g., Search Institute, 2013), thus perpetuating institutional researcher bias. Ideally, studies conducted by third parties to measure the maintenance of positive health outcomes over time stand to gain insight on this line of inquiry and make further contributions to understanding the usefulness of DAs (Atkiss, Moyer, Desai, & Roland, 2011).

## The Five Cs Model

### Overview

The Five Cs Model presents five core principles of PYD: competence; confidence; connection; character; and caring/compassion. In some models, a sixth core principle—contribution—is highlighted, a principle that is believed to emerge from the presence of the five Cs (Armour & Sandford, 2013; Lerner, Almerigi, et al., 2005; Lerner, Lerner, et al., 2005). These core principles (Table 3.4) can be viewed as interactive, and are believed to contribute to the healthy development of youth and their thriving. In this respect, young people who manifest all of the core principles over time are more likely to be on a positive life trajectory and less likely to be on a trajectory of risk and problem behaviour (e.g., substance abuse and delinquency; Bowers et al., 2010).

**Table 3.4: The Five Core Principles of Positive Youth Development (the Five Cs)**

| Core Principle           | Description   |
|--------------------------|---|
| <b>Competence</b>        | Positive view of one's actions in specific areas, including social competence (interpersonal skills), cognitive competence (cognitive abilities), academic competence (school grades, attendance, and test scores), and vocational competence (work habits and career choice explorations). |
| <b>Confidence</b>        | An internal sense of positive self-efficacy and self-worth at an overall level rather than in specific areas; one's global self-regard.   |
| <b>Connection</b>        | Positive bonds with people and institutions reflected in bi-directional exchanges between youth and peers, family, school, and community.   |
| <b>Character</b>         | Respect for societal and cultural rules, standards for correct behaviours, integrity, and a sense of right and wrong (morality).  |
| <b>Caring/Compassion</b> | A sense of sympathy and empathy for others.   |
| <b>Contribution</b>      | When the five Cs are present, youth contribute positively to self, family, community, and society. These contributions have a behavioural component (actions) and an ideological component (belief that contributions are a necessary part of one's civic duty).                            |

### Evidence for the Five Cs Model

The first empirical evidence for the model's core principles was provided by the 4-H Study of Positive Youth Development (see Jellic, Bobek, Phelps, Lerner, & Lerner, 2007; Lerner, Lerner, et al., 2005), a longitudinal study focusing on Head, Heart, Hands, and Health that began in 2002 and continues today. Prior to this study, there were no measures of PYD (Phelps et al., 2009). The 4-H study aimed to provide evidence of the usefulness of measures of the five Cs as a means to operationalize PYD (Jellic et al., 2007; Lerner, Lerner, et al., 2005). At this time, the core principles of PYD were hypothesized to predict lower levels of negative outcomes and higher levels of positive outcomes over time. A follow-up study in 2006 provided longitudinal endorsement for the hypothesized relationships (Jellic et al., 2009). Suggesting that the five Cs of PYD demonstrated several key strengths, Luke, Stein, Kessler, and Dierking (2007) presented a rationale for the framework's use:



First, it is appealing in its conciseness and clarity; each of the assets it describes is straightforward, easy to understand, and intuitively applicable to museum programs. Second, the framework ... [goes] beyond a focus on content knowledge and/or specific skills to encourage a broad, holistic view of development that takes into account the whole person within society. Finally, there exists growing empirical support for the use of these six assets in understanding and predicting youth development core principle model. (p. 420)

Using longitudinal self-report data that were collected over three phases from 920 youth in eighth to tenth grade, Bowers and colleagues (2010) conducted confirmatory factor analysis (CFA) to determine the extent to which the Five Cs were accurate indicators of the latent construct, positive youth development. The first model tested using CFA was based on prior hypothesized models of the Five Cs that postulated the following breakdown: Caring (random organization of items into packets Caring 1, Caring 2, Caring 3), Character (Values Diversity, Personal Values, Social Conscience, Conduct Behaviour), Competence (Academic, Grades, Social, Athletic), Confidence (Self-Worth, Positive Identity), and Connection (Family, School, Community, Peers). This initial model was consistently a poor fit of the data when tested independently for participants in Grades 8, 9, and 10. Specifically, first-order factor loadings of the models identified many nonsignificant pathways.

Given the poor fit of model based on existing hypotheses, the researchers modified and tested a revised model broken down as follows: Caring (random organization of items into packets Caring 1, Caring 2, Caring 3), Character (Values Diversity, Personal Values, Social Conscience, Conduct Behaviour), Competence (Academic, Grades, Social), Confidence (Positive Identity, Self-Worth, Appearance), and Connection (Family, School, Community, Peers). Modifications significantly improved the model fit ( $\chi^2(99) = 802.50$ , RMSEA = .074, CFI = .97). Furthermore, this work has moved the field closer to a shared vocabulary and confirmed the construct validity of the PYD measure that aids in the application of effective, age-appropriate interventions and programs for youth.

### **Critique of the Five Cs Model**

Although the 5 Cs model has received acclaim in the positive youth development (PYD) literature (e.g., Lerner, Almerigi, Theokas, & Lerner, 2005), a major criticism has been levied with respect to the validity of the 5 Cs' conceptualization in youth sport, an important context for youth development. For example, while researchers have traditionally suggested structured voluntary activities, such as sport, art, and participation in organizations, as salient contexts for developing PYD (Larson, 2000; Phelps et al., 2009), Jones, Dunn, Holt, Sullivan, and Bloom (2010) have recommended that, in a sporting context, PYD might best be represented by pro-social values and confidence/competence rather than by the 5Cs. Pro-social values characterize PYD in terms of helping people, respecting values and beliefs of other people, and feeling concern for those who are hurt, upset, or injured. This critique is based on findings that show a significant degree of indeterminacy in viewing the five factors as theoretically distinct constructs. Furthermore, the skepticism generated on account of applying the 5 Cs to developing PYD in a sporting context shows that the relation between the individual and his or her environment is more dynamic than originally thought and as conceptualized in the five Cs model (Lerner, 2005). Therefore, the 5 Cs approach to PYD casts a limited perspective on the correlates of healthy outcomes among youth.

## Self-Determination Theory

### Overview

From motivation research, self-determination theory (SDT) provides a construct of innate psychological needs (Deci & Ryan, 2000). SDT aligns with strength-based frameworks, such as PYD and Developmental Assets™ and the Five Cs Model, in that it is about the “competence of young people in engaging in volitional behaviour and their autonomy in making choices and decision, which are nurtured in supportive social environments” (Hui & Tsang, 2012, p. 2). Table 3.5 provides an overview of the three theories.

At its core, SDT posits that goal attainment is dependent on the extent to which the individual is able to fulfill three basic psychological needs: (i) autonomy, (ii) relatedness, and (iii) competence (Deci & Ryan, 2000). Autonomy reflects the individual’s experience of behaviour as “volitional and reflectively self-endorsed” (for example, students are autonomous when they willingly devote time and energy to their studies) (Niemic & Ryan, 2009, p. 134). Relatedness refers to the way that humans meaningfully internalize the values and practices of others. Competence refers to the individual’s self-efficacy. The surge of scientific interest in the theoretical construct of needs during the 1960s contributed to contemporary evidence-based theory of human motivation. SDT is understood to be an overarching macrotheory, encompassing four mini-theories: (i) basic needs theory; (ii) cognitive evaluation theory; (iii) organismic integration theory; and (iv) causality orientations theory (Jang, Reeve, Ryan, & Kim, 2009). Self-determination can be fostered through programming that has been designed specifically to improve autonomy, self-advocacy, and value-led choices (Hui & Tsang, 2012).

### Evidence Base for Self-Determination Theory (SDT)

Research in a variety of environments has confirmed the validity of the components of SDT as related to intrinsic motivation: autonomy, relatedness, and competence. For example, intrinsically motivated individuals demonstrate positive behaviour such as desire for understanding, persistence on task, and curiosity (Ryan & Deci, 2000). Intrinsic motivation predicts psychological well-being regardless of academic performance (Burton et al., 2006) and environmental support fosters self-determination as quantified as autonomy, relatedness, and competence (Standage et al., 2006). However, there is little research that captures the SDT model as a whole (Van Nuland, Taris, Boekaerts, & Martens, 2012).

Furthermore, the three needs (autonomy, relatedness, and competence) identified in Self-Determination Theory (SDT) are significantly correlated (e.g., Leversen et al., 2012; Sheldon & Niemic, 2006; Veronneau et al., 2005). For example, Veronneau and colleagues (2005) adapted the Intrinsic Need Satisfaction Scale for adolescents and found moderately high ( $r > .60$ ;  $p < .01$ ) correlations among measures of autonomy, competence, and relatedness. Evidence suggests that autonomy, relatedness, and competence are theoretically related factors. For example, Leversen and colleagues (2012) conducted a study to examine satisfaction of all three factors, which involved a nationally representative sample of Norwegian adolescents ( $N=3273$ ) aged 15 – 16 using data from the Health Behaviour in School-aged Children survey. They conducted a confirmatory factor analysis to assess the fit of a three-factor measure consisting of latent factors relatedness, autonomy and competence. The fit was acceptable, but weak<sup>4</sup>: CFI = .946 and RMSEA = .075. Factor loadings were significant ( $> .30$ ) but low.

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<sup>4</sup> Recommended cut-off criteria for good model fit: CFI  $> .95$  and RMSEA  $\leq .05$ .

**Table 3.5: Three Main Developmental Theories**

|                             | <b>Developmental Assets™</b>   | <b>The Five Cs Model (Five Cs)</b>   | <b>Self-Determination Theory (SDT)</b>  |
|-----------------------------|--|--|---|
| <b>Brief Snapshot</b>       | 40 Developmental Assets (20 external and 20 internal)  | strength-based perspective of adolescence  | macro-theory outlining motivation and innate, universal psychological needs   |
| <b>Core Understandings</b>  | the more developmental assets youth acquire, the better their chances of success and thriving behaviours, and less chance of participation in at-risk behaviours | five characteristics—competence, confidence, connection, character, caring/compassion, and contribution—lead to positive youth outcomes and development; youth with all five make a contribution | three “needs” foster self-determination: (i) autonomy; (ii) relatedness; and (iii) competence   |
| <b>Contextualization</b>    | places youth within the context of family and community  | places youth within the context of family and community  | (i) humans are proactive in their potential, (ii) humans tend towards growth naturally, and (iii) when needs are met, optimal growth is inherent. |
| <b>Original Formulation</b> | established in 1990 by the Search Institute; instruments developed to assess the 40 assets, risk behaviours, and thriving indicators                             | first empirical evidence provided by the 4-H study in 2005; prior to this time, there were no measures of PYD, such as those found in the Five Cs Model  | first empirical evidence provided by Deci (1971); examined the influence of rewards on motivation for intrinsically motivating tasks              |

**Critique of Self-Determination Theory (SDT)**

Self-Determination Theory makes a number of important assumptions about the nature of the human being. Essentially, SDT posits that there is a universal set of intrinsic psychological needs (i.e., autonomy, relatedness, and competence) that must be satisfied for effective functioning and psychological health (Ryan & Deci, 2000). However, needs theorists are divided in regards to SDT.

For example, some theorists interpret these three psychological needs as constituting variable motivational constructs, while others see them as largely invariant (Sheldon & Niemiec, 2006). The field of research is also split on whether needs operate as implicit (internal) desires of individuals or as explicit (external) conditions of human thriving (Leveresen, Danielsen, Birkeland, & Samdal, 2012). Another assumption SDT has traditionally made is that the basic makeup of human needs show up during the process of human development (Deci & Ryan, 2008). This assumption has led to debate over whether needs are few or multitudinous in number (Sheldon, Ryan, & Reis, 1996); and whether needs are acquired through learning processes or emerge as a result of human genetics (Sheldon & Schüler, 2011). In light of these criticisms, research is needed to unpack how SDT contributes to

understanding the extent to which positive mental health supports the development of physical health and well-being.

## Theoretical Frameworks' Alignment with ARC Critical Factors Model

We adapted the most salient theoretical premises of Developmental Assets™, the Five Cs, and Self-Determination Theory to create a youth thriving model by discussing three critical factors that are essential to youth thriving: autonomy, relatedness, and competence (ARC model).

Table 3.6 presents a synthesis across frameworks depicting how various salient features of each framework contribute to and are aligned with the ARC model of four critical needs.

The Developmental Assets™ map onto our ARC Critical Factor Model in a specific fashion: external assets are mainly related to the critical factor of relatedness, whereas internal factors are found to be related to autonomy and competence. However, this mapping is mainly heuristic, with no clear-cut alignment, as some assets may map onto other critical factors as well. Internal factors within the categories of Social Competencies and Commitment to Learning are related to the critical factor of Competence, whereas internal factors belonging to the categories of Positive Values and Positive Identity are related to the critical factor of Autonomy. External factors in the categories of Support and Boundaries and Expectations are related to Relatedness. Finally, the external assets categories of Empowerment and Constructive Use of Time may encompass all three critical factors.

The Five Cs map closely onto the three factors: Caring (Relatedness), Connection (Relatedness), Confidence (Autonomy), Character (Autonomy), and Competence (Competence). In addition, Contribution is related to the combined effect of the three critical factors, as it is envisioned as an overarching core principle; when the five Cs are present, youth contribute positive to self, family, community, and society.

Within Self-Determination Theory (SDT), the three needs and psychological processes are identified as significant for optimal functioning and health – autonomy, relatedness, and competence. Furthermore, research on SDT indicates that only when people's feelings of relatedness and competence result from behaviors that are autonomous—behaviours that emanate from the self—will the people display optimal engagement and psychological well-being (Deci & Ryan, 2000).

**Table 3.6: Cross-Framework Synthesis**

| Critical Factors (ARC)                           | Developmental Assets™ (selected assets as illustrations)   | The Five Cs Model (Five Cs)   | Self-Determination Theory (SDT)  |
|--|--|---|--|
| <b>Autonomy</b>                                  | <p><b>Positive Identity</b></p> <ul style="list-style-type: none"> <li>• Personal power</li> <li>• Self-esteem</li> <li>• Sense of purpose</li> <li>• Positive view of personal future</li> </ul> <p><b>Positive Values</b></p> <ul style="list-style-type: none"> <li>• Caring</li> <li>• Equality and social justice</li> <li>• Integrity</li> <li>• Responsibility</li> </ul>   | <ul style="list-style-type: none"> <li>• Confidence</li> <li>• Character</li> </ul> | <ul style="list-style-type: none"> <li>• Autonomy</li> </ul>   |
| <b>Relatedness</b>                               | <p><b>Support</b></p> <ul style="list-style-type: none"> <li>• Family support</li> <li>• Other adult relationships</li> <li>• Caring neighbourhood</li> <li>• Caring school climate</li> </ul> <p><b>Boundaries and Expectations</b></p> <ul style="list-style-type: none"> <li>• Family boundaries</li> <li>• School boundaries</li> <li>• Neighbourhood boundaries</li> <li>• High expectations</li> </ul>                 | <ul style="list-style-type: none"> <li>• Caring</li> <li>• Connection</li> </ul>    | <ul style="list-style-type: none"> <li>• Relatedness</li> </ul>  |
| <b>Competence</b>                                | <p><b>Social Competencies</b></p> <ul style="list-style-type: none"> <li>• Interpersonal competence</li> <li>• Cultural competence</li> <li>• Resistance skills</li> <li>• Peaceful conflict resolution</li> </ul> <p><b>Commitment to Learning</b></p> <ul style="list-style-type: none"> <li>• Achievement motivation</li> <li>• School engagement</li> <li>• Bonding to school</li> <li>• Reading for pleasure</li> </ul> | <ul style="list-style-type: none"> <li>• Competence</li> </ul>                      | <ul style="list-style-type: none"> <li>• Competence</li> </ul>   |
| <b>Cutting across the three critical factors</b> | <p><b>Empowerment</b></p> <ul style="list-style-type: none"> <li>• Community values youth</li> <li>• Youth as resources</li> <li>• Service to others</li> </ul> <p><b>Constructive Use of Time</b></p> <ul style="list-style-type: none"> <li>• Creative activities</li> <li>• Youth programs</li> <li>• Religious community</li> </ul>  | <ul style="list-style-type: none"> <li>• Contribution</li> </ul>                    | <ul style="list-style-type: none"> <li>• Optimal engagement and psychological well-being is achieved when autonomy, relatedness, and competence converge.</li> </ul> |

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## CHAPTER 4: AUTONOMY

### Defining Autonomy

Autonomous activities are self-chosen, concordant with one's intrinsic interests. Autonomy thereby implies having input or voice in determining one's own behaviour (Deci & Ryan, 1985). In their review of the literature, Eccles and Gootman (2002) identified support for efficacy and mattering as a key feature of positive youth development settings. Support for efficacy involves practices that support autonomy, such as participation in program decision-making and leadership (Eccles & Gootman, 2002). Factor analyses have also confirmed the analytical distinctness of autonomy from self-esteem, mastery and mattering, emotional reliance, and social support (Van Gundy, 2002).

Historically, there have been challenges in adequately defining and operationalizing the term "autonomy" (for a review, see Van Petegem, Vansteenkiste, & Beyers, 2013). To address these challenges, Van Petegem and colleagues (2013) sought to examine youth autonomy in the context of both its healthy and dysfunctional manifestations. As such, they explored the construct on two distinct dimensions: 1) independence (i.e., behaving, deciding, and thinking without relying on others) and, 2) volition (i.e., acting upon personal interests, values, and goals). To test their perspective of the construct, they administered two studies with a sample of 707 Belgian adolescents from Grades 9-12, and a sample of 783 adolescents aged 14-21, which clearly yielded a two-factor model consistent across grade level. The model accounted for 58% of the total variance with Tucker's phi indices showing good congruence for both dimensions, suggesting that the model was a good fit for the data. This study provides clear evidence of a two-dimensional structure of autonomy.

Another perspective, proposed by Beyers and colleagues (2003), suggests examining youth autonomy from a dimensional framework. Factor analysis results suggest that autonomy is best understood within the context of four factors that are theoretically distinct, but related: 1) connectedness, 2) separation, 3) agency, and 4) detachment. Beyers and colleagues administered self-report questionnaires to 601 middle adolescents to conduct a confirmatory factor analysis (CFA) of the proposed dimensional model of autonomy. Their final model, with a good fit of the data ( $\chi^2(84) = 410.36$ , RMSEA = .08, GFI = .91), consisted of the following four factors: Connectedness (Parental Reciprocity, Adolescent Reciprocity, Mutuality, Dependency, Emotional Closeness, Availability), Separation (Deidealization, Non-dependency, Individuation), Agency (Attitudinal Autonomy, Emotional Autonomy, Functional Autonomy), and Detachment (Parents as People, Coolness/Rejection, Open Confrontation). All items had high and adequate loadings on their respective factors (.36-.99).

Beyers and colleagues (2003) conducted an additional study with 374 first-year university students to examine whether or not the model was consistent across age groups. Similar to their previous study, all indices initially indicated poor fit of the proposed four-factor model. As such, modifications were made, and variables were excluded. The final model, which was an adequate fit of the data ( $\chi^2(113) = 359.42$ , RMSEA = .08, GFI = .89), consisted of the following four factors: Connectedness (Connection, Reciprocity, Cohesion, Trust, Communication), Separation (Separatedness, Deidealization, Non-dependency, Individuation, Secrecy), Agency (Attitudinal Autonomy, Emotional Autonomy, Functional Autonomy, Self-Reliance), and Detachment (Parents as People, Alienation, Conflict). All items had high and adequate loadings on their respective factors (.44-.89). While the findings consistently supported a four-dimensional model of autonomy, Beyers and colleagues (2003) cautioned readers about the complex nature of the construct. They advised researchers to use the term solely as an umbrella term and to employ specificity when investigating the construct. In terms of further research and program development, these studies indicate that certain dimensions of autonomy differ in importance for youth of different ages.

## Outcomes

There is extensive evidence that youth autonomy, although a highly nuanced construct that represents a variety of youths' experiences, is related to a range of positive outcomes. For example, Van Petegem and colleagues (2013) provided psychometric evidence for the relation between one of the dimensions of autonomy, youth volition (i.e., acting upon personal interests and goals), and higher reported levels of well-being and lower reported levels of problematic behaviour consistently across various ages. Volition, which increases with age, was associated with secure attachment patterns, another indicator of positive youth development.

### Cognitive/learning outcomes

Autonomy-support inside and outside of school settings is critical for positive effects on a range of indicators. Cognitive and learning outcomes are most often measured using direct indicators of achievement, such as graded performance and GPA, and indirectly using indicators such as motivation for learning, depth of processing, and student engagement. Outside of school settings, cognitive and learning outcomes can be measured using indicators of career exploration and career commitment.

Vansteenkiste and colleagues (2004) conducted a series of experimental studies, examining the relationships among intrinsic goals, autonomy-supportive learning climates, and academic learning and performance. In the first study with 200 female Belgian college students (19-20 years old) and their teachers, Vansteenkiste and colleagues found that providing an intrinsic rationale for learning, such as personal growth or health, in an autonomy-supportive rather than controlling context resulted in significant main effects on graded performance ( $F(1, 196) = 7.12, p < .001, \eta^2 = .04$ ) and autonomous motivation for learning ( $F(1, 196) = 25.92, p < .001, \eta^2 = .12$ ). The most positive outcomes were obtained when the task was framed by intrinsic goals in an autonomy-supported way: interaction resulted in synergistically high deep processing, test performance, and persistence. These results were validated by a second study with 196 Belgian marketing students (18-19 years old), and a 3<sup>rd</sup> study with younger youth in Grades 10 and 11 ( $N=224$ ) with a focus on physical activity (Tai-bo) rather than on text material. Autonomy support and intrinsic goals interacted to produce additional positive effects on autonomous motivation ( $F(1, 220) = 26.99, p < .001, \eta^2 = .11$ ) and on graded performance ( $F(1, 220) = 4.10, p < .001, \eta^2 = .02$ ). While the results were statistically significant in these students, the effect sizes were low.

Student engagement, defined here as basic participation in school activities, tends to decrease among high school students as they get older (see Marks, 2000 for a review). Hafen and colleagues (2012) examined three critical factors (autonomy, competence, and relatedness) as predictors of changes in student engagement. Their study included high school students in Virginia ( $N=578$ ) and teachers who filled out questionnaires before and after the course. The strongest predictor of change in engagement was adolescents' perceptions of autonomy in the classroom. Positive students' perceptions of adolescent autonomy predicted increases in observed student engagement ( $\beta = .27, p = .04$ ) and student-reported engagement across the year ( $\beta = .32, p = .02$ ). The relationship between autonomy and student-reported engagement has also been found among middle school students (Skinner et al., 2008).

Autonomy support from parents and teachers is critical for positive outcomes in school and job-seeking. Soenens and Vansteenkiste (2005) investigated a model of relationships between perceived parenting and teaching styles, self-determination<sup>5</sup> in three life domains (school, social competence,

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<sup>5</sup> Self-determination involves self-regulation, self-governing, and "being the initiator of one's own actions" (Soenens & Vansteenkiste, 2005, p. 590).

and job-seeking behaviours), and specific adolescent outcomes. Autonomy-supportive parenting was significantly related to self-determination in all life domains. Autonomy-supportive teaching added significantly to the prediction of self-determination in school and in job-search, which are associated with higher GPA, increased school competence, and job exploration and commitment. This model was validated with middle- to late-adolescents using data from two studies including 328 Belgian students from Grades 10-12 between 15-21 years and 285 Grade 12-13 students between 17-22 years.

## Summary

- Autonomy-supportive learning environments are related to improved school/activity performance and grades, greater autonomous motivation for learning, and deeper cognitive processing;
- Perceived classroom autonomy is related to student engagement; increased perceptions of classroom autonomy can mitigate the drop in student engagement that tends to occur with age;
- Autonomy support from teachers and parents predicts school achievement and competence, as well as job exploration and commitment.

## Behavioural/social outcomes

In the behavioural/social domain, multiple dimensions of autonomy are predictors of behavioural problems. Behavioural problems are measured by indicators of delinquency or deviancy, and alcohol use. Gender and risk level may moderate these relationships.

Autonomy is additionally a predictor of positive behavioural/social outcomes, measured by indicators of social competence, social support-seeking behaviours, and physical activity. In a study by Van Petegem and colleagues (2013) with Belgian adolescents in Grades 9-12 (N=707), one dimension of autonomy, volition, predicted lower scores on indicators of problem behaviours. Volition was a significant unique predictor of deviant behaviour ( $\beta = -.12$ ) and alcohol abuse ( $\beta = -.15$ ). Distance, the second dimension of autonomy used in this study, was a significant unique predictor of deviant behaviour ( $\beta = .36$ ) and alcohol abuse ( $\beta = .24$ ). A similar pattern of findings emerged among a different sample including older adolescents (783 Belgian adolescents aged 14 to 21).

Gender and risk level moderate delinquency outcomes of autonomy. In a longitudinal study following students in Florida from Grades 6-9 (N=1286), Van Gundy (2002) found that the assertion of autonomy<sup>6</sup> reduced the risk for crime among young women, but increased the risk for crime among young men. Boykin McElhancy and Allen (2001) conducted a similar study with 131 adolescents in Grade 9 and 10 (mean age 15.9) and their mothers, to examine the relationships between autonomy and adolescent functioning. For high-risk adolescents, higher autonomy was related to increased levels of self-reported delinquency ( $\beta = .44$ ,  $p < .01$ ), whereas the link was nonsignificant for low-risk adolescents. These findings suggest a need for greater guidance and structure in the lives of adolescents living in high-risk situations (and consequently less, rather than more, autonomy).

Autonomy has links with positive behavioural/social outcomes, such as active coping (actively searching for and accepting social support) and motivation. Seiffge-Krenke and Pakalniskiene (2011) conducted a 4-year longitudinal study with 196 German families with adolescents (mean age = 13.9)

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<sup>6</sup> Assertion of autonomy is independence from, or lack of preoccupation with, others' attitudes about oneself.

to examine the relationships between autonomy support and coping behaviours. Parents and children did not directly affect each other's abilities to cope with family stress over time. Both the parents' and adolescents' perceptions of autonomy support were important in shaping their respective coping styles. Adolescents who reported high levels of autonomy support showed more active coping over time, reflective of studies involving late adolescents (Klink, Byars-Winston, & Bakken, 2008; McCarthy, Lambert, & Seraphine, 2004).

In terms of motivation, Vierling and colleagues (2007) conducted a study with 237 low socioeconomic Hispanic American early adolescents in Grade 5-8 (mean age = 12.11 years) to explore the relationships among autonomy-support, motivation, and physical activity. Students who perceived that their teachers and parents promoted autonomy-support toward physical activity experienced greater satisfaction of autonomy, competence, and relatedness. Satisfaction of these critical factors positively predicted autonomous motivation towards physical activity, which in turn positively accounted for 9% of the variance in physical activity and 15 % of the variance in reported positive attitudes about physical activity.

Risk may moderate social outcomes. For example, Soenens and Vansteenskiste (2005) examined relationships between autonomy support and social competence. Perceived autonomy-supportive parenting was related to friendship self-determination with significant indirect effects found from maternal autonomy support to social competence ( $\beta = .10, p < .05$ ). Low-risk adolescents who exhibited autonomy with their mothers were more likely to have greater friendship competence ( $\beta = .28, p < .05$ ) (Boykin McElhane & Allen, 2001).

## Summary

- Higher volition is related with reduced deviant behaviours and alcohol use from early to late adolescence;
- The level of adolescent risk moderates the link between autonomy and adolescent adjustment as well as the link between autonomy and social competence. For adolescents living in high-risk situations, more guidance and structure may be beneficial;
- Family autonomy support is positively related with active coping;
- Autonomy support from both parents and teachers is positively related to autonomous motivation for physical activity and increased engagement in physical activity.

## Psychological/emotional outcomes

Somewhat divergent evidence about autonomy has emerged in criminology and mental health fields: over-emphasis on the self (autonomy without relatedness) can lead to anti-social behaviours, while emotional reliance (lack of autonomy) increases risk for negative psychological/emotional outcomes (Van Gundy, 2002). In the psychological/emotional domain, multiple dimensions of autonomy are associated with psychological and emotional well-being, which is measured by indicators of positive and negative affect and self-concept, vitality (i.e., sense of energy), and lack of depression.

The relationship between autonomy and positive affect is cross-cultural and is significant from early to late adolescence. In a study involving 515 Chinese adolescents (mean age = 15.50) and 567 North American adolescents (mean age = 14.17), Lekes and colleagues (2010) examined relationships among parenting, life goals, and well-being. Across societies, autonomy-supportive parenting (e.g.,

encouraging initiative, offering choices, being responsive, providing a rationale for rules, and acknowledging youth's perspectives) was associated with endorsement of intrinsic life goals, which, in turn, was associated with well-being. Well-being was measured through indicators of positive and negative affect and self-concept. Intrinsic life goals partially mediated the relationship between parental autonomy support and well-being. In their study with Belgian high school students, Van Petegem and colleagues (2013) also found that a dimension of autonomy, volition, predicted higher scores on indicators of well-being. Volition was a significant unique predictor of self-esteem ( $\beta = .51$ ), depressive symptoms ( $\beta = -.44$ ), and vitality ( $\beta = .32$ ) (Van Petegem et al., 2013).

Similarly, in a sports context, Adie, Duda, and Ntoumanis (2008) tested a theoretical model of coach autonomy support, motivational processes, and well/ill being. Their study involved 539 British late adolescents (mean age = 22.75). Coach autonomy support predicted participants' basic need satisfaction for autonomy, competence, and relatedness. Basic need satisfaction predicted greater subjective vitality when engaged in sport. Athletes who perceived low levels of autonomy were more susceptible to feeling emotionally and physically exhausted from sport investment. Autonomy and competence partially mediated the path from autonomy support to subjective vitality.

Decision-making is an important practice of autonomy, and the importance and opportunity to be involved in decision-making changes throughout adolescent development (see Wray-Lake, Crouter, & McHale, 2010). Decision-making is linked to depression with this relationship potentially moderated by ethnicity and age. Gootman and Eccles (2007) analyzed a longitudinal dataset following 1,329 African-American and European-American adolescents from Grade 7 to post-high school graduation. Adolescents who perceived more decision-making opportunities from early to late adolescence had more self-esteem, although decision-making opportunities explained only a small proportion of the variance in self-esteem. More decision-making opportunities were related to less depression from middle to late adolescence for African Americans, whereas the opposite pattern was found for European American adolescents who initially had more decision-making opportunities in middle adolescence. Thus either too much or too little autonomy may be related to increased depression. For longer-term effects, age and gender may also play a role; for example, Gootman and Sameroff (2004) found that autonomy (as measured by involvement in decision-making during adolescence) was not related to male depression during adolescence, but did predict less depression during late adolescence (19-22 years). Van Gundy (2002) found that the assertion of autonomy reduced the risk for depression for both young women and men ( $\beta = -.07$ ,  $p < .001$ ). Autonomy did not moderate the effects of stress, such as transition to high school, on depression or crime.

## Summary

- Autonomy-supportive parenting is positively related to adolescents establishing intrinsic life-goals;
- Volition is positively related to self-esteem and vitality (i.e., sense of energy);
- Autonomy support from coaches is predictive of subjective vitality;
- Decision-making opportunities are negatively related to depression. However, this relationship is moderated by ethnicity and number of decision-making opportunities;

## Summary of Literature on Autonomy and Youth Outcomes

Autonomy is a critical factor for positive outcomes in cognitive/learning, behavioural/social, and psychological/emotional domains. Further, autonomy is a critical protective factor in terms of negative behavioural and psychological/emotional outcomes. In turn, these outcomes are associated with long-term well-being. Table 4.1 provides a summary of these autonomy outcomes. However, the connection between autonomy and outcomes is not consistent across research studies. The domain(s), timing, and amount of autonomy are critical for positive adolescent outcomes and long-term thriving depending on gender, age, and risk status. Furthermore, greater specificity with respect to type and dosage of autonomy may well prove beneficial for understanding different youth outcomes across adolescence.

**Table 4.1: Summary table of outcomes associated with autonomy**

| Outcome domain                      | Autonomy dimension  | Outcome measure  | Long-term implication <sup>7</sup>                           |
|-------------------------------------|---|--|--|
| <b>Cognitive/<br/>Learning</b>      | Autonomy-supportive learning environments                             | School/activity performance<br>Autonomous motivation for learning<br>Deep processing             | Achievement<br>Life-long learning                            |
|                                     | Perceived classroom autonomy  | Student engagement   | Achievement  |
|                                     | Autonomy support from teachers and parents                            | School achievement and competence<br>Job exploration and commitment                              | Achievement<br>Career development                            |
| <b>Behavioural/<br/>Social</b>      | Volition  | Deviant behaviour<br>Alcohol abuse   | Responsible citizenship                                      |
|                                     | Autonomy  | Delinquency  | Responsible citizenship                                      |
|                                     | Family autonomy support<br>Autonomy support from teachers and parents | Active coping<br>Motivation for physical activity<br>Behavioural engagement in physical activity | Well-being<br>Physical health<br>Life-long physical activity |
| <b>Psychological/<br/>emotional</b> | Autonomy-supportive parenting   | Intrinsic life-goals   | Well-being   |
|                                     | Volition  | Self-esteem<br>Vitality  | Well-being   |
|                                     | Autonomy support from coaches   | Subjective vitality  | Well-being and health  |
|                                     | Decision-making   | Depression   | Well-being   |

<sup>7</sup> Long-term implications indicate connections to thriving and well-being over time.



## Chapter 4 References

[Starred studies are described in tabular form in Appendix Chapter 4.]

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## CHAPTER 5: RELATEDNESS

### Defining Relatedness

Relatedness is the need to feel belonging and connection with others (Ryan & Deci, 2000). This critical factor builds upon three key features of settings that promote positive adolescent development: supportive relationships, opportunities to belong, and integration among family, schools, and community efforts (Eccles & Gootman, 2002). Relatedness encompasses relating to and caring for others, feeling cared for, and feeling involved with the social world (Leveresen, Danielson, Birkeland, & Samdal, 2012). Barber and Schluterman (2008) highlighted the importance of addressing the nuanced nature of relatedness through a review of the concept “connectedness,” which is conceptually similar to relatedness. Connectedness is primarily a relational construct, which represents a youth’s interpersonal experience, or the degree to which a reciprocal and dynamic dyadic relationship exists (e.g., between parent and youth, peer and youth). However, another view examines connectedness within an environmental framework; that is, the degree to which the youth enjoys and engages with different contexts (e.g., school). In general, connectedness is best understood in relation to two basic components: a relational component (i.e., relatedness) and an autonomy component (Barber & Schluterman, 2008).

The development of relatedness is initially fostered by the dynamics of the parent-child relationship. A child’s sense of security in primary relationships (i.e., parent-child) is thus paramount for later positive outcomes (Bowlby, 1969). Three critical dimensions of parenting foster positive adolescent development: 1) parental support (e.g., warmth, nurturance), 2) behavioural control (e.g., reasonable rules), and 3) psychological control (e.g., intrusive parenting; Barber & Schluterman, 2008). However, as children move into and through adolescence, other attachments increase in importance (Gorrese & Ruggieri, 2012; Markiewicz, Lawford, Doyle & Haggart, 2006).

### Outcomes

Although relatedness can manifest among youth in different forms (for a review, see Barber & Schluterman, 2008), there is a general consensus that having a strong sense of connection, to both other individuals and other systems, may be critical to positive youth development and positive outcomes. Factor analytic studies investigating variables that represent the latent construct “positive youth development” provide some support for the importance of connectedness among children and adolescents. For example, Bowers and colleagues (2010) provided psychometric evidence suggesting that relatedness is an important indicator of positive youth development that is equally important for youth at different stages in development (e.g., early, middle, late adolescence). In this context, relatedness was defined as youth’s reciprocal bonds with both people and institutions (Bowers et al., 2010). Those youth who report higher degrees of relatedness to both people (e.g., family) and institutions (e.g., school) tend to report higher scores on indices of thriving by the Search Institute<sup>8</sup> (Theokas et al., 2005). Relatedness is a significant predictor of both concurrent and prospective positive affect among youth and adolescents (Verroneau, Koestner, & Abela, 2005). Taken together, the research consistently provides strong evidence for the association between youth relatedness and positive outcomes across cognitive/learning, behavioural/social, and psychological/emotional domains.

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<sup>8</sup> The Search Institute proposes seven behavioural indicators of thriving: 1) school success, 2) leadership, 3) helping others, 4) maintenance of physical health, 5) delay of gratification, 6) valuing diversity, and 7) overcoming adversity (Scales, Benson, Leffert, & Blyth, 2000).

## **Cognitive/learning outcomes**

Relatedness is a critical factor inside and outside of school settings, having positive effects on a range of indicators. Within schools, cognitive and learning outcomes are most often measured using direct indicators of achievement, such as grades and test scores, or indirect indicators of engagement, such as involvement in learning activities and effort that mediates achievement. Outside of school settings, cognitive and learning outcomes are sometimes framed through career development and commitment.

Relatedness is significantly associated with academic achievement. For example, Roorda, Koomen, Spilt., and Oort (2011) found significant, but low, effect sizes between teacher-student relationships and achievement. In a subset of 17 studies, including 38,343 secondary students, overall effect size for positive relationships on achievement was  $r = .16$  (fixed) and  $r = .20$  (random)<sup>9</sup>. In three studies, involving 12,176 secondary students, overall effect size for negative relationships was  $r = -.13$  (fixed) and  $-.16$  (random). Effect sizes for positive relationships on achievement were larger in studies that used grades (rather than test scores) as indicators of achievement ( $r = .24$  for positive and  $-.15$  for negative relationships). Evidence of the influence of relatedness on academic achievement can also be seen in individual studies. For example, Crosnoe, Johnson, and Elder (2004) conducted a longitudinal study with American students from Grade 7-12 ( $N=14,736$ ) to examine the link between relatedness and grades. Student-teacher relationships were positively associated with higher grades for all students regardless of age, particularly for Hispanic American girls.

School belonging is acknowledged in the literature as a factor in student motivation and achievement (see review in Osterman, 2000). However, this connection varies across diverse youth. For example, Faircloth and Hamm (2005) investigated dimensions and mechanisms of belonging relevant to motivation (efficacy beliefs and valuing school) and achievement (grade-point average) among high school students in four ethnic groups. Participating students ( $N=5494$ ) attended seven ethnically diverse high schools in San Francisco and Wisconsin, in Grades 9-12. All four dimensions of belonging (relationships with teachers, involvement with peers, engagement in school activities, perceived ethnic-based discrimination) were relevant, but variably so, across ethnic groups. For example, all four were significant for Euro-American and Latino students; whereas friendship nominations were not significant for all African-American or Asian students in predicting achievement. In a structural model postulating belonging as a mediator, belonging accounted for much of the relationship between student motivation and academic success across all groups (particularly African-American and Latino students).

There is significant theoretical and empirical evidence of the relation between the quality of teacher-student relationships and school engagement (see Pianta, Hamre & Allen, 2012 for a review). Teacher-student relationship associations with engagement were stronger than with achievement in the Roorda et al. (2011) meta-analysis. Twenty-three studies involving 54,923 secondary students revealed a high overall effect size (fixed effects model  $r = .30$ ; random effects  $r = .40$ ,  $p < .01$ ) between positive teacher-student relationships and school engagement. The effect size was slightly lower for students in primary school. In two studies involving 853 postsecondary students examining the relationship between negative teacher-student relationships and school engagement, overall effect size (fixed effects model  $r = -.25$ , random effects  $r = -.31$ ,  $p < .01$ ) was moderate. For primary school studies only, the overall associations with engagement were somewhat stronger for negative relationships than for positive relationships, whereas for secondary school studies, positive relationships had stronger associations with engagement (Roorda, Koomen, Spilt, & Oort, 2011).

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<sup>9</sup> Fixed effects models permit inferences only about the studies included in the meta-analysis and assumes a shared true effect size. Random effects models assume that the studies are a random sample of the relevant distribution of the effects. Random effects models allow generalizations, beyond the particular set of studies included, to comparable studies. Tests of random effects have less statistical power to detect significance than tests of fixed effects.

Individual studies reinforce this finding. For example, in a study involving low-income, urban, early adolescents (in Grades 7-9), teacher-student relationship quality accounted for 25% of variance in student behavioural participation in school activities, while parent-child relationship quality accounted for an additional 24% (Murray, 2009). Relatedness seems to be especially important for school involvement of immigrant youth. In a longitudinal study, emotionally supportive school-based relationships accounted for 15% of the variance of behavioural engagement (Suarez-Orozco, Pimental, & Martin, 2009). The association between relatedness and school engagement is important for achievement. In a theoretical review and longitudinal study by Reeve (2012), student engagement, defined as “active involvement in a learning activity” (p. 150) that includes behavioural, emotional, cognitive and agentic aspects, was found to fully mediate the motivation-to-achievement relation.

Outside of school settings, cognitive and learning outcomes can be assessed using indicators related to career development. For example, Felsman and Blustein’s (1999) study with 147 university undergraduate students (mean age = 18.62) examined the role of peer relatedness in late adolescent career development. Three peer relatedness variables (attachment, intimacy, mutuality) shared a modest significant and unique amount of variance with career exploration and commitment. Attachment to peers and intimacy were positively associated with environmental exploration and progress in committing to career choices. These findings suggest that late adolescents may use peer relationships to buffer anxiety and provide support (over and above relationships with parents). Despite the study’s flaws (i.e. the study is not current and its analysis is not robust), it suggests possibilities for moving research into relatedness and cognitive/learning outcomes beyond the school into the world of work.

## Summary

- Supportive teacher-student relationships and school belonging are associated with school achievement and engagement. School belonging is additionally associated with motivation;
- Peer attachment, intimacy, and mutuality are important for career exploration and commitment.

## Behavioural/social outcomes

In the behavioural/social domain, relatedness serves as a protective factor, preventing a range of adolescent problem behaviours. Problem behaviours are assessed in terms of severity or frequency of deviant or delinquent acts. Relationships with parents, peers, and teachers predict differential associations with problem behaviours.

Youth who feel a sense of belonging tend to be less antisocial, and exhibit better self-regulation and social responsibility (Grotevant, 1998). Attachment to parents may reduce the severity of adolescent boys’ delinquency (Anderson, Holmes & Ostresh, 1999). However, there may not be as significant a decrease in frequency of problem behaviours for boys as there is for girls. For example, in a study involving 911 7<sup>th</sup> to 12<sup>th</sup> graders (mean age = 15), attachment bond variables (particularly parent quality and adult bond) accounted for 22% of the variance of delinquency for females but only 8% for males (Huebner & Betts, 2002).

Higher peer attachment has been associated with higher rates of school misconduct (Damanet & Van Houtte, 2012). However, relationships with regulating peers (peers who report low deviant behaviours) are negatively associated with antisocial behaviour. For example, youth with regulating

peers may be least likely to behave antisocially (Barber & Olsen, 1997). Positive socialization with family and peers related so strongly to antisocial behaviour as to neutralize the influence of neighborhood and school. Newman and colleagues (2007) explored three aspects of peer group membership in adolescence in relation to behaviour problems in a sample of 733 ethnically and socioeconomically diverse adolescents aged 11-18. A positive sense of group belonging was connected to lower internalizing and externalizing behaviour problems (one SD increase in peer group belonging = about a half SD decrease in behavioural problems).

Longitudinal studies have replicated the preventive effect on deviancy of school belonging (e.g., Dornbusch, Erickson, Laird & Wong, 2001) and teacher attachment (e.g., Freidenfelt Liljeberg, Eklund, Vafors Fritz, & af Klinteberg, 2011). Crosnoe and colleagues (2004) found that the odds ratio for the longitudinal association between teacher-student relationships and later disciplinary problems indicated that the odds of disciplinary problems decreased by 39% with every unit increase in teacher-student bonding for youth between Grades 7-11. This effect size exceeded all demographic factors (Crosnoe, Johnson, & Elder, 2004). Using multilevel analyses, Damanet and Van Houtte (2012) examined peer and teacher bonding and misconduct in a nationally representative sample of students between 15-20 years old in Finnish secondary schools (N=11,872). Students' individual bonding with teachers and school were negatively associated with school misconduct.

Although the literature tends to focus on parental and teacher relationships, there are a few studies that examine other adults in mentorship roles. Non-parental adult mentors are effective at supporting social skill-building only if their relationships with youth are deeply connected (i.e. duration, closeness, frequency of contact, and involvement). Outcomes for youth who are less-connected to their mentors do not differ from those for youth without mentors (Hurd & Sellars, 2013). Similarly, duration of relationship is important. Grossman and Rhodes' (2002) study examined Big Brothers Big Sisters programs involving urban adolescents (N=1138) between 10 – 16 years of age. Mentorship relationships that lasted less than 6 months were associated with adverse effects, such as increased alcohol use and decreased self-worth (Grossman & Rhodes, 2002). Further, different types of youth-adult relationship lead to different social outcomes. Individual or mentor-type relationships foster one-on-one social development, whereas collaborative forms of youth-adult leadership are conducive to communal group belonging (Mitra, 2004).

## Summary

- Parent quality and adult bond are associated with lower rates of delinquency;
- Peer attachment and belonging with regulating peers predict lower rates of antisocial and problem behaviours;
- Teacher-student relationships are associated with lower rates of school misconduct and disciplinary problems.
- Deep connection and long duration of adult mentor relationships are protective factors for problem behaviours and are associated with increased social skills.

## Psychological/emotional outcomes

Relatedness is associated with reducing negative psychological and emotional outcomes, such as depression, the lack of which are most often used to indicate well-being. However, the absence of negative outcomes is not sufficient. Positive psychology focuses on associations between relatedness and the presence of positive psychological and emotional outcomes as indicators of well-being.

In an exploratory quantitative study involving 900 5<sup>th</sup> and 8<sup>th</sup> grade primarily White students in Utah, Barber and Olsen (1997) investigated the relation of connection with significant others, regulation of behaviour, and autonomy to grades, depression, and antisocial behaviour in four social contexts (family, school, neighbourhood, peers). Socialization experiences within the family were most salient to feelings of depression. Male and female eighth graders who reported high levels of connection with parents had significantly lower levels of depression. Similarly, in a random sample of English school children (N=6425) between 11-15, young people with a low sense of school belonging were twice as likely to report feeling low each week (Morgan & Haglund, 2009). Young people with low sense of belonging and low neighbourhood involvement were almost twice as likely to report 'less than good health' than students high in those dimensions (Morgan & Haglund, 2009).

To complement the more prevalent use of negative measures of psychological adjustment in the literature, Van Ryzin, Gravely, and Roseth (2009) focused on measures of hope, which tend to be correlated positively with self-efficacy, optimism, self-actualization, task-based coping in times of stress, and general well-being (and negatively correlated with maladjustment), basing their study on previous research where hope predicted grade-point averages in college and increased likelihood of graduation (Snyder et al., 2002). In their 5-month longitudinal study with secondary students (mean age 15.33) in rural Midwestern United States, Van Ryzin and colleagues examined the relationship among autonomy, belongingness, school engagement, and psychological adjustment. Both peer- and teacher-related belongingness were found to have an independent positive effect on engagement in learning, which in turn had a positive impact on adjustment, so that engagement in learning mediated these relationships. There was also a direct link between peer-related belongingness and positive adjustment, supporting the hypothesis that positive peer relations can impact adjustment independently of engagement. The predictors explained 51% of variance in engagement and 35% of the variance in hope (Van Ryzin, Gravely, & Roseth, 2009).

## Summary

- Family connection and school belonging are associated with lower rates of depression;
- Peer and teacher-related belongingness are associated with hope, which, in turn, is connected to improved psychological adjustment and well-being, higher GPA and increased likelihood of college graduation.

## Summary of Literature on Relatedness and Youth Outcomes

Relatedness is a critical factor for positive outcomes in cognitive/learning and psychological/emotional domains, and a critical protective factor in the behavioural/social domain. The presence of relatedness is critical for school achievement, motivation, engagement, career development, and hope. In turn, these outcomes are associated with long-term achievement, psychological and behavioural adjustment, and well-being. Table 5.1 provides a summary of these relatedness outcomes.

**Table 5.1: Summary table of outcomes associated with relatedness**

| Outcome domain                      | Relatedness dimension                                 | Outcome measure  | Long-term implication <sup>10</sup>   |
|-------------------------------------|---|--|---|
| <b>Cognitive/<br/>learning</b>      | Supportive teacher-student relationships              | School achievement and engagement                          | Achievement   |
|                                     | School belonging                                      | School achievement and motivation                          | Achievement   |
|                                     | Peer attachment, intimacy, and mutuality              | Career exploration and commitment                          | Career development  |
| <b>Behavioural/<br/>social</b>      | Parent quality and adult bond                         | Lower rates of delinquency                                 | Responsible citizenship   |
|                                     | Peer attachment and belonging (with regulating peers) | Lower rates of antisocial and problem behaviours           | Responsible citizenship   |
|                                     | Teacher-student relationships                         | Lower rates of school misconduct and disciplinary problems | School adjustment   |
|                                     | Adult mentor relationships                            | Social skills  | Achievement and future relatedness  |
| <b>Psychological/<br/>emotional</b> | Family connection and school belonging                | Lower rates of depression                                  | Well-being  |
|                                     | Peer- and teacher-related belongingness               | Hope   | Psychological adjustment and well-being<br>Higher GPA<br>Increased college graduation |

<sup>10</sup> Long-term implications are connected to thriving and well-being over time.



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[Starred studies are described in tabular form in Appendix Chapter 5.]

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## CHAPTER 6: COMPETENCE

### Defining Competence

Competence can be defined as knowing how to handle situations effectively. Competence is not an absence of deficits, problems, and pathology, but rather the presence of well-developed clusters of attributes, abilities, and skills (Park & Peterson, 2006) and an “effective human functioning in attainment of desired and valued goals” (Baumrind, 1998, p. 13).

Competence in children and youth is commonly understood as the experience of behaviour as effectively enacted (e.g., youth feel competent when they feel able to meet the challenges of a certain assignment) (Niemi & Ryan, 2009). In other words, competence refers to the development of skills to perform tasks successfully (House, Bates, Markham, & Lesesne, 2010). Competence is positioned as a desirable outcome in Pittman, Irby, Tolman, Yohalem, and Ferber’s (2003) model of Desirable Youth Outcomes.<sup>11</sup> In this conceptualization, the construct of competence entails: *knowledge* (developing and reflecting on one’s knowledge and experiences); *skills* (developing a range of skills across developmental areas such as health, civic, physical, social, emotional, cognitive, and personal); and *behaviour* (applying and practicing new life skills and new roles). Similarly, Self-Determination Theory (SDT) considers competence or effectance to be one of the three fundamental psychological needs<sup>12</sup> that can energize human activity and must be satisfied for long-term psychological health, defined as ongoing psychological growth, integrity, and well-being (Deci & Ryan, 2000), although competence in SDT is seen subjectively. Competence has both an objective component (how well one can accomplish a given task) and a subjective component (how one feels about the likelihood of accomplishing a given task in domain-specific areas [e.g., social, academic, cognitive, vocational]).

As one of the Five Cs<sup>13</sup> of Positive Youth Development (PYD), competence is regarded as a healthy outcome of adaptive development (Eccles & Gootman, 2002; Lerner, Lerner et al., 2005; Lerner, Dowling, & Anderson, 2003; Roth & Brooks-Gunn, 2003). Competence is developed through opportunities for skill-building and mastery of physical, intellectual, psychological, emotional, social, and cultural skills. These opportunities are considered crucial features of positive developmental settings, as they allow youth to build social/cultural capital for future thriving (Eccles & Gootman, 2002).

In a factor analytic study, Bowers and colleagues (2010) examined the theoretical strength of competence as one of the Five Cs of Positive Youth Development (PYD). Initially, the researchers proposed that competence was comprised of a youth’s subjective views of his or her actions in the academic, social, and athletic domains in combination with objectively measured school grades. When this model was tested, athletic competence was not a strong indicator of overall competence and was excluded from later analyses. The final model in their study consisted of perceived level of academic competence, school grades, and perceived level of social competence as the key components of competence among eighth, ninth, and tenth graders. Overall, competence was a significant component of the 5 C’s framework of positive youth development (Bowers et al., 2010).

Catalano Hawkins, Berglund, Pollard, and Arthur (2002) identified five competence constructs of PYD: cognitive, emotional, social, behavioural, and moral competence.

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<sup>11</sup> Desirable Youth Outcomes: Confidence, Character, Connection, Competence, and Contribution.

<sup>12</sup> Competence, Autonomy, and Relatedness

<sup>13</sup> The Five Cs: Competence, Confidence, Connection, Character, Caring/compassion

- *Cognitive competence*: a) Self-awareness, interpreting social cues and understanding different perspectives, problem-solving, and decision-making; and b) academic and intellectual skills such as analytic thinking and abstract reasoning;
- *Emotional competence*: Knowing and managing one's emotions, recognizing others' emotions, handling relationships;
- *Social competence*: Interpersonal skills, such as communication skills, conflict-resolution, and negotiation strategies;
- *Behavioural competence*: Non-verbal communication, verbal communication, taking action;
- *Moral competence*: Ability to assess and respond to ethical, affective, or social justice dimensions of a situation, such as empathy and moral awareness.

Park and Peterson (2006) defined moral competence as “the knowledge, ability, and motivation to pursue and to do good effectively” (p. 892). Moral competence is interrelated with and guides other competences (Park, 2004; Park & Peterson, 2006).

Social competence is complemented by *cultural competence*, commonly understood as the ability of individuals to work or respond effectively across cultures in a way that acknowledges and respects the culture of other persons. Cultural competence is manifested through a young person's knowledge of and comfort with people of diverse cultural/racial/ethnic backgrounds (Scales, Benson, Roehlkepartain, Sesma, & van Dulmen, 2006). Cultural competence moves beyond the concepts of “cultural awareness” (knowledge about a particular group primarily gained through reading or studies) and “cultural sensitivity” (knowledge as well as some level of experience with a group other than one's own), focusing on the fact that some level of skill development must occur (Messina, 1994). Gaining cultural competence is a long-term process through which individuals develop a mixture of beliefs/attitudes, knowledge, and skills that help them establish trust and communicate with others.

## Outcomes

There is extensive evidence that increases in a range of competences predict positive outcomes for adolescents in the cognitive/learning, behavioural/social, and psychological/emotional domains. For instance, Durlak Weissberg, Dymnicki, Taylor, and Schellinger (2011) conducted a meta-analysis of Social and Emotional Learning (SEL) interventions to build social and emotional competence involving 270,234 students from Kindergarten through high school. Social skills include abilities such as clear communication, active listening, resisting inappropriate social pressure, and seeking and offering help when needed. Emotional skills include abilities such as recognizing and regulating one's emotions, and empathizing with others. Compared to controls, participants benefited from improved social and emotional skills (effect size = 0.57), attitudes (effect size = 0.23), social behaviours (effect size = 0.24), and academic performance (effect size = 0.27, which translates into an 11 percentile point gain in academic achievement).

### Cognitive/learning outcomes

Competence is generally operationalized as self-perceptions, using measures of skill-related self-attitudes (e.g., hope and self-esteem). For example, Ciarrochi, Heaven, and Davies (2007) examined perceptions of competence through indicators of self-esteem, hope, and positive attributional style, and their predictive relationships with future grades and teacher-rated adjustment. This longitudinal study surveyed students in the middle of their first year of high school and again one year later. Using coded questionnaires, the researchers were able to directly match the Time 1 and 2 data of more than 600 students (ranges from 635 [for hostility] to 657 for several school subjects). Hope, in terms of how students felt they were doing and their confidence in problem solving, was the best predictor of grades ( $T = 3.57$ ,  $p < .001$ ). Using the same data set in a subsequent study, Leeson, Ciarrochi, and Heaven (2008) examined the relationships among cognitive ability, positive thinking, and academic

achievement. Over and above cognitive ability, hope predicted better academic performance ( $b = .09, t = 2.80, p < .01$ ). Similarly, Daniels et al. (2009) conducted a predictive study with adolescents transitioning into first-year university ( $N=669$ ), a new achievement setting, to examine the relationships between hopefulness and mastery goals<sup>14</sup> and achievement outcomes. Hopefulness, or the encouraging outlook students had about their performance, predicted mastery goals ( $b = .20, p < .001$ ). Mastery goals predicted enjoyment, which, in turn, predicted achievement. Overall, this model explained 22% of variance in achievement (final course grade and GPA).

In a longitudinal study, Stepp, Pardini, Loeber, and Morris (2011) followed boys living in inner-city Pittsburgh from age 13 - 25 ( $N=257$ ) to examine trajectories of adolescent social competence as a resilience factor among at-risk youth. Social competence had a direct effect on educational attainment in early adulthood: boys who developed social competence in adolescence went further in school irrespective of their involvement with delinquent peers. Growth in social competence across adolescence predicted higher educational attainment and lower serious delinquency during young adulthood.

### Summary

- Self-perceived competence has been associated with academic achievement and performance;
- Hope, as a proxy for perceived competence, may be an important construct in understanding competence;
- Social competence has been related with higher subsequent educational attainment;
- Findings are relatively consistent across age groups and settings.

### Behavioural/social outcomes

Multiple competences serve as protective factors for behavioural problems. Behavioural problems are measured by indicators of deviancy and delinquency, delayed sexual initiation and reduced unplanned pregnancy, and drug use. Social and cultural competences in particular predict positive behavioural and social outcomes.

Several cross-sectional studies with children under the age of 12 confirm a relatively high negative association between social competence and antisocial behaviour (see, for example LaFreniere, Masataka et al., 2002). Sorlie, Hagen, and Ogden (2008) conducted a longitudinal study following 391 Norwegian middle school students in 8th grade and then again in 10th grade, as well as ratings from their parents and teachers, to examine relationships between social competence and antisocial behaviour. Low social competence at age 13 predicted antisocial behaviour at age 15 ( $\gamma = -.33, p < .05$ ). Similarly, a longitudinal study (Stepp, Pardini, Loeber, & Morris, 2011) found that high-risk boys with high levels of social competence decreased their involvement with deviant peers throughout adolescence, which predicted less serious forms of delinquency in early adulthood.

In a systematic review of 116 studies, House, Bates, Markham, and Lesesne (2010) found sufficient and consistent evidence that cognitive competence and behavioural/social competence are protective factors for adolescent sexual and reproductive health outcomes. Specifically, academic

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<sup>14</sup> Mastery goals are intentions to improve and learn skills.

ability/achievement was associated with delaying sexual initiation for all youth, as well as with increases in the use of contraceptives for female adolescents. One behavioural/social competence construct, partner sexual communication, was associated with increases in the use of contraceptives for female adolescents only. There was insufficient evidence to draw conclusions about the relationship between emotional and moral competence and adolescent sexual and reproductive health.

In an older study, Botvin, Baker, Dusenbury, Botvin, and Diaz (1995) used a longitudinal randomized control trial to examine drug use behaviours associated with social competence development. The researchers followed 3597 White middle-class students from 56 schools in New York State over six years starting in Grade 7. Students participated in a drug prevention program during Grade 7, with booster sessions in Grades 8 and 9 that involved building general life skills to enhance individual competence and reduce vulnerability to drug use influences. The program provided skills to build cognitive, behavioural, and social competences including skills for building self-esteem, resisting advertising, managing anxiety, developing personal relationships, and asserting rights. Students who participated in the intervention had significant reductions in both drug and polydrug use relative to controls: up to 44% fewer drug users and 66% fewer polydrug (tobacco, alcohol, and marijuana) users. Monthly and weekly cigarette smoking rates were 15%-27% lower and heavy smoking was 25% lower in intervention subjects than control subjects. Although the effect size was moderate, these results provided strong evidence of the efficacy of the intervention.

Scales, Benson, Leffert, and Blyth (2010) investigated the contribution of developmental assets to thriving behaviours among adolescents. The researchers focused on outcomes of adolescent well-being or thriving, a concept that incorporated not only the absence of problem behaviours or other signs of pathology, but also the signs or indicators of healthy development. The seven thriving indicators were: (a) school success, (b) leadership, (c) helping others, (d) maintenance of physical health, (e) delay of gratification, (f) valuing diversity, and (g) overcoming adversity. The study involved students in Grades 6-12 (N=6000) evenly distributed across 6 ethnic groups. For at least three racial-ethnic groups of youth, cultural competence predicted the thriving index. For White youth, cultural competence was especially important for predicting thriving. Cultural competence specifically predicted four thriving outcomes: 1) valuing diversity (for all racial-ethnic groups); 2) physical health (for all racial-ethnic groups except multiracial youth); 3) delay of gratification (for American Indian and African-American youth); and 4) leadership (for Asian-American, White, and multiracial youth).

## Summary

- Social competence is related to lower rates of antisocial behaviour, delinquency, and drug use;
- Cognitive and behavioural/social competence is associated with delayed sexual initiation and increased use of contraceptives;
- Cultural competence is associated with valuing diversity, increased physical health, delay of gratification, and leadership.
- These findings are relatively independent of gender differences and somewhat independent of racial differences.

## Psychological/emotional outcomes

In the psychological/emotional domain, competence is associated with psychological and emotional well-being. Psychological well-being is indicated by the presence of life satisfaction, self-esteem, vitality, emotional regulation, and positive affect. It is related to the absence or reduction of distress, anxiety, mental disorders, depression, and burnout.

Competence can serve to promote resilience by increasing psychological well-being over time. In a 3-year longitudinal study, Griffin, Botvin, Scheier, Epstein, and Doyle (2002) investigated the relationship among personal competence, psychological distress and well-being, and substance use with a predominantly ethnic minority sample of junior high school students (Grades 7-9) in New York City (N=1184). Greater personal competence, involving cognitive (e.g., decision-making) and behavioural (e.g., self-regulation) skills, predicted less distress ( $r = -.17, p < .001$ ) and greater well-being ( $r = .29, p < .001$ ) over time. In turn, greater well-being predicted less subsequent substance use ( $\beta = -.08, p < .05$ ). Similarly, Holopainen, Lappalainen, Juntilla, and Savolainen (2011) followed an entire age group of adolescents (N=412) from Grade 9 -12. Social competence (specifically cooperation skills) predicted later well-being as measured by higher self-esteem, and absence of depression and burnout ( $\beta = .13$ ), when controlling for earlier levels of psychological well-being.

Perceived competence is important for psychological and emotional well-being. Perceptions of competence and a belief of success, measured by indices of hope, predicted future positive affect ( $T=3.26, p < .01$ ) in a sample of Australian early adolescents (Ciarrochi, Heaven, & Davies, 2007). This result replicated previous longitudinal studies. For example, a longitudinal study with high school students found that hope positively correlated with life satisfaction assessed one year later (Valle, Huebner, & Suldo, 2006). In another longitudinal study, Pedersen and Seidman (2004) examined the relationships between perceived sport competence in early adolescence and self-esteem in middle adolescence among ethnically diverse, urban American girls (N=247). The study followed the girls through the transition from middle school (mean age = 13.15 years) to high school (mean age = 16.43), during a point in girls' trajectory when athletic interest and perceptions of competence tend to decline. Only when perceived team competence was developed did sport participation subsequently have a positive influence on self-esteem; the relationship between sports participation and self-esteem was partially mediated by self-evaluations of team competence, which accounted for a significant but small amount of variance ( $F(1,239) = 5.12, p < .05, \Delta R^2 = .02$ ).

In a similar study focusing on physical competence with late adolescents, physical competence, body image, and instrumentality<sup>15</sup> mediated the relationships between high school sport involvement and college well-being (Greenleaf, Boyer, & Petrie, 2009). This model accounted for 60% of variance in psychological well-being in the sample of 260 female undergraduate students in southern United States. Likewise, Adie and colleagues (2008) found that competence partially mediated the pathway from coach autonomy support to athletes' subjective vitality (i.e., degree to which participants felt alive and energetic when playing their team sport).

Emotional competence as well has been related to psychological well-being. Mavroveli, Petrides, Rieffe, and Bakker (2007) studied the relationships between self-rated emotional competence (trait emotional intelligence) and well-being for 282 Dutch adolescents (11-15 years). Emotional intelligence (EI) was positively associated with adaptive coping styles ( $r = .347, p < .01$ ) and negatively associated with depressive thoughts ( $r = -.604, p < .01$ ). In an experimental study, Nelis and colleagues (2011) examined emotional competence and its correlates among a sample of 92

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<sup>15</sup> Instrumentality is the "tendency to approach the world with a self-determining, assertive attitude" (Greenleaf et al., 2009, p. 715).



undergraduate women (21 of whom were part of a control group). The emotional competence intervention consisted of 18 hours of in-session time enhancing skills to understand emotions, identify and regulate one's own and others' emotions, and use positive emotions to foster well-being. Increasing emotional competence improved psychological well-being, with increases in emotional regulation ( $d = 0.61$ ) and life satisfaction ( $d = 0.59$ ) and a decrease in mental disorders ( $d = 0.62$ ). In a 3-year longitudinal study with 163 Australian first year undergraduate students (mean age = 21.47), measures of emotional competence predicted subsequent well-being (Ciarrochi & Scott, 2006). Difficulty in describing emotions uniquely predicted increases in anxiety ( $\beta = .22, p < .001$ ) and decreases in positive affect ( $\beta = -.28, p = .05$ ). Difficulty managing emotions also predicted decreases in positive affect ( $\beta = -.29, p = .05$ ).

## Summary

- Cognitive and behavioural competence is related with less distress, greater psychological well-being, and subsequent decreases in substance use;
- Hope, as a proxy for perceived competence, and emotional competence are associated with positive affect and life satisfaction;
- Social and physical competence are related to higher self-esteem, and the latter is associated with subsequent sport participation;
- Emotional competence is associated with adaptive coping, positive affect, life satisfaction as well as reduced depressive thoughts, anxiety, and mental disorders.

## Summary of Literature on Competence and Youth Outcomes

Competence is a critical factor for positive outcomes in cognitive/learning, behavioural/social, and psychological/emotional domains. However, the competences are culturally mediated and therefore different competences may be more important in some cultures than in others (Eccles & Gootman, 2002), with limited evidence to indicate that there are competences that are universal. Greater specificity about the outcomes related to type of competence, and their relevance for various cultures and ethnic backgrounds, as well as across age and risk level, may prove beneficial for understanding different outcomes across adolescence.

Competence is a critical protective factor for negative behavioural and psychological outcomes. Table 6.1 provides a summary of these competence outcomes. Specific competences, and self-perceptions of those competences, are related to different positive adolescent outcomes. Although social competence or skills are remarkably important, so too are social connections, social character, social confidence, and social contributions (Pittman et al., 2003). Therefore, competence cannot be fully understood in a vacuum, but in relation with other critical factors in youth and adulthood.



**Table 6.1: Summary table of outcomes associated with competence**

| Outcome domain                      | Competence dimension                        | Outcome measure   | Long-term implication <sup>16</sup> |
|-------------------------------------|---|---|-------------------------------------|
| <b>Cognitive/<br/>learning</b>      | Self-perceived competence                   | Academic achievement and performance  | Achievement                         |
|                                     | Social competence                           | Educational attainment  | Employment                          |
| <b>Behavioural/<br/>social</b>      | Social competence                           | Lower rates of antisocial behaviour and delinquency   | Responsible citizenship             |
|                                     | Cognitive, behavioural, & social competence | Delaying sexual initiation and increased use of contraceptives  | Health                              |
|                                     | Social competence                           | Reductions in drug and polydrug use   | Health                              |
|                                     | Cultural competence                         | Valuing diversity, physical health, delay of gratification, and leadership  | Responsible citizenship             |
| <b>Psychological/<br/>emotional</b> | Cognitive and behavioural competence        | Less distress and greater psychological well-being  | Less substance use                  |
|                                     | Social competence                           | Higher self-esteem<br>Absence of depression and burnout   | Psychological well-being            |
|                                     | Perceived competence                        | Positive affect<br>Life satisfaction  | Life satisfaction                   |
|                                     | Physical competence                         | Self-esteem   | Well-being and physical activity    |
|                                     | Emotional competence                        | Adaptive coping, positive affect, and life satisfaction<br>Reduced depressive thoughts, anxiety, and mental disorders | Psychological well-being            |

<sup>16</sup> Long-term implications indicate links to thriving and well-being over time.

## Chapter 6 References

[Starred studies are described in tabular form in Appendix Chapter 6.]

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## CHAPTER 7: TRANSITIONS

### Defining Transitions

The transitions into and through adolescence and early adulthood (12-25 years old) involve biological, psychosocial, and environmental changes. The beginning of adolescence is loosely linked to the onset of puberty. At an individual biological level, puberty involves hormonal changes, morphological changes, and brain development (Blakemore, Burnett, & Dahl, 2010). Pubertal maturation is not uniform: it involves multiple processes at different ages and rates of development (Blakemore et al., 2010; Ellis, Shirtcliff, Boyce, Dearthorff, & Essex, 2011). Various developmental factors and processes influence the timing and rate of puberty (see Ellis, 2004 for a review). The timing and speed of puberty influences how difficult the transition is for individual adolescents (Ellis et al., 2011).

Puberty is furthermore associated with psychosocial changes that influence identity development, behaviour, and emotion in adolescence. Adolescents navigate through various transitions or developmental shifts of identity, with increasing commitment to identity statuses with age (Meeus, van de Schoot, Keijsers, Schwartz, & Branje, 2010). In relation to behaviours and emotions, adolescents experience increases in sensation-seeking and reward-related behaviours and increased interest and pursuit of relationships with peers (Forbes & Dahl, 2010; Martin et al., 2002). To date, the strongest evidence for puberty-specific influence on behaviour is in the increased pursuit of relationships with romantic partners (Forbes & Dahl, 2010; Forbes et al., 2010). Furthermore, these behaviours are complexified by cultural and social norms (Collins, 2003; Feldman, Turner, & Araujo, 1999).

At a macrolevel, from age 12 to 25, transitions include environmental shifts from elementary/middle school to high school, from high school to post-secondary/workplace, and from post-secondary to workplace. Depending on their life contexts and social conditions, pathways to adulthood differ; social class and resources/support of one's family of origin are linked strongly with different pathways (Cohen, Kasen, Chen, Hartmark, & Gordon, 2003). The strongest determinants of adolescent health worldwide are structural factors including income inequality, access to education, safe and supportive families and schools, and positive peer support (Viner et al., 2012). As a result of different social determinants of health and life contexts, young people may experience additional transitions, for example, into and out of systems of care, into and out of the justice system, into adult health services, into new living arrangements, into parenting roles, and/or geographic migration. Generally, shifts and changes over adolescence are associated with some negative health outcomes, such as increased depression and physiological stress (Stroud et al., 2009). For those who experience family instability, transitions are much more difficult (Keller, Cusick, & Courtney, 2007).

In the literature, there is no clear agreement about the timing of transitions for four main reasons. First, biological, psychosocial, and environmental transitions through adolescence are not synchronous; different types of transitions occur at different times. Second, there is intra-individual variance, or in other words, there is variance of different transitions and their timings within an individual. Third, there is also inter-individual variance: variance of different transitions and their timings among individuals (Ellis et al., 2011; Forbes & Dahl, 2010). Finally, some adolescents experience additional key transitions due to life circumstances (e.g. transition to parenting, transition out of care, etc.; Keller et al., 2007). As a result of all of these differences, transitions during adolescence are extremely complex. Different youth negotiate multiple changes at different times than their peers, within different intra- and inter-cultural environments, with varying resources, and therefore require flexible, culturally appropriate and responsive supports throughout these transitions.

In this report, we define transitions as shifts from one general developmental stage to the next. To avoid the conflicting timing and variance of different types of transitions, this report focuses on three generally consistent key environmental transitions that provide a useful framework for program design:

1. The transition from elementary/middle school to high school, which tends to correspond with the shift from early to middle adolescence.
2. The transition from secondary to post-secondary education, which tends to correspond with the shift from mid- to late adolescence.
3. The transition from educational settings to the world of work, which tends to correspond with the shift from late adolescence to early adulthood, but is not necessarily age-specific.

Autonomy, relatedness, and competence can serve as protective factors during transitions, improving cognitive/learning, behavioural/social, and psychological/emotional outcomes. These critical factors are important during every transition and are themselves interrelated. In the following sections, we select one critical factor that has primacy in each transition to illustrate how the presence of critical factors can support young people during transitions. Our focus on one critical factor per transition does not indicate that the other critical factors are not operating at this transition.

### **From secondary to post-secondary: Autonomy**

During the transition to post-secondary education, adolescents experience a new achievement context and increasing independence. There is conflicting research about psychological adjustment during this transition, with some studies associating the transition with lower psychological well-being, and higher anxiety and depression (Beck, Taylor, & Robbins, 2003; Cooke, Bewick, Barkham, Bradley, & Audin, 2006), while others associate this transition with higher overall subjective well-being (self-esteem, self-efficacy, and social support; Schulenberg & Zarrett, 2006). The latter study credits greater autonomy in making choices about roles and contexts for the increase in well-being.

Through adolescence, several dimensions of autonomy increase, including volition and decision-making (for a review, see Wray-Lake, Crouter, & McHale, 2010). Joint decision-making in families tends to be highest during middle adolescence and lower in early and late adolescence, with adolescent-unilateral decision-making rising sharply between 15-17 years and taking more prominence in late adolescence (Gootman & Eccles, 2007; Wray-Lake et al., 2010). However, there is a dearth of longitudinal research examining multiple dimensions of autonomy throughout adolescence (Wray-Lake et al., 2010).

Autonomy-supportive learning environments and self-driven goals are important for achievement and motivation through this transition. Autonomy-support includes invitations and encouragement for adolescents to make decisions about what they want to do and how they want to go about various tasks with support as needed. Autonomy-supportive, rather than controlling, contexts and self-directed goals are associated with increased graded performance, deeper processing, greater persistence, improved job-seeking, higher social competence, and autonomous motivation for learning during this difficult transition to post-secondary education (Soenens & Vansteenkiste, 2005; Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004).

Autonomous goal regulation has a critical role as a tool to navigate transitions and to influence subjective well-being. Autonomous goal regulation involves self-directed personal goals that are relevant to the individual's own life planning; these goals are selected for autonomous reasons. Litalien, Lüdtke, Parker, and Trautwein (2013) examined the relationships between autonomous goal regulation and subjective well-being (life satisfaction, positive and negative affect, and self-esteem)

during the transition out of secondary education. The longitudinal study involved 2,284 German adolescents at the end of high school and again two years later. Overall, subjective well-being and goal regulation were more favourable after the transition out of secondary education, with the exception of participants who did not follow traditional educational trajectories. Participants who did not continue into post-secondary education experienced lower life satisfaction post-transition. Autonomous goal regulation prior to the transition positively predicted life satisfaction ( $\beta = 0.10$ ,  $p < .01$ ), positive affect ( $\beta = 0.15$ ,  $p < .001$ ), and self-esteem ( $\beta = 0.10$ ,  $p < .01$ ), and negatively predicted negative affect ( $\beta = -0.11$ ,  $p < .001$ ) after the transition.

Decision-making opportunities can either facilitate or exacerbate the difficulties of transition, depending on the timing and type of autonomy dimension, as well as individual-contextual differences. For example, for adolescents who prematurely experience a large amount of autonomy and independence, additional decision-making opportunities can lead to further distress during transitions (Gootman & Eccles, 2007). Therefore, timing and dosage are important; increased decision-making opportunities in middle adolescence can support adolescents through the transition to post-secondary education. For example, involvement in decision-making during adolescence is not related to male depression during adolescence, but does predict less depression during late adolescence (19-22 years) (Gootman & Sameroff, 2004).

## Summary

- Individual decision-making increases through adolescence;
- Autonomy-supportive environments are critical for transitions from secondary to post-secondary education;
- Autonomous goal regulation during middle adolescence facilitates this transition and is associated with increased subjective well-being in late adolescence;
- Timing and dosage of opportunities for decision-making is critical; decision-making opportunities during middle adolescence predict less depression during late adolescence for males if they are not already experiencing distress from premature independence.

## From elementary to secondary education: Relatedness

Early adolescence is characterized by high dependence on parental relationships. Relationships with parents shift, and peer relatedness and romantic relationships gain importance through the transition from elementary to secondary education (Gorrese & Ruggieri, 2012; Markiewicz, Lawford, Doyle, & Haggart, 2006). Teacher-student relationship quality accounts for a significant amount of variance in student participation in school activities in Grades 7-9 (Murray, 2009; Roorda, Koomen, Spilt, & Oort, 2011). However, there is limited evidence about how these relationships change through adolescence, particularly with respect to the effect of transitions. As well, research to date has not systematically examined the functions of relatedness as adolescents transition to emerging adults (Gorrese & Ruggieri, 2012; Markiewicz et al., 2006).

Relatedness can serve as a protective factor during the transition to secondary school, preventing negative outcomes such as delinquency, school misconduct, and antisocial and problem behaviours, as well as depression and distress (Barber & Olsen, 1997; Crosnoe, Johnson, & Elder, 2004; Damanet & Van Houtte, 2012; Wong, Eccles, & Sameroff, 2003). Despite the critical importance of relatedness in



early adolescence, the transition to secondary education is accompanied by a decrease in relatedness with parents and teachers, resulting in a lack of relatedness with adults in adolescents' lives. During this transition, peer group belonging is associated with reduced internalization of behaviour problems (Newman, Lohman, & Newman, 2007). Relationships with self-regulating peers are associated strongly with antisocial behaviour, so much so that they neutralize the influence of neighbourhood and school (Barber & Olsen, 1997). Therefore, opportunities to build relationships with self-regulating peers, and increase social competences to support those relationships, are especially important in the transition to secondary education (Barber & Olsen, 1997; Holopainen, Lappalainen, Juntilla, & Savolainen, 2011).

A sense of inclusion and belonging is a key element during this transition. A 2-year longitudinal analysis of African American youth (Wong, Eccles, & Sameroff, 2003) specifically examined transitions from junior high to high school (across 7th – 9th grades). Adolescents who perceived more incidents of racial discrimination with teachers, school staff, and classmates in Grade 8 showed declines in their cognitive and learning outcomes (reduced self-concept and teacher-reported grades), increases in negative social and behavioural outcomes (increased problem behaviours), and increases in negative psychological and emotional outcomes (psychological distress, reduced psychological resilience, increases in anger and depressive symptoms) from Grade 7 to Grade 9. Connection to ethnic identity served as a protective factor against aversive effects of discrimination: those adolescents who perceived high discrimination and had high connection to their ethnic group were doing as well, or almost as well, as their counterparts who perceived very little or no discrimination (Wong et al., 2003).

During the transition into adolescence, young people may also begin sexual and/or romantic relationships with dating activity increasing with age (Collins, 2003). The initiation of dating involvement is associated more closely with cultural and social expectations, especially age-graded behavioural norms, than with timing of pubertal development (Collins, 2003; Feldman, Turner, & Araujo, 1999). Early and middle adolescents' romantic relationships tend to be less intimate than later relationships, and tend to focus on affiliation and sexual systems rather than attachment and caregiving as they do in late adolescence (Roisman, Booth-LaForce, Cauffman, Spieker & The NICHD Early Child Care Research Network, 2009). Research about transitions into romantic relationships during adolescence is relatively limited with few empirical studies on the topic. Furthermore, these few studies do not explain variation in relationship experiences (Meier & Allen, 2009).

Romantic relationship outcomes in young adulthood are either additively and/or interactively predicted by relatedness and social competence in early adolescence (Gest, Sesma, Masten, & Tellegen, 2006; Sroufe, Egeland, Carlson, & Collins, 2005). Peer relationships including the extensiveness of peer networks, peer intimacy, and social support contribute to romantic relationship quality (Taradash, Connolly, Pepler, Craig, & Costa, 2001; Linder, Crick, & Collins, 2002). For example, in a longitudinal study following 957 youth from infancy through age 15, peer social competence predicted decreased depth (e.g., less intense emotional investment and greater number of partners), but greater quality (e.g., intimacy and nurturance) of romantic relationships (Roisman et al., 2009). Furthermore, support from a prosocial romantic partner is in turn associated with improving one's sense of mastery through the transition to adulthood (Burt & Paysnick, 2012; Surjadi, Lorenz, Wickrama, & Conger, 2011).



## Summary

- Adolescents experience a gap in relatedness with adults during the transition to high school. Opportunities to develop long-term relationships with non-parental and non-teacher adults may address this gap;
- Opportunities to develop relationships with self-regulating peers can support adolescents through this transition;
- Inclusive environments are critical;
- Connection to one's ethnic identity is a protective factor during this transition for ethnic minority youth;
- Peer relatedness and peer social competence contribute to romantic relationship quality, which in turn supports the transition to adulthood.

### From educational settings to workplace: Competence

During the transition from educational to work contexts, adolescents are negotiating new environments and new responsibilities. They may also be experiencing complementary transitions, such as the shift to independent living, that require new skills (Litalien et al., 2013). There is limited evidence about transitions during late adolescence, in part due to the difficulty in accessing late adolescents if they are not in post-secondary education. Furthermore, the transition to the workforce occurs across a large age range, with considerable overlap for many individuals in middle and late adolescence (15-25) who are both students and employees simultaneously (see Zimmer-Gembeck, & Mortimer, 2006 for a review). The few key longitudinal studies examining the transition to emerging adulthood, although they tend not to be current, suggest that planful competence, including goal setting, intellectual capacity, productivity, self-confidence, and self-control, are key components for success in the world of work and future relationships (Burt & Paysnick, 2012; Clausen, 1991; Quinton, Pickles, Maughan, & Rutter, 1993).

More recently, Roisman, Masten, Coatsworth, and Tellegen (2004) examined data from a longitudinal study that followed 173 children over 20 years, with follow-ups in emerging adulthood (age 17-23), and again in young adulthood (approximately 30 years old). Four areas of competence – academic achievement, social competence with peers, appropriate conduct, and coping ability – predicted success in the same domains 10 years later, as well as success in salient developmental tasks of young adults in the domains of work and romantic relationships (Roisman et al., 2004). The most unique predictor was planfulness/future motivation when all other emerging adult competence variables were controlled (Masten et al., 2004). The effects of childhood competences (academic achievement, social competence, and conduct) were almost entirely mediated by the effects during emerging adulthood, in that the competence at emerging adulthood best predicted future competence and thriving in work, romantic relationships, and parenting. Further, competence in the transition to emerging adulthood was especially important for individuals who grew up in adverse situations. Planfulness and future motivation, as well as autonomy and adult support outside the family, were indicators that predicted resilience over the transition to adulthood among individuals who had low competence and experienced high adversity during their adolescence (Masten et al., 2004).

During the transition to work, adolescents are also often reaching the age of majority and taking on additional civic responsibilities. Obradovic and Masten (2007), using the same dataset as Masten et al. (2004), examined the relationship of competence and civic engagement during the transition through emerging adulthood (late adolescence). Adolescent academic, social, and conduct

competences explained variance in citizenship (14%) and volunteering (8%) in emerging adulthood over and above relevant background variables. Academic and social competence emerged as unique predictors. In terms of future thriving, competence in age-salient developmental tasks through early, mid-, and late adolescence accounted for 58% of variability in citizenship ( $F=13.27, p < .001$ ) and 24% of variability in volunteering ( $F=3.06, p < .001$ ) in young adulthood (ages 28-30).

## Summary

- During the transition from education to workplace, adolescents have increasing responsibilities and new tasks;
- Four types of competence in adolescence – academic competence, social competence with peers, appropriate conduct, and coping ability – predict success in salient developmental tasks of young adults, including civic engagement;
- Planful competence is a unique predictor and serves as a protective factor for individuals who had low competence and/or adverse life conditions as adolescents.

## Other transitions

During adolescence, different contexts and pathways lead to additional transitions: transitions out of child/adolescent-specific systems (e.g., child health care system, child welfare system, and youth justice system) and into new responsibilities (e.g., parenthood and independent living). In this section, we focus on three of these transitions: the transition out of the child welfare system, the transition to parenting, and the transition to independent living.

Adolescent youth in care<sup>17</sup> simultaneously transition out of care and into adulthood. There is limited research in the Canadian context about the transition out of the child welfare system (Tweddle, 2007). However, in the United Kingdom (for a review, see Stein, 2006) and the United States (Courtney & Dworsky, 2006), adolescents transitioning out of care are doing more poorly on various dimensions than other adolescents. They fare worse on indicators of education, health, homelessness, and employment. Many foster youth who choose to exit the child welfare system and move to independent living do so between the ages of 16-18 years, condensing and speeding up the transition to adulthood (Stein, 2006). Those who choose to stay in the child welfare system until they age out are more likely to experience better outcomes than those who choose to or are forced to leave care (Courtney & Dworsky, 2006).

Although all of the critical factors are important during this transition, relatedness is a key critical factor for young people exiting care; adolescents who have a strong connection with a family member are more likely to experience better outcomes (Stein, 2006). In the absence of family members, relationships with non-familial mentors can support adolescents in care to acquire competencies for the transition to adulthood. Osterling and Hines (2006) conducted a 2-year mixed-methods exploratory evaluation of a mentorship program that assisted older adolescent foster youth to acquire skills and resources for successfully transitioning out of foster care and into adulthood. The Advocates to Successful Transition to Independence (ASTI) program provided mentoring and advocacy services to youth from 14-21 years to prepare for emancipation and to support these youth for another three

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<sup>17</sup> Youth in care refers to adolescents in the child welfare system.

years. Youth reported that their relationships with their advocates were helpful, supportive, encouraging, dependable, and consistent. As a result of the relationships with their mentors, youth reported increased social and emotional competence, and increased skills for transitioning to independent living. Similarly, Rhodes, Haight, and Briggs (1999) examined outcomes for foster youth in the Big Brothers Big Sisters mentorship program using a subset of a national study. Youth were randomly assigned to treatment or control with changes in peer relationships assessed after 18 months. Foster youth (n=90) and a matched group of non-foster youth (n=90) were compared. Peer relationships of mentored non-foster youth remained stable. Mentored foster youth living with relatives reported improvements in prosocial support ( $F(1, 171) = 6.23, p < .05$ ) and self-esteem enhancing supports ( $F(1, 174) = 3.94, p < .05$ ), while the control foster youth showed decrements over time. Further, foster parents were more likely than non-foster parents to report that their child showed improved social skills, greater comfort, and trust with others as a result of the mentorship. Although the sample size was small and included only a small proportion of non-relative foster parents (n = 12), this study suggests that mentoring programs may enhance peer relationships of foster youth as they negotiate various life transitions.

There is a lack of research focused on supports for adolescents as they navigate the transition to parenting. Instead, the literature predominantly focuses on dysfunctional parenting and negative outcomes of teen pregnancy (Al-Sahab, Heifetz, Tamim, Bohr, & Connolly, 2011; Lipman, Georgiades, & Boyle, 2011; Ngu & Florsheim, 2011). Relatedness and competence are especially important for adolescent parents. In one study, Ngu and Florsheim (2011) examined factors associated with paternal functioning among 60 young, primarily African American high-risk fathers (mean age = 17.7) and their co-parenting parents (mean age = 16.1) over three years. Fathers were screened as at-risk for paternal failure based on a history of school dropout, psychopathology, poor family relations, and/or serial fatherhood. High-risk fathers with relationally competent partners had higher relational competence scores over time. Higher relational competence scores were associated with more positive paternal functioning scores. Relational competence (consisting of social and emotional competence) included five core competencies: 1) capacity for cognitive empathy; 2) capacity to appreciate partner's less attractive characteristics; 3) capacity to clearly express positive feelings about the partner; 4) capacity for commitment and partnership; and 5) capacity to understand relational growth. Paternal functioning was based on self-reports, time spent with child, and observed parenting. Although this study had a fairly small sample size, it contributes insight to the importance of social and emotional competence for the transition to parenting.

During the transition to parenting, relatedness, in terms of belonging and racial identity, may be an important factor to support adolescent coparenting. In a study involving 52 low-income African American adolescent parents, adolescents who had less distress about their racial identity were more likely to report higher levels of coparenting satisfaction. Coparenting satisfaction was indicated by a sound working relationship with their child's other parent in regards to care, decision, and responsibilities related to the child. Those parents who experienced significant distress due to internalized racism reported lower coparenting satisfaction. Adolescent parents who recognized the impacts of racism, who were frequently immersed in their minority culture, and/or who had internalized their racial identity with their self-concept comfortably reported more coparenting satisfaction (Varga & Gee, 2010).

Late adolescents in Canada experience an increasingly elongated transition through emerging adulthood, spending longer living in their parents' homes. According to Statistics Canada's (2001) Census, 50% of men were living at home at the age of 24 and 50% of women were living at home at the age of 22.5. According to Statistics Canada's 2011 Census, Ontario had the highest proportion of young adults living in their parents' homes (50.6%). Compared with Canadian youth in general, Aboriginal youth are more likely to move out of their parents' home at a younger age, while

immigrant youth are relatively more likely to live with their parents for longer periods of time (Beaujot & Kerr, 2007). At a systemic level, overall economic climate, socioeconomic status, and living conditions greatly influence the timing of leaving home (Beaujot & Kerr, 2007; Seiffge-Krenke, 2009). At the individual and social levels, autonomy during mid-adolescence is a key influence in leaving-home patterns. For example, in a longitudinal study following youth from age 14-25 (n=93), on-time leavers reported that their parents reduced levels of support between ages 14-16, and showed an authoritative parenting style that balanced warmth and negotiations about autonomy and independence. In contrast, emerging adults still living at home at age 25 experienced substantially higher levels of parental support throughout adolescence (Seiffge-Krenke, 2009). In terms of adolescent well-being, the timing of home-leaving or even specific living situation is not as predictive as the motivational dynamics underlying the living situations. In a study involving 224 Belgian emerging adults and their parents, emerging adults experienced more well-being as measured by life satisfaction, subjective vitality, distress and depressive symptoms when their place of residence reflected personal values and needs (i.e., autonomously motivated; Kins, Beyers, Soenens, & Vansteenkiste, 2009).

## Summary

- Adolescents experience negative outcomes during their transition out of the child welfare system;
- Relatedness, with familial adults or non-familial mentors, is a key critical factor to support adolescents transitioning out of care;
- The transition to parenthood is predominantly studied from a deficit/problem-based perspective;
- Relational competence is a key critical factor associated with improved paternal functioning during the transition to parenthood;
- Racial identity formation supports co-parenting;
- Autonomy-support during adolescence supports increasingly independent living during emerging adulthood.

## Chapter 7 References

[Starred studies are described in tabular form in Appendix Chapter 7]

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## CHAPTER 8: INTERVENTIONS

In light of the amount of time youth spend outside of school hours, youth programming and interventions during those hours have become the focus of intense attention. Young people’s time out-of-school hours have implications for development of cognitive/learning outcomes (Lauer et al., 2006), behavioural/social outcomes (Durlak & Weissberg, 2007), and psychological/emotional outcomes (Armstrong & Manion, 2006). With increased funding pressures on program-based interventions (Fredricks & Simpkins, 2012), youth programmers and policy-makers have to process enormous quantities of information to make informed decisions about which programs are worthy of increased and continuing funding.

The purpose of this chapter is to review the literature on interventions for youth development so that knowledge can be shared with program designers. We accomplish this goal by describing the following five elements: (i) direct interventions and reviews of interventions that have been developed to address the critical factors identified in this report; (ii) key aspects of program design; (iii) components of program design critical to success; (iv) measures of impact; and (v) applications to programming moving forward. This chapter is structured to fulfill the requirements of those five elements systematically (see Table 8.1) through an analysis organized by the three critical factors.

**Table 8.1: Outline of the Chapter**


| Five Elements   | How Each Element is Addressed   |
|---|---|
| (i) direct interventions and reviews of interventions that have been developed to address the critical factors identified | The three chapter sections have been organized by the three critical factors (autonomy, relatedness, and competence)  |
| (ii) key aspects of program design<br>(iii) components of program design critical to success                              | Each section includes descriptions of two interventions with strong evidence, two interventions with moderate evidence, and two reviews of interventions. The Implications for Program Design section outlines key components and considerations for program designers. Further information about each intervention is provided in tabular form in Appendix: Chapter 8. |
| (iv) measures of impact   |   |
| (v) applications to programming moving forward  | The final section of the chapter includes applications for programming moving forward.  |

Tables 8.2-8.4 provide an at-a-glance overview of the outcomes, frameworks, sample characteristics, and critical factors in each intervention detailed in the section. The first two interventions within each of these tables have strong evidence, the next two interventions have moderate evidence but are included because of the significance of the findings and their promise, and finally, the last two columns represent relevant studies or reviews of interventions related to critical factors.

Details about the purposes, research instruments, and key findings for interventions are outlined in Appendix: Chapter 8. Specific implementation details are often beyond the scope of intervention reports and go underreported (Mayo-Wilson, 2007). In the cases where component-specific details were not provided, we have included considerations that may prove useful for program designers.

## Autonomy

**Table 8.2: Methods from Interventions in the Autonomy Critical Factor at a Glance**

| Evaluations             | Evidence-based      |   | Promising           |                                | Relevant Studies or Reviews |                                |
|-------------------------|---------------------|---|---------------------|--------------------------------|-----------------------------|--------------------------------|
|                         | Tebes et al. (2007) | Lawford, Ramey, Rose-Krasnor, & Proctor (2012)<br> | Abel & Greco (2008) | Taylor-Powell & Calvert (2006) | Berry & LaVelle (2012)      | Adie, Duda, & Ntoumanis (2008) |
| Outcomes:               |                     |   |                     |                                |                             |                                |
| Cognitive/Learning      | ✘                   | ✓   | ✘                   | ✘                              | ✓                           | ✘                              |
| Behavioural/Social      | ✓                   | ✓   | ✘                   | ✓                              | ✓                           | ✘                              |
| Psychological/Emotional | ✘                   | ✓   | ✓                   | ✓                              | ✓                           | ✓                              |
| Dominant Framework:     |                     |   |                     |                                |                             |                                |
| Developmental Assets™   | ✘                   | ✘   | ✓                   | ✘                              | ✘                           | ✘                              |
| Five Cs (or related)    | ✓                   | ✓   | ✘                   | ✓                              | ✓                           | ✘                              |
| SDT                     | ✘                   | ✘   | ✘                   | ✘                              | ✓                           | ✓                              |
| Other                   | ✘                   | ✘   | ✘                   | ✘                              | ✘                           | ✘                              |
| Sample populations:     |                     |   |                     |                                |                             |                                |
| Early adolescence       | ✓                   | ✓   | ✓                   | ✓                              | ✓                           | ✘                              |
| Mid-adolescence         | ✓                   | ✓   | ✘                   | ✓                              | ✘                           | ✘                              |
| Late adolescence        | ✘                   | ✘   | ✘                   | ✘                              | ✘                           | ✓                              |
| Critical Factor:        |                     |   |                     |                                |                             |                                |
| Autonomy                | ✓                   | ✓   | ✓                   | ✓                              | ✓                           | ✓                              |
| Relatedness             | ✘                   | ✓   | ✘                   | ✓                              | ✓                           | ✘                              |
| Competence              | ✘                   | ✓   | ✘                   | ✓                              | ✘                           | ✘                              |

### Legend

✓ represents element present ✘ represents element absent

Early adolescence 12-15 (Grade 7-10), mid-adolescence 16-20 (Grade 11-postsecondary), late adolescence 21-25

## Interventions addressing autonomy

Autonomy is a sense that choices are volitional, and activities are self-chosen according to intrinsic interests (Deci & Ryan, 1985). Healthy integration of autonomy predicts well-being and lower levels of negative behaviour (VanPetegem et al., 2013). Within the Autonomy critical factor, four direct interventions were reviewed, three from the United States and one from Canada, as well as two reviews of interventions. Most of the interventions employed quantitative methods. While five studies targeted behavioural/social and another five psychological/emotional outcomes, three sources addressed all three outcome domains. Four of the sources focused on youth in early to mid-adolescence; one focused only on youth in early adolescence, and the remaining study looked at young adults. Although all studies were focused primarily on autonomy, three sources focused on all three critical factors.

Tebes et al. (2007) studied the preventative qualities in after-school programs that reduced adolescent risk-taking behaviour with a philosophical orientation that a strengths-based approach in combination with structured, supervised activities can significantly shape the outcome of adolescent development. The 304 participants included 149 students in the intervention group and 155 in a control group. Attitudes towards substance use were routinely assessed at the beginning, end, and one year after the program. Participation in the program increased participant autonomy and predicted a significant reduction in substance use and an elevated understanding of harmful behaviours. These developments were maintained according to the follow-up interview one year later. Therefore, risk behaviour in urban environments might be mitigated by after-school programs that specifically advocated substance use prevention.

Lawford, Ramey, Rose-Krasnor, and Proctor (2012) examined how features of a program, as well as youth's level of involvement, contributed to the successful development of adolescents in a national exchange program. The researchers collected survey data from participants about their experience within the Youth Exchanges Canada program. Participants in the program spend time in another part of the country experiencing a range of activities including educational field trips and sight-seeing. Data from 656 adolescents aged 12-18 indicated that both positive features of the program, using Eccles and Gootman's (2002) model, and the adolescents' input into the planning and duration of their exchange positively predicted successful development. While the research focus of this study included a range of predictors of developmental outcomes, its key contribution is autonomy as defined through youth input. Youth express their autonomy through increased input and decision-making opportunities within programs and tasks.

Abel and Greco (2008) conducted an experiment to assess the impact of an early sexual abstinence-focused empowerment program for urban, multicultural, adolescent youth. Youth in public school Grades 5 to 9 participated in 18 eight-week intervention groups. Surveys were completed before and after the intervention took place. No control group was used, but the sample only included youth who filled in both the pre-program and post-program surveys. Each of the targeted variables—open communication, attachment, and attitude toward abstinence in parent-child relationships—increased after program completion. The authors report that self-esteem, a component of autonomy, can work as a preventative factor for early sexual behaviour. While the authors suggested that a psycho-educational focus in combination with an assets-driven model might be a useful approach to increase positive youth development, they acknowledged several design flaws that might affect the credibility of these results; better-designed studies would give more confidence in the study results.

Taylor-Powell and Calvert (2006) reported on the value and impact on youth development of the 4-H Arts and Communication program based on a state-wide evaluation. A total of 724 youth completed a survey, while focus groups and interviews were conducted with youth, program alumni, and parents. The 4-H Arts and Communication program received praise from respondents for its uniqueness.

Respondents highlighted the variety of activities provided and the supportive climate as contrasted with the often-competitive climate in a school context. These aspects were viewed as contributing to the success of the program and resulting in positive outcomes for youth development. This study included a comprehensive look at many of the concepts outlined in current literature (e.g. value of connections, communication). The element most relevant to this review is autonomy, identified as self-determination and self-discipline. The authors identify greater career achievement later in life as an outcome of increased autonomy.

Berry and LaVelle (2012) discussed Self-Determination Theory in conjunction with proximal or distal reasons for joining after-school programs. The 277 youth involved in this study were mostly 12-14 years old and lived in low-income neighbourhoods. Students completed surveys at the beginning and end of the school year to assess changes in socio-emotional outcomes. Students who joined the program on their own initiative experienced significant increases in self-esteem, autonomy, and prosocial behaviours compared to those who joined as a result of outside influences. Moreover, students who claimed their motivation was internal at the beginning of the program but later reported their reason for staying in the program was external reported lower developmental assets. These results suggest that the locus of motivation may predict youth developmental outcomes.

Adie, Duda, & Ntoumanis (2008) examined the role of coach autonomy support on motivation and well-being of young adult sport participants in the United Kingdom (mean age 22.75). The 539 young adults involved in this study are participants in team sports and had been working with their coach for an average of 3 years. Participants volunteered to fill out a survey either before or after a practice. Structural equation modeling analysis revealed that coach autonomy support predicted need satisfaction for autonomy, competence, and relatedness. Coach autonomy support predicted greater subjective vitality when engaged in sport, and was negatively related to feeling emotionally and physically exhausted.

## Summary

- The extent to which youth feel in control of a program, including decisions about participating in the program and decision-making within the program, contributes to their success in the program.
- By specifically targeting risk behaviour, after-school programs may reduce the progression and escalation of risk behaviour and thus offer greater autonomy for young people to address the adolescent risk factors in unsupervised out-of-school time.
- Autonomy support by coaches and other non-parental adults in programs makes an important contribution to young people's subjective well-being.
- Interventions examining autonomy most often are based on the Five Cs framework.

**Relatedness**

**Table 8.3: Methods from Interventions in the Relatedness Critical Factor at a Glance**

| Evaluations             | Evidence-based                         |                                   | Promising                         |                       | Relevant Studies or Reviews       |                           |
|-------------------------|--|-----------------------------------|-----------------------------------|-----------------------|-----------------------------------|---------------------------|
|                         | Wenzel, Weichold, & Silbereisen (2009) | Thomas, Davidson, & McAdoo (2008) | Tierney, Grossman, & Resch (2000) | Herrera et al. (2007) | Vandell, Reisner, & Pierce (2007) | Durlak & Weissberg (2007) |
| Outcomes:               |  |                                   |                                   |                       |                                   |                           |
| Cognitive/Learning      | ✗                                      | ✗                                 | ✓                                 | ✓                     | ✓                                 | ✗                         |
| Behavioural/Social      | ✓                                      | ✓                                 | ✓                                 | ✓                     | ✓                                 | ✓                         |
| Psychological/Emotional | ✓                                      | ✓                                 | ✓                                 | ✓                     | ✗                                 | ✗                         |
| Dominant Framework:     |  |                                   |                                   |                       |                                   |                           |
| Developmental Assets™   | ✓                                      | ✓                                 | ✗                                 | ✗                     | ✓                                 | ✗                         |
| Five Cs (or related)    | ✗                                      | ✗                                 | ✗                                 | ✗                     | ✗                                 | ✓                         |
| SDT                     | ✗                                      | ✗                                 | ✗                                 | ✗                     | ✗                                 | ✗                         |
| Other                   | ✓                                      | ✓                                 | ✓                                 | ✓                     | ✗                                 | ✗                         |
| Sample populations:     |  |                                   |                                   |                       |                                   |                           |
| Early adolescence       | ✓                                      | ✗                                 | ✓                                 | ✓                     | ✓                                 | ✓                         |
| Mid-adolescence         | ✗                                      | ✓                                 | ✓                                 | ✗                     | ✗                                 | ✓                         |
| Late adolescence        | ✗                                      | ✗                                 | ✗                                 | ✗                     | ✗                                 | ✗                         |
| Critical Factor:        |  |                                   |                                   |                       |                                   |                           |
| Autonomy                | ✗                                      | ✓                                 | ✓                                 | ✗                     | ✗                                 | ✗                         |
| Relatedness             | ✓                                      | ✓                                 | ✓                                 | ✓                     | ✓                                 | ✓                         |
| Competence              | ✗                                      | ✗                                 | ✓                                 | ✗                     | ✓                                 | ✗                         |

**Legend**

✓ represents element present ✗ represents element absent

Early adolescence 12-15 (Grade 7-10), mid-adolescence 16-20 (Grade 11-postsecondary), late adolescence 21-25

## Interventions addressing relatedness

Relatedness is quantifiably distinct from competence and autonomy (Van Gundy, 2002). It is the need to initiate and maintain secure emotional attachments with others. Satisfaction associated with relationships is consistently linked with thriving (Jang et al., 2009). Within the Relatedness critical factor, four direct interventions were reviewed, three from the United States and one from Germany, as well as two reviews of interventions. Three of the interventions employed quantitative methods, while one intervention employed qualitative methods. Behavioural/social outcomes were addressed in all five interventions. The two promising interventions examined all three outcome domains. None of the sources focused on youth in late adolescence; all focused on youth in early and/or mid-adolescence. All sources focused primarily on relatedness. One intervention focused on all three critical factors.

Wenzel, Weichold, and Silbereisen's (2009) study investigated whether or not a life skills program (LSP) for the prevention of adolescent substance misuse can have positive influences on a school context and on school bonding. The study also explored the extent to which effects on alcohol use are mediated by positive effects on school bonding resulting from program participation. The LSP IPSY (Information + Psychosocial Competence = Protection) was implemented over a 3-year period via specially trained teachers. Analyses were based on a German evaluation study utilizing a quasi-experimental design (intervention/control) with school-wise assignment to the respective groups. Analyses were based on four measurement points (N. 952, 10 years at pre-test). IPSY was well implemented, highly accepted by teachers and students; teachers profited regarding their teaching methods. ANCOVAS revealed positive program effects on alcohol use and school bonding. Multiple regressions indicated that relatedness, demonstrated as positive influences through school bonding following program participation, partially mediated effects on alcohol use.

Thomas, Davidson, and McAdoo (2008) examined the effects of a culturally relevant school-based intervention designed to instill connection to cultural identity and promote cultural assets (i.e., ethnic identity, collectivist orientation, racism awareness) among a group of 74 African American adolescent girls; of whom 57% were freshmen and 43% were sophomores in high school. Thirty-six were in the intervention group and 38 in the control group. Pre- and posttests were administered to assess intervention effects. Separate ANCOVA analyses were performed to test the intervention effects on (a) ethnic identity, (b) collectivist orientation, (c) racism awareness, (d) intentions to liberatory youth activism, and (e) actual liberatory youth activism. In comparison to those who did not participate, participants in the intervention had a stronger ethnic identity, stronger sense of communalism, enhanced awareness of racism, and greater intention to, and increased participation in, liberatory youth activism at the end of the program. The authors suggested that increased relatedness, as seen through communalism and shared cultural assets, may have implications for risk prevention.

Tierney, Grossman, and Resch (2000) reported on evidence that mentoring programs can positively affect youth based on research conducted at programs associated with the Big Brothers and Big Sisters of America (BBBS) program in the United States. A comparative study of 959 youth aged 10 to 16 who had applied to BBBS programs was conducted, where a treatment and control group were respectively established with those who received programming and those who did not. Data on social, personal, and academic outcome areas were collected in the form of self-reported data through baseline and follow-up participant interviews, or forms completed by staff. The study was designed to leverage the value of relatedness for positive outcomes through the meaningful mentorship within the BBBS program. Participants who received programming were less likely to have used drugs and alcohol during the 18-month study period, and were more likely to report positive social relationships than their peers in the control group.



Herrera et al. (2007) studied the degree to which the Big Brothers and Big Sisters School-Based Mentoring Program could provide youth with measurable benefits. This study involved youth in Grades 4 to 9 (9 to 16 years old) who had been recruited into the School-Based Mentoring program. Overall, 1,139 study participants were randomly assigned to a treatment group (565 youth who received matching with a mentor) and a control group (574 youth who were not matched with the mentor). The youth, teachers, and mentors were surveyed at three time points over a period of 15 months to determine what benefits occurred from experience in the program. Improvements were evident and observable in the academic attitudes, performance, and behaviours of participants who had received matches with mentors when compared to their peers who had not, although gains were not evident in social or personal domains. The length of the youth-mentor match was critical, where shorter matches might not provide significant or long-term benefits to youth. Improvements involving relatedness were achieved through mentoring programs that involved at least one meeting a week and reached at-risk youth who benefitted from additional support and attention in school.

Vandell, Reisner, and Pierce (2007) researched high-quality afterschool programs to evaluate academic, longitudinal developmental outcomes amongst low-income, ethnically diverse adolescents. High-quality programs were characterized by supportive relationships between youth and staff, and among youth. Approximately 3000 students from eight different states were assessed over a two-year period. Half of the students participated in the extracurricular program, while the rest was a control group. Significant improvement was noted in standardized test scores and effective work habits alongside an overall reduction in problem behaviour. Students who engaged in some form of supervised program scored consistently higher than controls. Program intensity and consistent participation were predictors of success. Positive peer relationships and improved work habits might have contributed to academic improvement. This study was grounded in an assets-based approach, which acknowledges the capacity for thriving in all types of backgrounds if interventions are provided.



In their review, Durlak and Weissberg (2007) systematically evaluated after-school programs to determine the programs' impacts on enhancing personal and social skills, to identify the nature and magnitude of the outcomes, and to describe what features were common in effective programs. Included programs were limited to those that were offered to children within the ages of 5 and 18, as well as those that operated during the school year and outside of normal school hours. The meta-analysis revealed that after-school programs had positive impacts on academic achievement, positive social behaviours, and youth self-perceptions, while significant reductions were found in problem behaviours. Programs that used evidence-based approaches in their design and implementation produced significant improvements in social behaviours, unlike programs that had no basis in the use of empirical evidence.

## Summary

- A strong bond established between an adult and a youth participant appears to be important for program success.
- Program length and program attendance are linked to positive youth outcomes. The contact time within the program is vital for greater success.
- Programs building relatedness can be successful within the school setting and outside the school setting. The best evidence at present for the nature of such programs comes from within the school setting.
- Successful programs within the relatedness critical factor tend to focus on young people's Development Assets or a similar framework.

## Competence

**Table 8.4: Methods from Interventions in the Competence Critical Factor at a Glance**

| Evaluations             | Evidence-based  |  | Promising                             |  | Relevant Studies or Reviews   |                                   |
|-------------------------|---|--|---------------------------------------|--|---|-----------------------------------|
|                         | Wright, John, Alaggia, & Sheel (2006)  | Gianotta, Settanni, Kliewer, & Ciairano (2009) | International Youth Foundation (2010) | Gambone, Akey, Furano, & Osterman (2009) | Busseri, Krasnor, Willoughby, & Chalmers (2006)  | Fauth, Roth, & Brooks-Gunn (2007) |
| Outcomes:               |   |  |                                       |  |   |                                   |
| Cognitive/Learning      | ✓   | ✓  | ✓                                     | ✗  | ✓   | ✗                                 |
| Behavioural/Social      | ✓   | ✗  | ✓                                     | ✓  | ✓   | ✓                                 |
| Psychological/Emotional | ✓   | ✓  | ✗                                     | ✗  | ✓   | ✓                                 |
| Dominant Framework:     |   |  |                                       |  |   |                                   |
| Developmental Assets™   | ✗   | ✗  | ✓                                     | ✗  | ✗   | ✗                                 |
| Five Cs (or related)    | ✗   | ✗  | ✗                                     | ✓  | ✓   | ✓                                 |
| SDT                     | ✗   | ✓  | ✗                                     | ✗  | ✗   | ✗                                 |
| Other                   | ✓   | ✓  | ✗                                     | ✗  | ✗   | ✗                                 |
| Sample populations:     |   |  |                                       |  |   |                                   |
| Early adolescence       | ✓   | ✓  | ✗                                     | ✓  | ✓   | ✓                                 |
| Mid-adolescence         | ✗   | ✗  | ✗                                     | ✓  | ✓   | ✓                                 |
| Late adolescence        | ✗   | ✗  | ✓                                     | ✗  | ✗   | ✗                                 |
| Critical Factor:        |   |  |                                       |  |   |                                   |
| Autonomy                | ✓   | ✓  | ✗                                     | ✓  | ✗   | ✗                                 |
| Relatedness             | ✓   | ✗  | ✗                                     | ✓  | ✗   | ✗                                 |
| Competence              | ✓   | ✓  | ✓                                     | ✓  | ✓   | ✓                                 |

### Legend

✓ represents element present ✗ represents element absent

Early adolescence 12-15 (Grade 7-10), mid-adolescence 16-20 (Grade 11-postsecondary), late adolescence 21-25

## Interventions addressing competence

Competence is the perception of ability, capacity, and achievement (Deci & Ryan, 1985). Feeling competent is more than personal attainment; competence fosters intrinsic motivation and is foundational in the sense of self. Individuals who perceive themselves as competent want to exercise their abilities, extend their capacities, and extend their skills (Jang, Reeve, Ryan, & Kim, 2009). For the competence critical factor, four direct interventions were reviewed: one from Canada, one from Italy, one from the United States, and one that included data from the sub-Saharan African countries of Senegal, Kenya, Nigeria, and Tanzania. All the interventions employed quantitative methods, with one study also including qualitative data analysis. Two studies provided information about all three of the outcome domains. Five of the studies focused on early and/or mid-adolescence, while one of the sources focused on late adolescence. All of the interventions were based primarily on competence critical factors; two included all three critical factors.

Wright et al. (2006) conducted a 3-year multi-method evaluation of a national arts program conducted in five sites across Canada that (a) were located in urban and rural areas, (b) had a focus on youth 9–15 years, (c) were located in low-income communities, and d) reflected the cultural and regional diversity of Canada; 183 youths, 9–15 years of age, participated in a 9-month arts program that focused on theatre but also included visual arts (mask-making, set design, and painting) and media arts (digital filming and editing). High-quality arts programs had a significant effect on children's in-program behaviour and emotional problems. The qualitative interviews suggested that active recruitment, removing barriers to participation, and high parental involvement enhanced youth engagement. Perceived youth gains included increased confidence, and individual and social competence as evidenced by enhanced art skills, prosocial skills, and conflict resolution skills.

Gianotta, Settanni, Kliwer, and Ciairano (2009) investigated the effectiveness of an expressive writing intervention in a sample of Italian early adolescents on internalizing and post-traumatic stress symptoms and coping strategies. Participants were 153 Italian adolescents (48% male), attending 7<sup>th</sup> grade (M. 12.24 yrs, SD 0.47). Youth were randomly assigned either to write about personal emotional events related to problems they recently experienced with peers, or trivial topics. Data were collected before and 2 months following the intervention. While analyses revealed no overall intervention effects on symptoms, victimized youth in the intervention showed increased competence in cognitive restructuring and avoidance coping, relative to other groups. Thus, expressive writing affected coping strategies but not internalizing problems in their early adolescent sample.

The International Youth Foundation operates under an assets-based philosophy that recognizes a large youth demographic as a positive economic resource. To enact its philosophy, the Foundation implemented and assessed a series of youth empowerment programs in four different Sub-Saharan African countries (Kenya, Senegal, Nigeria, and Tanzania). Each program attempted to address the enormous youth unemployment rate by improving quality of education, opportunities for formal work experience, and general job-related competence. Youth were placed in internships, community jobs, or income-generating self-employment. Approximately 9544 youth participated across the four programs, with an anticipated 9700 more to follow. Sixty per cent of the participants were male, which was a result of the entrance criteria that required a high school certificate. The program considered HIV/AIDS as a widespread barrier to productivity and employment. At the time of publication, these programs had not yet reached completion. Tentative results showed that average salaries increased to three times the national average. Youth who had participated in the program reported positive employment prospects even if they were not currently working. Entrepreneurship increased significantly. Overall, youth and community partners reported high satisfaction, hopefulness, and a belief in the sustainability of this project.

Gambone, Akey, Furano, and Osterman (2009) examined the impact of the Boys & Girls Clubs of America's Triple Play program on youth development outcomes. This program helps youth aged 6-18 increase their competence and understanding of how nutrition, physical activity, and positive relationships lead to a healthier lifestyle. Using a cluster-randomized trial design, data were collected through youth surveys, observations, and interviews during site visits, and implementation reports about activities and participation provided by each site. Triple Play programs positively impacted both nutritional and physical activity management, as well as positive social development and peer relations. Female and older-aged subgroups benefitted the most on youth development outcomes. Committed participation in the Triple Play program was essential for significant growth to occur, calling for the need for similar programming to be made both available and attractive to youth.

Busseri, Rose-Krasnor, Willoughby, and Chalmers (2006) analyzed the relationship between youth participation and healthy adolescent development within a longitudinal high school population to explore conditions that promoted positive interpersonal relationships and reduced problem behaviour. Students from 25 schools (N=7430) completed questionnaires to track their progress over time. Increased duration of involvement in extracurricular activities correlated with higher development, but increased intensity did not. The authors concluded that development interventions featuring increased duration have longitudinal effects on "the 6 Cs": competence, connection, character, confidence, caring, and contribution. Developmental success and positive increases in developmental success predicted greater breadth and intensity of involvement. Thus a dual role for youth activity participation is suggested, both promoting positive development and existing as a product of successful development. Some concerns about generalizability were noted in this study's limitations.

Fauth, Roth, and Brooks-Gunn (2007) assessed the influence of extracurricular participation on developmental outcome deficits (substance abuse, anxiety/depression) over a period of six years. Neighbourhood was considered as an intersecting variable; 1315 youth aged 9-15 engaged in a variety of program activities and completed interviews to assess their developmental progress. Different activities impacted specific youth development outcomes in both positive and negative ways, depending on context. For example, community-based activities were predictive of lower anxiety and depression in violent neighbourhoods. These neighbourhoods also observed lower substance abuse rates by increasing connection to church groups. In contrast, team-based sport participation corresponded with higher substance abuse and delinquency scores but significantly reduced anxiety and depression. Moreover, development outcomes were influenced by patterns of participation such as duration, frequency, and intensity (with youth who participated in particular activities at waves 2 and 3 of data collection exhibiting the largest average outcome difference with their counterparts who did not participate in the activity at all).

## Summary

- Competence approaches to intervention can be based on any one of a number of competences.
- Developmental, cultural, and contextual elements may be particularly important to consider in designing competence interventions.
- Measuring the impact of youth programs on competence is a complex process because there seems to be a strong subject-treatment interaction effect, such that a program beneficial for one young person is not helpful for a seemingly similar young person

## Implications for Program Design

In their seminal book, Eccles and Gootman (2002) recommend eight program features for positive development of youth participants: (i) physical and psychological safety; (ii) appropriate structure; (iii) supportive relationships; (iv) opportunities to belong; (v) positive social norms; (vi) support for efficacy and mattering; (vii) opportunities for skill building; and (viii) integration of family, school, and community efforts. By Eccles and Gootman's own account, these eight features are provisional and the boundaries between features are often quite blurred. In our report, we looked to update those features of positive developmental settings based on literature published since the year 2000. We have used the eight recommendations (Eccles & Gootman, 2002) as a referential guide by which to synthesize current studies. Meta-analyses and program studies completed since 2000 offer depth and specificity to the eight program features originally proposed. These program features are supplemented by an analysis of the current literature and aligned to the critical factors model. The following section outlines each feature and offers selected key contributions from recent literature for program development and implementation.

Overall, this review of current interventions literature substantiates the recommendations by the Committee on Community-level Programs for Youth (Eccles & Gootman, 2002) related to features of positive developmental settings for effective youth programs. These eight features serve to create contexts that support youth to increase their autonomy, relatedness and competence, which are in turn associated with long-term health outcomes and thriving. We recommend that programs are intentionally designed to create contexts that demonstrate these features.

### **Physical and psychological safety**

In addition to providing safe contexts and processes that increase safe peer interactions, the review of interventions suggests that it may be useful to intentionally build social and emotional competences. Emotional and social competences have significant predictive power of individual engagement, work ethic, academic achievement, and personal success (Durlak et al., 2011). Socio-emotional skill-building components can be woven into design structure and do not require specialized staff. Some programs successfully incorporate components of group interactions and therapeutic enhancements (e.g., family counselling, family therapy, and group session) that are effective at reducing recidivism (Wilson & Lipsey, 2000). These components are likely effective because they enable the participants to actively reflect and inquire about their own behaviour, reflection that can lead to personal development, psychological well-being and improved interactions with others. Despite the strong evidence supporting the benefits of programming for social-emotional health (Durlak et al., 2011; Nelis et al., 2011), the gap is still quite wide between established evidence and practical application.

### **Supportive relationships**

In the past decade, the literature has identified that relationships with non-parental adults are more effective when they have sufficient duration and closeness (e.g. mentorship relationships; Grossman & Rhodes, 2002; Herrera et al., 2007; Hurd & Sellars, 2013). Further, an emerging concept of adult-youth partnership has surfaced in the literature and provides a promising direction. As compared with traditional mentorship models that foster individual social development, collaborative forms of youth-adult partnership are conducive to communal group belonging (Mittra, 2004).

### **Opportunities to belong**

A useful contribution in the current literature to improve belonging and inclusion is a program design focus on cultural identity, which leads to belonging (e.g., Thomas et al., 2008). As described in more detail in chapter 8, increasing relatedness through cultural identity, cultural pride, and understanding racism can be important for navigating transitions throughout adolescence and early adulthood (Varga & Gee, 2010; Wong, Eccles, & Sameroff, 2003). Interventions do not have to focus solely on one cultural identity, but rather offer

opportunities for youth to explore their ethno-cultural heritage in a supportive social context free from discrimination.

### **Appropriate structure**

The value of structured and unstructured time has been further explored in the intervention literature. Programs that are low in structure are characterized by a lack of skill-building opportunities and adult involvement/supervision. These programs tend to lack conventional social relations and, in some cases, may attract youth who are already involved in deviant behaviours that are then further entrenched in the program (Mahoney & Stattin, 2000). It is the resulting social context that predicts behavioural and academic problems, truancy and delinquency (Mahoney & Stattin, 2000; Mahoney, Stattin, & Lord, 2004; Murphey, 2000; Weisman & Gottfredson, 2001). However, unstructured time was found to be a meaningful component of a camp program, associated with developing relatedness (Garst, Browne, & Bialeschki, 2011). This suggests that intentionally including unstructured time in a program that has an established positive social context is valuable. Therefore, consideration of the role of unstructured time, the specific youth involved, and the social context is required to understand the potential advantages and disadvantages of including unstructured time in youth programming. Also required is a careful exploration of what “unstructured” time looks like in the context of program design. For example, in a camp, there are supports in place related to the “unstructured” component. The lack of research attention to these kinds of distinctions and program details often restricts the usefulness of the evidence for program designers.

### **Positive social norms**

Positive social norms and values were considered as key components of youth well-being by several reports and studies which were included in this report (e.g. Catalano et al., 2002; Eccles & Gootman, 2002; Lawford, Ramey, Rose-Krasnor, & Proctor, 2012; Ma, 2012). As described earlier in this report, subscription to positive values, whether through familial or social influences, reduces delinquent behaviour (Hawkins & Weis, 1985) and has therefore been a consideration for researchers subscribing to theoretical constructs that include social constructionism, recidivism, resiliency, and Positive Youth Development (see the Competence chapter for a fuller discussion of moral competence and its influence). Based on its presence in the foundational literature (PYD) and the studies of the past 13 years, access to positive values and building moral competence stand as important implications for program design.

Youth benefit from regular access to positive values whether through peer models, adult mentors, or a collectively accepted code. Positive social norms provide a foundation for relatedness and self-determination (autonomy). In general, moral development is better fostered by comprehensive programs (e.g., PATHS program based on the work of Catalano et al., 2002; Ma, 2012) than ones addressing only one aspect of young people’s lives. However, risk behaviour can be mitigated by after-school programs that specifically target behaviour (Tebes et al., 2007). Programs with high staff/participant ratios and intense programming are best positioned to serve youth participants. Much of the research base around morality comes from studies on youth recidivism. The evidence of the importance of moral development is stronger in clinical settings than in naturalistic settings (Van Vugt, Gibbs, Jan Stams, Bijleveld, Hendriks, & van der Laan, 2011). Adequate training of service delivery personnel may partially explain the difference between effect sizes in different settings (Wilson & Lipsey, 2000). While it is clear that peer and adult role models can effectively reduce risk behaviour of target youth, the findings from research in this field have not clearly described the method by which to train role models most effectively.

### **Support for efficacy and mattering**

The goal of youth programming should extend beyond attendance. To activate the positive developmental benefits related to youth programming, participation must include active engagement (Hirsch, Mekinda, & Stawicki, 2010). While participation in a program alone does not predict successful outcomes; intrinsically motivated participation in the program does predict increased levels of autonomy, relatedness, and



competence (Fauth, Roth, & Brookes-Gun, 2007). It matters that youth participants perceive they have input in decisions about the program (Lawford et al., 2012). The phenomenon of engagement is multifaceted with behavioural and psychological components that can be manipulated to enhance the impact of programs (Finn & Zimmer, 2012).

### **Opportunities for skill building**

Youth need to sense they are developing meaningful skills. Tasks that are misaligned for the individual or tasks that have no intrinsic value for the youth will miss the mark. Determining exactly which intervention characteristics best foster skill development is a challenge, because details such as dosage and curricula are not thoroughly reported. Meta-analyses have shown that the programs that empower youth and foster meaningful skill-building typically offer multiple sessions per week, provide individualized feedback, and involve developmentally appropriate tasks (Morgan et al., 2013). The evidence supporting the inclusion of appropriately challenging tasks is very strong. Mastering incrementally more challenging tasks builds confidence and competence; appropriate challenge and frequency are positively related with development (International Youth Foundation, 2010; Wilson & Lipsey, 2000).

### **Synergy, integration of family, school and community efforts**

The current literature does not adequately explore synergy and relatedness across contexts, which is probably due to the difficulty of studying the interactions between family, schools, and communities. However, there is evidence that interventions that engage parents lead to improved outcomes (e.g. Wright, Alaggia, & Sheel, 2006; Vierling et al., 2007).

At a macro level, program designers and communities should collaborate to create the most comprehensive range of supervised afterschool activities to counteract the negative outcomes associated with being disadvantaged (Vandell, Reisner, Pierce, & Irvine, 2007). Meaningful engagement in extracurricular programming can work as a protective factor against non-preferred behaviours such as suicide ideation (Armstrong & Manion, 2006). Pooling resources and coordinating foci can foster programming that focuses very minutely on the needs of a particular neighbourhood. For example, coordinated efforts with communities provided the resources for explicit instruction regarding drug use that were effective in changing participant-held drug perceptions and drug usage (Tebes et al., 2007).

### **Diversity of experience**

Recent intervention literature suggests additional considerations for program design, the first of which is diversity of experience across and within programs. Increasing benefits associated with participation in youth programming is not linear. Lerner and colleagues (2011) proposed that moderate participation is ideal, whereas too little or too much participation mitigates the accrued advantages. While the curvilinear relationship between participation and benefits may describe some interactions, recent research has shown that, in terms of breadth and frequency of participation, more is generally better. Those who participate in more activities, and participate more frequently, benefit from the breadth of activities because they allow for one context to compensate for the limitations of another (Busseri et al., 2006). Breadth was shown to be more significant in some cases than frequency. Frequent participation in multiple programs protects the youth from the shortcomings of any individual program, providing more opportunities to increase autonomy, relatedness, and competence. Programs that best support youth development include breadth and depth of programming. We are not suggesting that every program has to provide a wide range of services. Service-learning, for example, is a component of program design that shows tremendous promise (Warren, 2012) but may not be the right fit for all programs. The purposes and methods of youth programs vary widely depending on the idiosyncrasies of the focus population. It is perfectly appropriate for a program to be domain- or skill-specific.

Furthermore, intentionally involving diversity of perspectives and experiences within a program may be a promising practice. An example is provided by a study examining the national exchange program hosted by the YMCA of Greater Toronto (Lawford et al., 2012). One of the unpublished significant findings revealed that the more the community that the youth visited was different from their home community, the higher their ratings of their exchange experience. In addition, youth reported that the exchange had a larger positive impact on their lives after the exchange if the exchange had been very different from their day-to-day experiences. Larson & Walker (2006) conducted a qualitative longitudinal study of an urban arts program that was designed to expose youth to experiences that would prepare them for the transition to arts careers in adulthood. Youth participants experienced a developmental process that included dissonance and challenge, followed by active adaptive learning. Experiencing a new context that differs greatly from their norm is an emerging promising component of the adolescent developmental process and transition to adulthood.

### **Designing for Macro and Micro Levels**

The second key addition from the more recent interventions literature suggests that effectiveness of youth programs may be further improved if program designers and policy-makers consider application at two levels: macro and micro. Youth programming should be as broad as possible (macro), while addressing the unique needs of its population (micro). Much of this chapter has focused on the universalities of youth development. However, demographics and individual differences (micro level) present further challenges to program designers. Like a community fingerprint, the specific demography of individual neighbourhoods can be unique and require precise considerations. Gender, ability, socio-economic status, and ethnicity influence how youth respond to programming (Duke et al., 2009; Gambone et al., 2009; Vaquera, 2009). This level of specificity is hard to achieve without coordination across partners. It is clear that program designers need to be cognizant of factors such as demography, gender, and personal assets, particularly as we do not have a clear picture of which factors are universally salient in specific interventions.

The direct way to design programs, with the micro level in mind, is to engage youth who are the recipients of the program in planning and decision-making (see the Autonomy chapter for a more detailed discussion about decision-making). Youth input into program and organizational decision-making has been linked to development of competencies (Larson, Walker, & Pearce, 2005; Serido, Border & Perkins, 2009; Zeldin, 2004), agency (Mittra, 2004), and community connections and relationships (Jarrett, Sullivan, & Watkins, 2005; Zeldin, 2004). Youth input into an exchange program was a unique contributor to successful development, significantly adding to the variance accounted for by the eight positive features (Lawford et al., 2012).

Programs should be dynamic enough to address the specific needs of the individual in consideration of perspectives of family, community, and policy (Gallagher et al., 2005; O'Neil et al., 2012). What is less clear is the best way to design programs that balance the needs of the community with the needs of the individual. Community integration and macro system planning would allow for youth to experience a diversity of programs, while developing specific targeted programs for particular individual needs.

**Table 8.5: Program Design Summary**

| Program features<br>Eccles & Gootman (2002)                  | Contributions of current research   | Alignment to<br>Critical Factors Model |
|--|---|--|
| Physical and psychological safety                            | Social and Emotional competence building                                      | Competence                             |
| Supportive relationships                                     | Duration and closeness of youth-adult relationships; youth-adult partnerships | Relatedness                            |
| Opportunities to belong                                      | Cultural identity   | Relatedness                            |
| Appropriate structure  | Deliberate use of unstructured time in positive social contexts               | Relatedness                            |
| Positive social norms  | Moral competence; high staff to youth ratios; intensity                       | Autonomy, relatedness, competence      |
| Support for efficacy and mattering                           | Active engagement and opportunities for involvement in decision-making        | Autonomy, relatedness, competence      |
| Opportunities for skill building                             | Appropriate challenge   | Competence                             |
| Synergy, integration of family, school and community efforts | Engaging parents, coordinated community efforts                               | Relatedness                            |
|  | Diversity of experience   | Autonomy, relatedness, competence      |
|  | Macro and micro   | Autonomy, relatedness, competence      |

## Chapter 8 References

[Starred studies are described in tabular form in Appendix Chapter 8.]

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## CHAPTER 9: SYNTHESIS

We began this report with three research objectives: (i) review and synthesize the developmental and life course needs and the critical transitions that youth need to navigate to thrive; (ii) identify key outcomes on which programs for youth should focus to address developmental needs and transitions; and (iii) identify promising interventions and aspects of program design that have been developed and evaluated with respect to the identified key outcomes. Five sets of research questions guided our data collection: (i) What are the main developmental and life course needs 12- to 25-year-olds must meet to thrive? What are the critical transitions that they have to navigate? (ii) What are the main developmental and life course frameworks that have been developed to support youth programming, how do they compare, and how sound is their evidence base? What are the implications of the findings for the validity of developmental asset approaches? (iii) What implications does the research have for understanding the key outcomes on which youth programs should focus? (iv) What promising interventions have been developed to address the key outcomes identified? What are the key aspects of program design? Are there certain elements of program design that are critical to success? How have these programs measured their impact? How are these findings applicable to programming moving forward? (v) What role does context play in the generalizability of the research findings? What barriers and differences for youth exist? Are there differences in programming needs? How generalizable are the findings within the GTA and Ontario?

For each set of these research questions, we learned about the current state of knowledge, but we were also frustrated by the lack of evidence around certain topics. We realized the initial questions were more complex than we had originally supposed with permeable boundaries around the questions that made answering them discretely rather trickier than we had thought.

### Research Question 1: Developmental/Life Course Needs and Critical Transitions

Our first step in tackling this question was the critical consideration of the use of the term *needs*. In many theoretical conceptions, the term *needs* represents factors that individuals must have to survive, whereas we were particularly interested in what youth should have if they were to thrive. Furthermore, the term *needs* is exclusively used in Self-Determination Theory (Deci & Ryan, 2000), rather than across all the theoretical frameworks that are based on positive youth development (Eccles & Gootman, 2002). Therefore, we adopted the term *critical factors* as more inclusive of a variety of frameworks. The critical factors we selected based on a synthesis across development and life course frameworks were represented as ARC (autonomy, relatedness, and competence).

Transitions can be seen through biological, psychosocial, and environmental lenses. Biological changes occur as adolescents move into and through puberty; psychosocial changes relate to a changing sense of identity and focus of relationships; environmental changes occur for youth as they move from elementary/middle school to secondary school, from secondary school to post-secondary/workplace, and from post-secondary to workplace. There are also transitions that occur for some individuals but not for others at this time, such as navigating adult systems of care and parenthood. Understanding transitions is further complicated by the asynchronicity of changes, both within and across individuals. As such, in that they tend to take place at similar ages across young people, we concentrated on environmental transitions. Here we found that relatedness seems to be most important for the transition from early to middle adolescence as signalled by the movement into secondary school; autonomy most important in the move to post-secondary; and competence most important in going into the world of work. However, the evidence base around transitions is weaker as adolescents' age and move outside of the K-12 school system, particularly when they leave the school system entirely (either during or after secondary school or during or after post-secondary) by entering the workplace.

## Research Question 2: Developmental and Life Course Frameworks

We closely examined three theoretical frameworks, all with connections to an underlying theory of positive development (Eccles & Gootman, 2002): Developmental Assets™ (Benson, 2007; Search Institute, 2013), the Five Cs model (Lerner, Almerigi, et al., 2005; Lerner, Lerner, et al., 2005), and Self-Determination Theory (SDT; Deci & Ryan, 2000, 2008). While Developmental Assets™ targets 40 assets (20 internal, 20 external), the Five Cs five (or six) characteristics, and SDT three basic psychological needs, the differences across frameworks are more in specificity and nomenclature than any ideological or theoretical disagreement.

Their similarity additionally rests on the lack of theoretical evidence to support the framework. Although extensively used, there is little to indicate that the 40 assets, the five (or six) characteristics, or the three basic psychological needs are conceptually distinct. Developmental Assets™ has further been critiqued for the relative lack of independent research supporting the framework published in scholarly journals (Stevens & Wilkerson, 2010), while it has been suggested that the Five Cs is not applicable across contexts, most especially sports (Jones, Dunn, Holt, Sullivan, & Bloom, 2010). The main criticism of SDT rests on the insufficient number of studies examining all components of the theory simultaneously (Van Nuland, Taris, Boekaerts, & Martens, 2012).

## Research Question 3: Key Outcomes

We identified three key domains for outcomes: cognitive/learning, behavioural/social, and psychological/emotional. These outcomes have clear connections to the three dimensions of engagement used by the Centre of Excellence for Youth Engagement (CEYE): (i) a *cognitive/learning component*, including knowledge about the activity; (ii) a *behavioural component*, comprising actions related to participation (e.g., attendance at group meetings, playing a sport); and (iii) an *affective component*, including the emotional or subjective responses to an activity (e.g., excitement, frustration, meaningfulness; Pancer, Rose-Krasnor, & Loiselle, 2002). These dimensions can be represented by the Head (cognitive), Feet (behavioural), and Heart (affective; Rose-Krasnor, 2009). These key outcomes were measured in diverse ways across studies (see Tables 4.1, 5.1. and 6.1).

What we found more difficult was linking these outcomes to their long-term implications with respect to youth thriving. We located limited studies that tracked young people through adolescence to adulthood (e.g., Duke, Skay, Pettingell, & Borowsky, 2008), and none with a Canadian focus. We therefore needed to speculate on what the distal outcomes of programs would be based on their proximal outcomes.

## Research Question 4: Promising Interventions

Our review substantiates the eight program features identified by Eccles and Gootman (2002) and adds two emerging features. The original eight features work with the critical factors (autonomy, relatedness, and competence) across key outcomes (cognitive/learning, behavioural/social, and psychological/emotional). For example, skill-building (competence and autonomy) in meaningful environments can be used for any of the three outcomes. Influence of positive values is connected strongly to relatedness while fostering safety and social-emotional health can build upon any of the critical factors to achieve behavioural/social and psychological/emotional outcomes.

The current literature adds two key areas for consideration: 1) diversity of experience; and 2) designing for macro and micro levels. Breadth across programs and diversity of experience within programs are associated with positive developmental outcomes. Although there is debate about the exact amount of time required and the optimum level of participation (Lerner et al., 2011), extracurricular participation, especially across a number of activities (Busseri, Krasnor, Willoughby, & Chalmers, 2006), is beneficial.

The best interventions move beyond the macro level to consider the micro level of individuals in context. Engaging young people in program planning and decision-making is an effective method for identifying the

specific demographics at play at the micro level. Youth need to engage in the activities, rather than simply be present for them (Hirsch, Mekinda, & Stawicki, 2010).

A caveat needs to be put in place. Interventions may not be effective across all groups or all activities. For example, risky behaviour such as alcohol and drug usage can be reduced if the youth are engaged in structured programming. However, if that programming includes participation in a sports team, the protective features may be lost. The adverse effects of membership on a sports team are so strong that even efforts to combine participation in sport teams with school politics and academic activities may not reduce the increased alcohol and substance usage (Fauth, Roth, & Brooks-Gunn, 2007). Yet sports participation can be beneficial for a range of health issues by decreasing resting heart rate and reducing body fat.

### Research Question 5: Contextual Influences

To find studies that best fit within the lens of the Greater Toronto Area (GTA) and the province of Ontario, we attempted, insofar as possible, to examine first Canadian studies and, when those studies proved unavailable, American studies. This approach promoted the possibility that the study participants would most closely match the demographic characteristics of GTA and Ontario.

However, the National Household Survey (Statistics Canada, 2011) reveals that the population of GTA is 50.2% White, 49.1% visible minorities (excluding Aboriginal peoples), and 0.7% Aboriginal people. A full 48.6% of the GTA population was born outside of Canada. These demographics vary by neighbourhood within Toronto, such that the percentages of immigrants and visible minorities are distinctly higher in some areas of the city than others. Some neighbourhoods represent cultural enclaves with specific ethnic groups heavily represented. This demographic profile makes it virtually impossible to map evidence-based and promising interventions directly onto the youth who participate in the YMCA of Greater Toronto, United Way Toronto, and the Ontario Ministry of Children and Youth Services, especially as so few studies pay explicit attention to divergences related to gender, ability, socio-economic status, and ethnicity among others (Duke et al., 2009; Gambone, Akey, Furano, & Osterman, 2009; Vaquera, 2009).

### Significance of the ARC model

The ARC model is a potential contribution to a unifying umbrella for many existing theories and frameworks. All of the foundational documents identified for this review (Cohen & McDonough, 2012; Eccles & Gootman, 2002; McMurtry & Curling, 2008; MCYS, 2012; MCYS, 2013) recommended a simplified model or framework to assist organizations and institutions in linking age-appropriate developmental outcomes and long-term thriving outcomes to program design and execution. The development of the ARC model builds upon theories, concepts, and recommendations emerging from these foundational documents.

In synthesizing recent research from 2000 to 2013, this review adds to the evidence base upon which to design positive youth development programs. The ARC model provides a roadmap to a simpler approach to tracking and monitoring short-term and long-term program outcomes for youth and society. The literature review demonstrates the need to improve our understanding of what program elements work in which contexts, and of the dosages and sequences to produce short-term outcomes that lead to longer term thriving.

The evidence base for competence, autonomy, and relatedness is well developed; although as Eccles and Gootman noted in 2002, the factors may have nuanced definitional differences depending upon the discipline and type of literature. These three critical factors serve as summary factors for all of the major factors identified by the literature, both past and current.

### Moving Forward

One of our disappointments in crafting this report was the lack of evidence needed to include a fourth critical factor representing the synergy across the other three factors. Such a possibility is suggested by work on SDT (e.g., Ryan & Deci, 2000). There are two primary possibilities that could be at play here. The other three

factors' effects may be additive or multiplicative. In the latter case, possessing all three factors is better than might be expected from the joint influences.

We had hoped to call such a factor “engagement.” Research on youth engagement is relatively new; the Centre of Excellence for Youth Engagement was established in Canada in 2000. Appropriately, it was a young person who asked the government of Canada for permission to use the word engagement rather than participation in its name, saying that participation was not enough; excellence demanded engagement.

The activities of the Centre, the work of foundations such as the Laidlaw Foundation, the Ontario Trillium Foundation, the McConnell Foundation, and institutions such as the United Way of Greater Toronto, the YMCA of Greater Toronto, YMCA Canada, and assorted municipal, provincial, and federal government departments, have advanced interest in youth engagement and the uptake of youth engagement programming. The inclusion of engagement as a critical factor would represent a significant advance in our understanding, in alignment with the foundational documents and the emerging evidence and practice. However, without better evidence for its inclusion, engagement was omitted from our final model.

To fashion programs that best help the diversity of young people living in the Greater Toronto Area (GTA) and around the province of Ontario to thrive, we additionally must have better evidence to decide which programs are effective, for what duration, and for what individuals in what contexts. We are particularly lacking in program evaluations that track youth across critical transitions that follow adolescents over time and into adulthood, and that move beyond students in the K-12 school system. Such an effort requires cooperation across a range of stakeholders with sufficient government funding to assist organizations like the YMCA of Greater Toronto and the United Way Toronto to fulfill their mandates of providing amazing programs that produce amazing young people who become amazing adults.

The next stage is the translation of the findings in this scientific report to programming for the YMCA of Greater Toronto, United Way Toronto, and the Ontario Ministry of Children and Youth Services. It might be tempting to simply begin from the evidence-based and promising interventions in Chapter 8 and model programming on these models. In our opinion, doing so would be a mistake, particularly insofar as the demographic profile of young people in the GTA is so different from that found anywhere else in the world. In addition, taking this approach restricts the advantages that come from more expansive thinking.

We suggest a four-part process for moving forward programmatically. Throughout this four-part process, engaging young people in the planning and decision-making will ensure that the program is effective. First, the characteristics of the youth for whom programming is being developed needs to be understood so that all decisions are based on what the specific group of young people needs to thrive. Second, the theoretical framework(s) on which the programming is situated should be agreed upon by all parties, including the youth. Third, the models, characteristics, and program elements must be explored to design the programs, taking full advantage of prior knowledge. Finally, the programs must be examined to ensure that all three critical factors for youth thriving—autonomy, relatedness, and competence—are reflected in the programs before the programs can be put into place with young people.

## Chapter 9 References

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## APPENDIX CHAPTER 1: FOUNDATIONAL DOCUMENT SUMMARIES

| <b>Personal and Social Assets That Facilitate Positive Youth (Eccles &amp; Gootman, 2002)</b> |  |
|---|--|
| <b>Physical development</b>   | <ul style="list-style-type: none"><li>• Good health habits</li><li>• Good health risk management skills</li></ul>  |
| <b>Intellectual development</b>   | <ul style="list-style-type: none"><li>• Knowledge of essential life skills</li><li>• Knowledge of essential vocational skills</li><li>• School success</li><li>• Rational habits of mind—critical thinking and reasoning skills</li><li>• In-depth knowledge of more than one culture</li><li>• Good decision-making skills</li><li>• Knowledge of skills needed to navigate through multiple cultural contexts</li></ul>  |
| <b>Psychological and emotional development</b>  | <ul style="list-style-type: none"><li>• Good mental health including positive self-regard</li><li>• Good emotional self-regulation skills</li><li>• Good coping skills</li><li>• Good conflict resolution skills</li><li>• Mastery motivation and positive achievement motivation</li><li>• Confidence in one’s personal efficacy</li><li>• “Planfulness”—planning for the future and future life events</li><li>• Sense of personal autonomy/responsibility for self</li><li>• Optimism coupled with realism</li><li>• Coherent and positive personal and social identity</li><li>• Prosocial and culturally sensitive values</li><li>• Spirituality or a sense of a “larger” purpose in life</li><li>• Strong moral character</li><li>• A commitment to good use of time</li></ul> |
| <b>Social development</b>   | <ul style="list-style-type: none"><li>• Connectedness—perceived good relationships and trust with parents, peers, and some other adults</li><li>• Sense of social place/integration—being connected and valued by larger social networks</li><li>• Attachment to prosocial/conventional institutions, such as school, church, nonschool youth programs</li><li>• Ability to navigate in multiple cultural contexts• Commitment to civic engagement</li></ul>   |



## Themes, outcomes and indicators (MCYS, 2013)

| Theme  | Priority Outcome   | Indicators: current status   |
|--|--|--|
| <b>Health and Wellness</b>                     | 1. Ontario youth are physically healthy                                    | 1.<br>79.9% of youth are a healthy weight.<br>63.9% of youth are physically active.<br>44.9% of youth consume at least five servings of fruit or vegetables daily.<br>33.0% of youth did not visit a doctor in the past year.            |
|  | 2. Ontario youth feel mentally well  | 2.<br>6.0% of youth are experiencing anxiety and/or depression.<br>33.6% of youth are experiencing elevated psychological distress.<br>10.3% of youth had serious thoughts about suicide in the past year.                               |
|  | 3. Ontario youth make choices that support healthy and safe development    | 3.<br>8.7% of youth smoke cigarettes.<br>22.3% of youth have recently consumed excessive alcohol.<br>22.3% of youth have used any illicit drug.<br>3.9% of youth have had a sexually transmitted infection.                              |
| <b>Strong, supportive friends and families</b> | 4. Ontario youth have families and guardians equipped to help them thrive  | 4.<br>4.2% of families live in deep poverty and are struggling to afford housing.<br>8.1% of caregivers can't afford to feed their families balanced meals.<br>13.8% of children and youth live in low-income households.                |
|  | 5. Ontario youth have at least one consistent, caring adult in their lives | 5.<br>89.5% of youth have at least one parent who usually knows where they are.<br>4.6% of youth do not get along with their mothers.<br>6.9% of youth do not get along with their fathers.  |
|  | 6. Ontario youth form and maintain healthy, close relationships            | 6.<br>19.7% of youth feel lonely.<br>95.5% of youth have someone they are comfortable talking to about problems.<br>98.7% of youth have family and friends who help them feel safe, secure and happy.                                    |
| <b>Education and Training</b>                  | 7. Ontario youth achieve academic success                                  | 7.<br>84% of English-speaking and 78% of French-speaking students enrolled in academic math meet the provincial standard.<br>44% of English-speaking and French-speaking students enrolled in applied math meet the provincial standard. |

|   |  |   |
|---|--|---|
|   | 8. Ontario youth have educational experiences that respond to their needs and prepare them to lead | 82% of high school students graduate. Ontario ranks 6 out of 75 jurisdictions on overall reading achievement (PISA).<br>8.<br>7.2% of youth are enrolled in the Specialist High Skills Major program.<br>290,197 students have Individual Education Plans.<br>45.9% of high school course credits are available through e-learning. |
|   | 9. Ontario youth access diverse training and apprenticeship  | 9.<br>65% of adults have completed post-secondary education.<br>19,600 youth were served through the Ontario Youth Apprenticeship Program   |
| <b>Employment &amp; Entrepreneurship</b>        | 10. Ontario youth have opportunities for meaningful employment experiences                         | 10.<br>14.7% of students are enrolled in co-op placements.<br>60.1% of youth are in the labour force.<br>9.5% of youth are not in education, employment or training.<br>75.6% of youth are satisfied with their job.  |
|   | 11. Ontario youth have the skills and resources needed to develop a successful career or business  | 11.<br>1.8% of youth are self-employed.   |
|   | 12. Ontario youth are safe and supported at work   | 12.<br>11.0% of WSIB claims are for youth employees.  |
| <b>Diversity, social inclusion &amp; safety</b> | 13. Ontario youth experience social inclusion and value diversity                                  | 13.<br>69.3% of youth feel a sense of belonging in their community.<br>87.8% of students have positive attitudes toward diversity at school.  |
|   | 14. Ontario youth feel safe at home, at school, online and in their communities                    | 14.<br>76.9% of youth have a happy home life.<br>95.6% of youth feel safe at school.<br>22% of youth have been bullied online.<br>95.8% of Ontarians feel safe in their community.  |
|   | 15. Ontario youth respect, and are respected by, the law and justice system                        | 15.<br>8.0% of youth participate in antisocial behaviour.<br>4.6% of youth who police have reported as committing a non-traffic related crime.<br>53.6% of youth believe officers in their local police force do a good job at treating people fairly.  |
| <b>Civic</b>                                    | 16. Ontario youth play a   | 16.   |

|   |   |   |
|---|---|---|
| <p><b>Engagement and Youth Leadership</b></p>             | <p>role in informing the decisions that affect them</p> <p>17. Ontario youth are engaged in their communities</p> <p>18. Ontario youth leverage their assets to address social issues</p>               | <p>38.2% of youth voted in the last federal election. 10% of youth are unpaid members on a board or committee.</p> <p>17. 13.1% of youth canvassed, campaigned and fundraised as volunteers. 7% of youth volunteered with schools, religious organizations or community associations.</p> <p>18. 17.8% of youth started volunteering to help a cause they personally believed in.</p> |
| <p><b>Co-ordinated and Youth-Friendly Communities</b></p> | <p>19. Ontario youth have access to safe spaces that provide quality opportunities for play and recreation.</p> <p>20. Ontario youth know about and easily navigate resources in their communities.</p> | <p>19. 62% of parents feel recreation opportunities in their community meet their child's needs. 67.2% of youth feel there are good places in their community to spend their free time.</p> <p>20. 12% of callers to 211 looking for community referrals are young people.</p>  |

## APPENDIX CHAPTER 2: KEYWORDS FOR SEARCHING

1. Review and synthesize the developmental and life course needs and the critical transitions that youth need to navigate in order to thrive.

3. What implications does the research have for understanding the key outcomes that youth programs should focus on?

2. “What are the main developmental and life course frameworks that have been developed to support youth programming, how do they compare, and how sound is their evidence base? What, in particular, are the implications of the findings for the validity of developmental asset approaches?”

4. What promising interventions have been developed to address the key outcomes identified? What are the key aspects of program design? Are there certain elements of program design that are critical to success? How have these programs measured their impact? How are these findings applicable to programming moving forward?

5. What role does context play in the generalizability of the research findings? What barriers and differences for youth exist? Are there differences in programming needs? How generalizable are the findings within the Greater Toronto Area and the province of Ontario?

**Youth OR  
adolescen\* OR  
early adult\* OR  
emerging adult\*  
AND  
Adolescent  
development  
Attachment  
Autonomy  
Belonging  
Body image  
Brain development  
Cognitive  
development  
Conflict resolution  
Connectedness  
Contribution  
Decision-making  
Developmental  
outcomes  
Efficacy  
Emotional self-  
regulation  
Emotional support  
Emotional**

Self-efficacy  
Self-esteem  
Self-sufficiency  
Skills/Social  
development  
Social group  
identity  
Social  
assets/social  
support  
Spiritual identity  
Subjective well-  
being  
Youth develop\*  
  
Transition\* AND  
Adult services  
Child welfare,  
Foster care, Out-  
of-care  
Citizenship  
Employment, Work  
Extended transition  
Off-reserve  
Legal adulthood

Framework OR  
Approach OR  
Model AND  
  
Assets-based  
approach  
Child  
rights/rights-  
based  
Community  
youth  
development  
Developmental  
theory  
Harm reduction  
Peer-to-peer  
Positive youth  
development  
Resilience  
Service  
learning  
Social and  
emotional  
learning  
Youth-adult

Youth OR  
adolescen\* OR  
early adult\* OR  
emerging adult\*  
AND  
  
Impacts/Outcomes  
Program design  
Program evaluation  
Program review  
Impact evaluation  
Outcome evaluation  
Program assessment  
Formative  
evaluation  
Process evaluation  
Summative  
evaluation  
Developmental  
evaluation  
Gold standard  
Best practice  
Evidence-based  
practice  
Social return on  
investment (SROI)

Religion/spirituality  
School engage\*  
Social activism  
Sports  
Volunteer\*  
Voluntary service  
Youth group\*  
Youth voice  
Youth organizations  
  
DARE  
Left behind  
  
At-risk, High-risk  
Immigrant/immigration  
Indigenous  
LGBTQ, queer  
Newcomer  
Racialized, racial  
minority  
Marginalized,  
Vulnerable  
Multi-barriered  
Gender

|                           |                                 |                  |                      |                      |
|---------------------------|---------------------------------|------------------|----------------------|----------------------|
| <b>development</b>        | Immigration                     | partnerships     | Value for money,     | Diversity            |
| <b>Empathy</b>            | Parenthood                      | Youth            | Return on investment | Inclusion            |
| <b>Exploration</b>        | Puberty                         | development      | (ROI)                | Greater Toronto Area |
| <b>Gender identity</b>    | Rites of passage                | Youth            | Collective impact    | (GTA)                |
| <b>Health</b>             | Rural-Urban                     | engagement       |                      | Ontario              |
| <b>Identity</b>           | School                          | Youth            | AND                  |                      |
| <b>develop*/formation</b> | Transition to                   | participation    |                      | AND                  |
| <b>Independen*</b>        | adulthood                       |                  | Activit* AND         | outcomes/program     |
| <b>Inclusion</b>          | Youth justice                   | Routine          | involvement          | features from first  |
| <b>Leadership</b>         | Diversity in                    | activities       | Afterschool          | column               |
| <b>Lifespan develop*</b>  | employment –                    | framework        | Arts                 | Achievement,         |
| <b>Mattering</b>          | equitable hiring                | Risk             | Bridging             | Academic achievement |
| <b>Mental health</b>      | for at-risk youth               | Protective       | Civic                | Attainment           |
| <b>Moral reasoning</b>    | Equity/inequity,                | factors          | participa*/engage*   | Developmental needs  |
| <b>Moral support</b>      | equality/inequality             | Resilience       | Clubs                | Employment           |
| <b>Motivation</b>         | Opportunity youth               | Health           | Coaching             | Graduation           |
| <b>Nutrition</b>          | Youth trajectory                | Social           | Community            | Health               |
| <b>Optimism</b>           | Life course                     | determinants     | leadership           | Life course          |
| <b>Peer relationships</b> | Life path                       | Social capital   | Community            | Progression          |
| <b>Perspective-taking</b> | NEET                            | Cultural capital | participa*           | Retention            |
| <b>Physical activity</b>  | Out of labor force              | Life course      | Community service    | Social determinants  |
| <b>Physical</b>           | Teen                            | Developmental    | Counseling           | Wellbeing            |
| <b>development</b>        | Social capital,                 | needs            | Empowerment          |                      |
| <b>Prosocial behav*</b>   | social network,                 |                  | Engagement           |                      |
| <b>Prosocial norm*</b>    | social bond                     |                  | Extended learning    |                      |
| <b>Protective factors</b> | 21 <sup>st</sup> century skills |                  | Extracurricular      |                      |
| <b>Psychosocial</b>       | Character                       |                  | activit*             |                      |
| <b>develop*</b>           | development,                    |                  | Governance           |                      |
| <b>Risk behav*</b>        | values                          |                  | Leadership           |                      |
| <b>Risk-taking</b>        | Capacity building               |                  | Leisure              |                      |
| <b>Reasoning</b>          | Sex, intimacy,                  |                  | Mentorship           |                      |
| <b>Resilienc*</b>         | sexual health                   |                  | Out-of-school time   |                      |
| <b>Safety</b>             | Risk factors, Risk              |                  | (OST)                |                      |
| <b>School achieve*</b>    | Prevention                      |                  | Participa*           |                      |
| <b>School attachment</b>  | Developmental                   |                  | Political participa* |                      |
|                           | needs                           |                  | Program              |                      |
|                           | Addictions,                     |                  | Program evaluat*     |                      |
|                           | substance use                   |                  | Psychological*       |                      |
|                           | Cultural identity,              |                  | engage*              |                      |
|                           | Ethnocultural                   |                  | Recreation           |                      |
|                           | identity                        |                  |                      |                      |

## APPENDIX CHAPTER 4: STUDIES OF AUTONOMY

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|---|---|
| Title                                       | Autonomy support, basic need satisfaction and the optimal functioning of adult male and female sport participants: A test of basic need theory.   |
| Authors, publication date, DOI #/PMID, ISBN | Adie, J. W., Duda, J. L., & Ntoumanis, N. (2008). <i>Motivation and Emotion</i> , 32, 189-199. DOI 10.1007/s11031-008-9095-z  |
| Theoretical framework                       | Self-Determination Theory (BNT – Basic Needs Theory).   |
| Critical factor(s)                          | Autonomy, Relatedness, Competence.  |
| Outcome(s)                                  | Psychological/emotional.  |
| Outcome Measure(s)                          | Subjective vitality, emotional and physical exhaustion, well/ill being.   |
| Methodology                                 | Quantitative self-report questionnaire; structural equation modeling.   |
| Location(s)                                 | United Kingdom.   |
| School Level                                | N/A   |
| Purpose of Evaluation                       | To test the theoretical model of coach autonomy support, motivational processes and well/ill being. To discern which basic psychological needs mediate the link between autonomy support and well-/ill-being and to explore gender invariance in the model.   |
| Sample Population                           | 39 adults (Males = 271, Females = 268).<br>Late adolescence.<br>Mean age 22.75.   |
| Research Instrument(s)                      | Health Care Climate Questionnaire.<br>Five item perceived competence subscale of the Intrinsic Motivation Inventory.<br>Acceptance subscale of the Need for Relatedness Scale.<br>A five item version of the Subjective Vitality Scale.<br>Five item emotional and physical exhaustion subscale from the Athlete Burnout Questionnaire.   |
| Method                                      | Structural Equation Modeling (SEM) analyses.<br>Participants all engaged in team sports (most at club level) volunteered for study after being invited by the principle investigator.<br>-Multi-section questionnaire administered before or after practice.  |
| Key Findings                                | Coach autonomy support predicted participants' basic need satisfaction for Competence, Autonomy, Relatedness. Basic need satisfaction predicted greater subjective vitality when engaged in sport. Low levels of autonomy - more susceptible to feeling emotionally and physically exhausted from sport investment. Autonomy and competence partially mediated the path from autonomy support to subjective vitality. |
| Strengths                                   | Tested and supported BNT hypothesis.<br>Structural equation modeling to examine multiple outcome variables simultaneously and control for measurement error.  |
| Weaknesses                                  | Cross-sectional data.<br>Findings based on correlational data.<br>Self-report instruments.<br>Diversity of team sports participants limits generalizability.  |

|   |  |
|---|--|
| Title                                       | Autonomy and adolescent social functioning: The moderating effect of risk  |
| Authors, publication date, DOI #/PMID, ISBN | Boykin McElhane, K., & Allen, J.P. (2001), <i>Child Development</i> , 72, 220–235<br>DOI: 0009-3920/2001/7201-0014   |
| Theoretical framework                       | N/A  |
| Critical factor(s)                          | Autonomy, Relatedness, Competence.   |
| Outcome(s)                                  | Cognitive/learning.<br>Behavioural/social.<br>Psychological/emotional.   |
| Outcome Measure(s)                          | Parental attachment.<br>Level of environmental risk.   |
| Methodology                                 | Observational and multi reporter methods.  |
| Location(s)                                 | Virginia state, U.S.   |
| School Level                                | Secondary.   |
| Purpose of Evaluation                       | To examine how level of risk interacts with familial approaches to cognitive autonomy promotion.   |
| Sample Population                           | 131 adolescents from either a low-risk or high-risk social context, their mothers, and their peers.<br>Mean age 15.9.<br>Middle adolescence.   |
| Research Instrument(s)                      | Child Report of Parenting Behavior Inventory: Acceptance vs Rejection and Psychological Control vs. Autonomy.<br>Autonomy and Relatedness Coding System.<br>Adolescent Self-Perception Profile.  |
| Method                                      | Adolescents with academic risk factors in their records were selected from two school districts and sample was divided into two subsamples according to the level of risk present in the adolescents' social environments.<br>Families came in for two 3-hr visits.<br>Peers were contacted by phone and came in separately for one 45-min session.  |
| Key Findings                                | The relationship between negotiating autonomy and the quality of the mother–adolescent relationship is moderated by the level of risk present in the environment. In high-risk families, adolescents felt closer to mothers who undermined their autonomy, whereas low-risk teens saw these mothers as psychologically controlling. Negotiation of autonomy had different consequences outside the home according to the level of risk, particularly for adolescents' levels of delinquency and their social competencies. |
| Strengths                                   | Identifies risk level as a key contextual variable.<br>Examines links between autonomy negotiation and both mother–adolescent relationship quality and adolescent outcomes.<br>Study examined the moderating effects of environmental risk by using observational data and data from multiple reporters.<br>Extended and validated similar research that has used survey methods.  |
| Weaknesses                                  | Sample not representative of all adolescents in high or low risk environments.<br>The moderating effects of a risky context could not be examined separately within racial/ethnic groups in this study due to small sample size.<br>Only examined mother-adolescent relationships.<br>Cross-sectional data.  |



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|---|---|
| Title                                       | The pivotal role of adolescent autonomy in secondary school classrooms.   |
| Authors, publication date, DOI #/PMID, ISBN | Hafen, C. A., Allen, J. P., Mikami, A. Y., Gregory, A., Hamre, B., & Pianta, R. C. (2012). <i>Journal of Youth and Adolescence</i> , 41, 245-255.<br>DOI 10.1007/s10964-011-9739-2  |
| Theoretical framework                       | Self-Determination Theory.  |
| Critical factor(s)                          | Autonomy, Relatedness, Competence.  |
| Outcome(s)                                  | Cognitive/learning.<br>Behavioural/social.<br>Psychological/emotional.  |
| Outcome Measure(s)                          | Self-reported student behavior, academic competence, connection to the teacher and perceptions of the classroom.<br>Observed (video-taped) student engagement in the classroom.   |
| Methodology                                 | Quantitative self-report questionnaires (beginning and end of a single course).   |
| Location(s)                                 | Virginia USA.   |
| School Level                                | Grades 9-12.  |
| Purpose of Evaluation                       | To investigate students' perceptions of autonomy, teacher connection, and academic competence as predictors of changes in student engagement within classroom from start to end of a course.  |
| Sample Population                           | 578 (58% female, 68% White) high school students in Virginia.<br>(sample came from 34 classrooms).<br>Middle to late adolescence.   |
| Research Instrument(s)                      | 6 items (e.g., I try hard to do well in this class) taken from Patterns of Adapted Learning Scale).<br>Academic competence adapted from academic efficacy and master motivation scales.<br>Classroom Assessment Scoring System-Secondary.                                       |
| Method                                      | Data came from 34 classrooms and 578 students (323 males and 255 females).<br>Two self-report surveys were administered at the beginning and end of the course.<br>Video was taken during the beginning and end of the course and coded.<br>Cross-lagged model applied to data. |
| Key Findings                                | Students who perceived their classrooms as allowing and encouraging their own autonomy in the first few weeks increased their engagement through the course, rather than the typical decline in engagement by students in other classrooms.                                     |
| Strengths                                   | Data gathered from both student-reported and observed engagement over a year.<br>Use of multiple measures of engagement.<br>Use of longitudinal data to detect change in engagement.  |
| Weaknesses                                  | Half the teachers given a treatment; half the teachers were control condition: classroom dynamics.<br>Teachers self-selected the video that they sent in for coding.<br>Design utilized two assessment points, one at the beginning of a class and one at the end of a class.   |

|   |   |
|---|---|
| Title                                       | Who shapes whom in the family: Reciprocal links between autonomy support in the family and parents' and adolescents' coping behaviors.  |
| Authors, publication date, DOI #/PMID, ISBN | Seiffge-Krenke, I., & Pakalniskiene, V. (2011). <i>Journal of Youth and Adolescence</i> , 40, 983-995. DOI 10.1007/s10964-010-9603-9  |
| Theoretical framework                       | Coping theory.<br>Family development theory.<br>Family systems theory.  |
| Critical factor(s)                          | Autonomy, Relatedness, Competence.  |
| Outcome(s)                                  | Cognitive/learning.<br>Behavioural/social.<br>Psychological/emotional.  |
| Outcome Measure(s)                          | Perceptions of autonomy support.<br>Adolescent coping styles.<br>Parents coping behaviours.   |
| Methodology                                 | 4 year longitudinal design; Quantitative questionnaires administered to each family member; cross-lagged analyses.  |
| Location(s)                                 | Germany.  |
| School Level                                | High school.  |
| Purpose of Evaluation                       | To analyze the coping behaviors of fathers, mothers, and children and their relation to adolescent autonomy.  |
| Sample Population                           | 196 families (53% female children, mean age = 13.9). Mean age of mothers = 44.2, fathers = 42.8; German sample.<br>Early, Middle, Late adolescence.   |
| Research Instrument(s)                      | Family Environment Scale.<br>Coping Across Situations Questionnaire .<br>F-Copes.   |
| Method                                      | Data came from 4 waves of a four-year longitudinal study involving a total of 196 adolescents and 391 parents. Families came from broad socioeconomic strata.<br>Researchers visited family homes over 4 years and administered questionnaires.<br>Analyzed if the coping styles of parents and their adolescent children were directly related to each other over time by using a cross-lagged panel design model. |
| Key Findings                                | Parents and children do not affect each other's abilities to cope with family stress over time. Both the parents' and adolescents' perceptions of autonomy support in the family were important in shaping their respective coping styles.  |
| Strengths                                   | Four-year longitudinal study.<br>Analyzed the reciprocal links between the coping behaviors of different family members.  |
| Weaknesses                                  | Self-reporting.<br>Small sample size.<br>A more diverse sample may yield different results (cultural background, socioeconomic status, family structure).<br>Autonomy may be less important in other cultural contexts.   |

|   |   |
|---|---|
| Title                                       | Antecedents and outcomes of self-determination in 3 life domains: The role of parents' and teachers' autonomy support.  |
| Authors, publication date, DOI #/PMID, ISBN | Soenens, B., & Vansteenkiste, M. (2005). <i>Journal of Youth and Adolescence</i> , 34, 589-604.   |
| Theoretical framework                       | Self-Determination Theory.  |
| Critical factor(s)                          | Competence, Autonomy.   |
| Outcome(s)                                  | Cognitive/learning.<br>Behavioural/social.<br>Psychological/emotional.  |
| Outcome Measure(s)                          | Student's self-reported grades on their most recently completed series of exams.<br>Student reported reasons to search for a job in the future and intention to engage in job-search activities after graduation.   |
| Methodology                                 | Quantitative self-report questionnaires; structural equation modeling; correlational.   |
| Location(s)                                 | Dutch-speaking part of Belgium.   |
| School Level                                | Middle- to late-adolescence.  |
| Purpose of Evaluation                       | To investigate a model of relationships between perceived parenting and teaching styles, self-determination in 3 life domains (school, social competence, job-seeking behaviors), and specific adolescent outcomes.   |
| Sample Population                           | Two samples: 1 - 328, 75% girls, Grade 10-12, Dutch speaking part of Belgium, 15-21 years 2 - 285 Grade 12 or 13, 17-22 years, 46% boys.  |
| Research Instrument(s)                      | Parenting Scales.<br>Five items of the Perceptions Of Parents Scales .<br>6-item version of the Learning Climate Questionnaire SRQ-A.<br>SRQ-F.<br>Social Acceptance Subscale of the Self-Perception Profile for Adolescents (SPPA).<br>Job Search Self-regulation Questionnaire.<br>Societal identity scales of the U-GIDS.  |
| Method                                      | Independent self-report questionnaires delivered in schools during school time in small group session (50 minutes long) with each sample. With the older sample, adolescents were drawn from technical and vocational training classes.   |
| Key Findings                                | Autonomy-supportive parenting was significantly related to self-determination in all life domains. Autonomy-supportive teaching added significantly to the prediction of self-determining in school and job-seeking domains. Self-determination was positively associated with measures of adjustment in specific life domains. Self-determination acts as an intervening variable in the relation between perceived interpersonal environment and adolescent adjustment. |
| Strengths                                   | Looks at self-determination as an alternative way of tapping into the construct of autonomy.<br>Robust sample size (N = 328 and N = 285).<br>Multiple measures/methods for each dependent variable.<br>Compared the relative predictive power of mothers' and fathers' parenting style separately.  |
| Weaknesses                                  | All relationships were investigated in a cross-sectional design.<br>All measures were self-reported,<br>The assessment of parenting and teaching styles limited to the dimension of autonomy support.   |

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|---|---|
| Title                                       | Gender, the assertion of autonomy, and the stress process of young adulthood.   |
| Authors, publication date, DOI #/PMID, ISBN | Van Gundy, K. (2002). <i>Social Psychology Quarterly</i> , 65, 346-363.   |
| Theoretical framework                       | Stress Process Model.   |
| Critical factor(s)                          | Autonomy.   |
| Outcome(s)                                  | Behavioural/social.<br>Psychological/emotional.   |
| Outcome Measure(s)                          | Self-reported criminal behavior, current and previous.<br>Self-reported feelings or experiences related to depression.  |
| Methodology                                 | Self-reported questionnaire; Stress Process Model.  |
| Location(s)                                 | Miami-Dade County, Florida.   |
| School Level                                | High-school graduates.  |
| Purpose of Evaluation                       | To investigate the relationship between gender, stressful events, the assertion of autonomy, and two outcomes: depression and criminal behavior.  |
| Sample Population                           | 1,184 young adults: 312 young women and 872 young men. 27% African- American, 43% Hispanic, 28 % non-Hispanic white. Aged 18 to 23.<br>Late adolescence.  |
| Research Instrument(s)                      | Center for Epidemiological Studies Depression Scale (CES-D).  |
| Method                                      | Data came from a four- wave stratified random sample of 1,286 south Florida young adults who attended Miami-Dade schools in the 1990s. Includes self-reports from respondents based on face-to-face interviews conducted in 1998-2000. The Stress Process Model (Pearlin 1989) was applied to the data sample.  |
| Key Findings                                | Young women and young men tend to manifest different symptoms of stress: women tend more toward depression, and men tend more toward crime.<br>Gender differences in depression are not explained by gender variations in autonomy.<br>Depending on gender and the outcome assessed, the assertion of autonomy can be either a "resource" or a "detriment" in the stress process. |
| Strengths                                   | Extends prior stress research by using more comprehensive stress measure.<br>Sample reflects the rich ethnic composition of community.<br>Large sample size.  |
| Weaknesses                                  | Sample looks only at young adults restricting generalization of the results to other ages and time periods.<br>Findings may not generalize to other regions.<br>Assumptions about the causal ordering of variables.   |

|   |   |
|---|---|
| Title                                       | The jingle-jangle fallacy in adolescent autonomy in the family: In search of an underlying structure.   |
| Authors, publication date, DOI #/PMID, ISBN | Van Petegem, S., Vansteenkiste, M., & Beyers, W. (2013). <i>Journal of Youth and Adolescence</i> , 42, 994-1014.<br>DOI 10.1007/s10964-012-9847-7   |
| Theoretical framework                       | Self-Determination Theory, Separation-Individuation Theory, Psychological Reactance Theory; and the theory on depressogenic personality.  |
| Critical factor(s)                          | Autonomy, Relatedness.  |
| Outcome(s)                                  | Behavioural/social.<br>Psychological/emotional.   |
| Outcome Measure(s)                          | Self-reported feelings of self-worth; symptoms of depression; feelings of energy and vitality; rule breaking behaviour; and alcohol use.  |
| Methodology                                 | Quantitative self-report questionnaire; principal component factor analysis, regression analyses. Correlational.  |
| Location(s)                                 | Belgium.  |
| School Level                                | Grades 9 -12.   |
| Purpose of Evaluation                       | To clarify the meaning and measurement of adolescent autonomy in the family.  |
| Sample Population                           | Two samples ranging from 14-21 - 707 (51% girls) and 783 (59% girls); Belgium.  |
| Research Instrument(s)                      | Subscale of the Self-Perception Profile for Adolescents.<br>The Center for Epidemiologic Studies-Depression Scale.<br>Subjective Vitality Scale.<br>Deviant Behavior Scale.<br>Alcohol Use Disorders Identification Test.   |
| Method                                      | Two separate studies: Quantitative self-report questionnaires.<br>707 Belgian adolescents in Study 1, and 783 in Study 2.<br>Data was collected from students in grades 9-12, ranging in age between 14 and 20 years.<br>Surveys were collected from four high schools.   |
| Key Findings                                | Clear evidence for a two dimensional structure: 1. volition versus pressure - the degree to which adolescents experience a sense of volition and choice as opposed to feelings of pressure and coercion in the parent-adolescent relationship. 2. Distance versus proximity - the degree of interpersonal distance in the parent-adolescent relationship. Volition related to higher well-being, less problem behavior, secure attachment. Distance related to problem behavior, avoidant attachment style. |
| Strengths                                   | Helps to clarify the meaning, the measurement and the functional role of autonomy.<br>Large sample size.  |
| Weaknesses                                  | Self-report surveys.<br>Autonomy measures do not encompass the full range of existing scales.<br>Data limited to a specific context (child-parent relationship) and sample.<br>Cross-sectional study.   |

|   |   |
|---|---|
| Title                                       | Motivating learning, performance, and persistence: The synergistic effects of intrinsic goal contents and autonomy-supportive contexts.   |
| Authors, publication date, DOI #/PMID, ISBN | Vansteenkiste, M., Simons, J., Lens, W., Sheldon, K. M., & Deci, E. L. (2004). <i>Journal of Personality and Social Psychology</i> , 87, 246-260.   |
| Theoretical framework                       | Self-Determination Theory.  |
| Critical factor(s)                          | Competence, Autonomy.   |
| Outcome(s)                                  | Cognitive/learning.<br>Behavioural/social.<br>Psychological/emotional.  |
| Outcome Measure(s)                          | Self-reports of superficial processing.<br>Self-reports and a behavioral measure of deep processing.<br>Graded performance on tests and in demonstrations,\.<br>Subsequent free-choice persistence at activities related to the learning (e.g., reading related books).   |
| Methodology                                 | Self-report questionnaires; Factor analysis.  |
| Location(s)                                 | Belgium.  |
| School Level                                | Grades 10 and 11 and college students.  |
| Purpose of Evaluation                       | To examine the effects of experimentally manipulated goal content on processing, performance, and persistence outcomes.   |
| Sample Population                           | Late adolescence.<br>Study 1: 200 first-year female Belgian college students, 19–20 years old.<br>Study 2: 181 male and 196 female Belgian college students 18–19 years old.<br>Study 3: 111 female and 113 male 10th- and 11th-grade Belgian high school students.   |
| Research Instrument(s)                      | Questionnaires based on Ryan and Connell (1989), 4-point scales to assess the extent to which participants engaged in the learning task for external reasons, for introjected reasons, for identified reasons, and for intrinsic reasons.   |
| Method                                      | 4 randomly assigned experimental conditions based on goal content (intrinsic goal, extrinsic goal) and learning climate (autonomy-supportive, controlling). Each group was given written instructions worded by the 4 conditions.<br>Study 1: Student teachers read text about recycling and then completed questionnaires. A week later, students were randomly placed in groups to discuss recycling and were graded individually for quality and contribution.<br>Study 2: Marketing students read a text about communications then filled out the questionnaires. Five days later, students presented in small groups and were graded on individual contributions. Nine days after, they took a second written test on the material to assess if students voluntarily engaged with the topic.<br>Study 3: High school students learning Tai-bo exercises. At the end of the first class, they filled out the questionnaires. At the end of the second class, participants were graded on their performance by the instructor and were invited to demonstrate the exercises on two subsequent occasions. |
| Key Findings                                | Provides strong evidence that the experimental manipulation of both intrinsic goal framing and autonomy-supportive climates results in adaptive, learning-related outcomes.   |
| Strengths                                   | Results confirmed in 3 separate experimental studies and contexts.<br>Data collection did not rely solely on self-reporting.<br>Multiple measures for variables.  |
| Weaknesses                                  | No “no-goals” control group.<br>Short-term duration.  |

|   |   |
|---|---|
| Title                                       | Predicting attitudes and physical activity in an “at-risk” minority youth sample: A test of self-determination theory.  |
| Authors, publication date, DOI #/PMID, ISBN | Vierling, K. K., Standage, M., & Treasure, D. C. (2007). <i>Psychology of Sport and Exercise</i> , 8, 795-817.<br>DOI: 10.1016/j.psychsport.2006.12.006   |
| Theoretical framework                       | Self-Determination Theory.  |
| Critical factor(s)                          | Autonomy, Relatedness, Competence.  |
| Outcome(s)                                  | Behavioural/social.<br>Psychological/emotional.   |
| Outcome Measure(s)                          | BMI.<br>Students’ physical activity using pedometers.<br>Self-reported motivation and attitudes towards physical activity.  |
| Methodology                                 | Quantitative self-reported questionnaires, field cross-sectional design, structural equation modeling.  |
| Location(s)                                 | Southwestern United States.   |
| School Level                                | Grades 5-8.   |
| Purpose of Evaluation                       | To examine a model of motivational processes to predict physical activity and attitudes toward physical activity in an “at-risk” minority youth sample.   |
| Sample Population                           | Early-Mid Adolescence.<br>239 5th–8th graders (119 females, 120 males), ages 9.81–14.41 years; (M age 12.11 years). Sample was ethnically diverse (Hispanic . 67.3%, African American 10.1%, White 9.6%, Native American 2.4%, Pacific Island/Asian 2.4%, multiple ethnicities 8.2%).<br>Predominantly low socio-economic status.   |
| Research Instrument(s)                      | BMI (kg/m <sup>2</sup> ) was used as the measure of body composition.<br>The Walk4Life 2-Function pedometer (LS 2505).<br>Modified version of Sport Climate Questionnaire.<br>Intrinsic Motivation Inventory.<br>Perceived autonomy five items.<br>Acceptance subscale of Need for Relatedness Scale.<br>Adapted version of Self-regulation Questionnaire.<br>Children’s Attraction to Physical Activity scale.                   |
| Method                                      | Sample was classified as “at-risk” for health disparities, with heart disease risk factors. Four days of physical activity data was collected through pedometers and BMI over eight days of data collection. Participants completed self-report questionnaires on motivations and attitudes towards physical activity and autonomy.   |
| Key Findings                                | Autonomy-support facilitates motivational processes that influence positive subjective perceptions and physical activity. The findings reinforce SDT’s proposition that the three psychological needs of Competence, Autonomy, and relatedness are key variables to the “social context— motivation” relationship. Autonomous motivation positively linked to physical activity and positive attitudes towards physical activity. |
| Strengths                                   | Multiple methods of assessment: pedometer and self-report.<br>Diverse sample.   |
| Weaknesses                                  | Cross-sectional, cannot determine the direction of causality (i.e. it is uncertain as to whether BMI influences physical activity levels or whether physical activity levels influence BMI).<br>BMI is a contested measure.   |



## APPENDIX CHAPTER 5: STUDIES OF RELATEDNESS

|   |   |
|---|---|
| Title                                       | Socialization in context: Connection, regulation, and autonomy in the family, school, and neighborhood, and with peers.   |
| Authors, publication date, DOI #/PMID, ISBN | Barber, B. K., & Olsen, J. A. (1997). <i>Journal of Adolescent Research</i> , 12, 287-315.  |
| Theoretical framework                       | Developmental Assets™   |
| Critical factor(s)                          | Autonomy, Relatedness.  |
| Outcome(s)                                  | Cognitive/learning.<br>Behavioural/social.<br>Psychological/emotional.  |
| Outcome Measure(s)                          | Grades.<br>Child Depression Inventory Checklist.<br>Child Behavior Checklist – Delinquent subscale.   |
| Methodology                                 | Correlational.  |
| Location(s)                                 | Ogden, Utah.  |
| School Level                                | 5 <sup>th</sup> , 8 <sup>th</sup> grades.   |
| Purpose of Evaluation                       | To investigate the relation of connection with significant others, regulation of behavior, and autonomy to grades, depression and antisocial behavior in four social contexts (family, school, neighborhood).   |
| Sample Population                           | Early, mid adolescence, 900 fifth and eighth grade students.  |
| Research Instrument(s)                      | Acceptance subscale from the Child Report of Parent Behavior Inventory.<br>Peer – How much does this person like/love you?<br>School – 4 item scale used to measure school connection.<br>Neighborhood – 4-item scale used to measure how much time spent.<br>Family regulation – 5-item scale used in family research with adolescents.<br>Peer regulation – 10-item measure of peer delinquency.<br>School regulation – 3-item scale measuring the extent to which regulation is present in school envt.<br>Neighborhood regulation – 5-item scale measuring social disorganization in neighborhood.<br>Family autonomy – Psychological Control Scale – Youth Self Report.<br>Peer autonomy – “How much does this person try to control what you do, think, or say.”<br>School autonomy – 5-item scale.<br>Child Depression Inventory.<br>Delinquent subscales from the Child Behavior Checklist. |
| Method                                      | Data came from the first wave of four year longitudinal study.<br>Random sample stratified by Hispanic ethnicity was drawn of 5 <sup>th</sup> an 8 <sup>th</sup> graders.<br>Sample was divided equally between male/female students.<br>Descriptive and bivariate correlations reported.<br>Regression analyses conducted separately by gender and age of youth for each of the three dependent Variables with 11 predictor variables.   |
| Key Findings                                | Connection, regulation, autonomy were meaningful dimensions of socialization experiences in the four contexts, family and peers were primary socialization domains, aspects of youth functioning related to specific contexts.  |
| Strengths                                   | Examines factors in four different contexts.<br>Large sample, multiple measures for variables.  |
| Weaknesses                                  | Self-report questionnaire, regression analyses so no causality.   |

|   |  |
|---|--|
| Title                                       | Intergenerational bonding in school: The behavioral and contextual correlates of student-teacher relationships.  |
| Authors, publication date, DOI #/PMID, ISBN | Crosnoe, R., Johnson, M. K., & Elder, G. H. (2004). <i>Sociology of Education</i> , 77, 60-81.<br>DOI: 10.1177/003804070407700103  |
| Theoretical framework                       | Ecological systems.  |
| Critical factor(s)                          | Relatedness.   |
| Outcome(s)                                  | Cognitive/learning.<br>Behavioural/social.   |
| Outcome Measure(s)                          | GPA.<br>Binary measure (suspension/expulsion – yes/no).  |
| Methodology                                 | Short-term longitudinal.   |
| Location(s)                                 | Add Health (schools located throughout the States).  |
| School Level                                | Grades 7-12.   |
| Purpose of Evaluation                       | To explore the significance of social integration in the educational system. To examine whether student-teacher relationships predicted academic achievement and disciplinary problems. To examine whether these relationships were predicted by structural, compositional, and climate-related characteristic of the school and how the behavioral and contextual correlates of student-teacher relationships vary by race-ethnicity. |
| Sample Population                           | 13,570 adolescents.<br>Early, mid, late adolescence.   |
| Research Instrument(s)                      | Self-report questionnaires.<br>Teacher bonding – 3-item scale about general feelings about teacher.<br>Academic achievement – grades in math, science, English, social studies.<br>Disciplinary problems – reported whether or not they had ever been suspended or expelled.   |
| Method                                      | Research based on data from the National Longitudinal Study of Adolescent Health (Add Health).<br>Stratified sampling design.<br>Conducted regression analyses with teacher-bonding as the predictor and again separately as the outcome.<br>Examined differences among ethnicities.   |
| Key Findings                                | Strong intergenerational bonding in school was associated with higher academic achievement, especially for Hispanic American girls, and with a lower likelihood of disciplinary problems, especially for white girls. Bonds were stronger in schools with several characteristics (private sector, greater racial-ethnic matching between students and student body, greater perceived safety and lower SES).                          |
| Strengths                                   | Large sample size, examines differences among different ethnicities.   |
| Weaknesses                                  | Possible selection effects.<br>Small portion of sample switched schools during study.  |

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|---|---|
| Title                                       | School belonging and school misconduct: The differing role of teacher and peer attachment.  |
| Authors, publication date, DOI #/PMID, ISBN | Damanet, J., & Van Houtte, M. (2012). <i>Journal of Youth and Adolescence</i> , 41, 499-514.  |
| Theoretical framework                       | Schools-as-community perspective.   |
| Critical factor(s)                          | Relatedness.  |
| Outcome(s)                                  | Behavioural/social.   |
| Outcome Measure(s)                          | School misconduct.  |
| Methodology                                 | Correlational.  |
| Location(s)                                 | University of Liege (Belgium).  |
| School Level                                | Grades 9, 11.   |
| Purpose of Evaluation                       | To determine whether: 1) the preventive influence of school belonging acts at the individual or school level 2) a distinction should be made between the different actors with whom students bond at school 3) the associations of bonding with teachers/peers/school with school misconduct differ by socio-ethnic school context.   |
| Sample Population                           | 11,872 students from 85 schools.<br>Mid-, late-adolescence.   |
| Research Instrument(s)                      | School misconduct – 17 item scale inspired by Stewart (2003).<br>Bonding – 4-items for peers.<br>Bonding teachers – Psychological Sense of School Membership Scale.<br>Cohesion – aggregated students' individual beliefs to the school level, by calculating the mean sense of belonging.<br>Parental Attachment – 7 item scale.<br>Vocational Track (based on track student was currently enrolled in).<br>Prior Achievement – GPA. |
| Method                                      | Multilevel modeling.<br>Recruited participants from Flemish schools and administered questionnaires.<br>Examined school and individual effects of bonding, the differential effects of peer, teacher, and school bonding and differences by socio-ethnic context.   |
| Key Findings                                | Students individual bonding with peers, teachers and school associate with school misconduct, rather than overall school cohesion; while higher perceived teacher support and school belonging related to less misconduct, higher peer attachment was associated with higher rates of school misconduct; no socio-ethnic differences.   |
| Strengths                                   | Examined socio-ethnic differences, examined the association of bonding within differing contexts (peers, teacher, school).  |
| Weaknesses                                  | Sample is from Belgium (generalizes to North American students).  |

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|---|--|
| Title                                       | Sense of belonging among high school students representing 4 ethnic groups.  |
| Authors, publication date, DOI #/PMID, ISBN | Faircloth, B. S., & Hamm, J. V. (2005). <i>Journal of Youth and Adolescence</i> , 34, 293-309.<br>DOI: 10.1007/s10964-005-5752-7   |
| Theoretical framework                       | Stage-environment fit.   |
| Critical factor(s)                          | Relatedness.   |
| Outcome(s)                                  | Cognitive/learning.<br>Behavioural/social.   |
| Outcome Measure(s)                          | School valuation measure.<br>GPA.  |
| Methodology                                 | Correlational.   |
| Location(s)                                 | 6 schools in the San Francisco Bay area, 1 in Wisconsin.   |
| School Level                                | 9 <sup>th</sup> -12 <sup>th</sup> grades.  |
| Purpose of Evaluation                       | To investigate dimensions and mechanisms of belonging relevant to motivation and achievement among high school students in 4 ethnic groups (African American, Asian American, Latino European American).   |
| Sample Population                           | 580 African American, 948 Asian American, 860 Latino, 3142 Euro American students<br>Mid-, late-adolescence.   |
| Research Instrument(s)                      | Belongingness – peer nomination (nominated up to 5 best friends).<br>Extracurricular – single-item question.<br>Bonding with teacher – 6-item measure (e.g. my teachers care about how I'm doing).<br>Perceived discrimination – 3-item measure.<br>Efficacious attributions for academic success – 2 questions.<br>Self-competence attributions – Self-Perception Profile for Adolescents.<br>Valuing at school – 5-item scale taken from Wehlage et al. (1989).<br>Reasons for trying hard – 10-items.<br>Effort – 5-items.<br>Academic success – GPA. |
| Method                                      | Data taken from the National Center of Education Statistics records for each school.<br>Structural equation modeling using AMOS – identified relation between latent constructs (belonging, efficacy beliefs, valuing of school, and academic success and various observed measures of each).<br>Assessed viability of the model for each ethnic group using various fit indices CFI, RMSEA, etc.).  |
| Key Findings                                | All measures of belonging were significant for Euro-American and Latino students; friendship nominations were not significant for all groups, suggesting variability in perspectives across ethnic groups; belonging accounted for much of the relationship between student motivation and success across groups.  |
| Strengths                                   | Large, comprehensive, ethnically diverse sample. Examined variations across different ethno groups.  |
| Weaknesses                                  | Some variables measured using 2 item scale.  |

|   |   |
|---|---|
| Title                                       | The role of peer relatedness in late adolescent career development.   |
| Authors, publication date, DOI #/PMID, ISBN | Felsman, D. E., & Blustein, D. L. (1999). <i>Journal of Vocational Behavior</i> , 54, 279-295.  |
| Theoretical framework                       | Developmental Assets™<br>Relational theories, developmental task theory.  |
| Critical factor(s)                          | Relatedness.  |
| Outcome(s)                                  | Behavioural/social.   |
| Outcome Measure(s)                          | Different facets of career development (see instruments section).   |
| Methodology                                 | Correlational.  |
| Location(s)                                 | Medium sized northeastern state university.   |
| School Level                                | Undergraduate students.   |
| Purpose of Evaluation                       | To investigate the role of close peer relationships in facilitating the resolution of the exploration and commitment tasks of career development in late adolescence.   |
| Sample Population                           | 147 undergrads in career planning nor academic/personal effectiveness classes.<br>Age 17-22, emerging adults.   |
| Research Instrument(s)                      | Peer attachment – Inventory of parent and peer attachment.<br>Intimacy – subscales from Measures of Psychosocial Development.<br>Mutuality – Mutual Psychological Development Questionnaire .<br>Career exploration – Career Exploration Survey.<br>Progress in committing to career choices – Vocational Exploration and Commitment Scale.   |
| Method                                      | Recruited participants from specific career oriented classes.<br>Self-report questionnaires administered in class.<br>Canonical analyses conducted to determine relation between predictor and criterion variables.<br>Tested the full canonical model and then examined structure coefficients to determine the nature of relation between three relatedness variables and the career development variables. |
| Key Findings                                | Three peer relatedness variables (attachment, intimacy, mutuality) shared a significant and unique amount of variance with the exploration and commitment variables (above parental attachment, age, gender). Attachment to peers and intimacy were positively associated with environmental exploration and progress in committing to career choices.  |
| Strengths                                   | Examined peer relatedness using three different dimensions. Comprehensive measurement of “career development.”  |
| Weaknesses                                  | Small sample, undergraduate university students therefore findings may not generalize beyond this population. Correlational analyses, therefore no causality between variables.   |

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|---|--|
| Title                                       | Exploring the utility of social control theory for youth development: Issues of attachment, involvement, and gender.   |
| Authors, publication date, DOI #/PMID, ISBN | Huebner, A. J., & Betts, S. C. (2002). <i>Youth Society</i> , 34, 123-147.<br>DOI: 10.1177/004411802237860   |
| Theoretical framework                       | Social control theory.   |
| Critical factor(s)                          | Relatedness.   |
| Outcome(s)                                  | Cognitive/learning.<br>Behavioural/social.   |
| Outcome Measure(s)                          | Delinquency.<br>Academic Achievement.  |
| Methodology                                 | Correlational.   |
| Location(s)                                 | Southwestern US mining community (90 miles east of a major metropolitan area).   |
| School Level                                | 7 <sup>th</sup> to 12 <sup>th</sup> grade.   |
| Purpose of Evaluation                       | To examine the utility of social control theory's "attachment" and "involvement" bonds as protective factors to examine gender differences in reports of delinquency and academic achievement.   |
| Sample Population                           | 911 students.<br>Mid-, late-adolescence.   |
| Research Instrument(s)                      | Attachment to:<br>Family – time spent with family.<br>Parents – Perceived parental quality measure.<br>Adults – one item used to assess attachment to nonparent adults.<br>Peers – one item used to assess attachment to peers.<br>Involvement in conventional activities – 7-items.<br>Delinquency – 9-items.<br>Academic achievement – self-reported grades.     |
| Method                                      | Data collected as part of a larger study on attitudes, behaviors, values, worries, and hopes<br>First examined the relationship among variables.<br>Ran hierarchical regression analyses to look at which attachment and involvement bonds predicted delinquency and academic achievement for both males and females (ran 2 separate models, one for each gender). |
| Key Findings                                | Although several of the involvement bond variables of social control theory are predictive of both delinquency and academic achievement for both genders, only the attachment bond variable provides an overall protective function for females.   |
| Strengths                                   | Directly applied a theory to their research, actually examined gender differences.   |
| Weaknesses                                  | Self-report of delinquent behaviours and grades, correlational analyses therefore, no causality.   |

|   |  |
|---|--|
| Title                                       | Social capital does matter for adolescent health: Evidence from the English HBSC study.  |
| Authors, publication date, DOI #/PMID, ISBN | Morgan, A., & Haglund, B. J. (2009). <i>Health Promotion International</i> , 24, 363-372. DOI: 10.1093/heapro/dap028   |
| Theoretical framework                       | Social determinants of health.   |
| Critical factor(s)                          | Relatedness.   |
| Outcome(s)                                  | Behavioural/social.<br>Psychological/emotional.  |
| Outcome Measure(s)                          | Health.<br>Health-related behaviours.<br>Well-being.   |
| Methodology                                 | Correlational.   |
| Location(s)                                 | 80 schools in England.   |
| School Level                                | 6425 young people.<br>11-15 years.   |
| Purpose of Evaluation                       | To measure and assess the relative importance of a range of social indicators representing the different domains of social capital on health, wellbeing and health-related behaviours of young people.   |
| Sample Population                           | Early-, mid-adolescence.   |
| Research Instrument(s)                      | Self-reported health – those who reported health to be fair.<br>Wellbeing – proportion who reported feeling low at least 1/week.<br>Physical activity – how many days active for at least 60 min.<br>Smoking prevalence – yes/no.<br>Regular drinking – weekly/less than every month.<br>Family sense of belonging – 4-item scale.<br>School sense of belonging – 3-item scale.<br>Autonomy and control – 2-item scale.<br>Social networking – participation in school clubs.<br>Neighborhood sense of belonging – 4-item scale.<br>Autonomy/control in neighborhood – yes/no.<br>Social networking in neighborhood – number of days per week being involved in activities.<br>Family Affluence Scale. |
| Method                                      | Data taken from a nationally representative cross-sectional survey carried out in England as part of the HBSC study.<br>Multivariate logistic regression conducted to explore the independent effects of social capital on health and associate behaviours.<br>Predicted the odds of an outcome occurring for respondents with different combinations of characteristics.<br>Separate models developed for each of the seven outcomes.   |
| Key Findings                                | Social capital matters for young people's health. Statistically significant relationships were found between the range of social capital indicators and the health and health related outcomes.  |
| Strengths                                   | Provides a comprehensive measure of social capital and health behaviours.  |
| Weaknesses                                  | Sample drawn from England therefore may not generalize to North America.<br>Some variables measured using one item.  |



|   |   |
|---|---|
| Title                                       | Parent and teacher relationships as predictors of school engagement and functioning among low-income urban youth.   |
| Authors, publication date, DOI #/PMID, ISBN | Murray, C. (2009). <i>The Journal of Early Adolescence</i> , 29, 376-404.<br>DOI: 10.1177/0272431608322940  |
| Theoretical framework                       | Developmental Assets™   |
| Critical factor(s)                          | Relatedness.  |
| Outcome(s)                                  | Cognitive/learning.<br>Behavioural/social.  |
| Outcome Measure(s)                          | School Adjustment.<br>Engagement.<br>Competence.<br>Achievement.  |
| Methodology                                 | Correlational.  |
| Location(s)                                 | Large, Midwestern city.   |
| School Level                                | 6 <sup>th</sup> , 7 <sup>th</sup> , 8 <sup>th</sup> grades.   |
| Purpose of Evaluation                       | To examine the associations between early adolescents' relationships with parents and teachers and indicators of school-adjustment.   |
| Sample Population                           | 129 adolescents.<br>Adolescents, primarily Latino (91 percent) and low income.  |
| Research Instrument(s)                      | Research Assessment Package for Schools – 84-item measure that assesses student engagement in school, student beliefs about self, and perceptions of interpersonal support.<br>Grades in language arts and math (teacher reported).<br>Iowa Test of Basic Skills – measure of academic achievement.   |
| Method                                      | Data collected in classrooms.<br>MANOVA conducted to examine potential demographic differences.<br>Correlations computed.<br>Hierarchical regression analyses conducted to explore effects of parent and teacher relationships on school adjustment and functioning variables.<br>Examine interaction effect as well.   |
| Key Findings                                | Parent-child relationship quality accounted for a significant portion of the variance in student-rated school engagement, school competence, and standardized achievement in reading. Teacher-student relationship quality accounted for a significant amount of variance in student-reported engagement, grades in language arts, mathematics, and mathematical achievement. Unclear expectations in relationships with parents, and closeness-trust with teachers also were strong predictors of school adjustment. |
| Strengths                                   | Comprehensive assessment of school adjustment, sample primarily ethnic minorities.  |
| Weaknesses                                  | Data are correlational therefore no causality can be concluded. Although sample consists of ethnic minorities, cannot be generalized beyond that population.  |

|   |   |
|---|---|
| Title                                       | Peer group membership and a sense of belonging: Their relationship to adolescent behavior problems  |
| Authors, publication date, DOI #/PMID, ISBN | Newman, B. M., Lohman, B. J., & Newman, P. R. (2007). <i>Adolescence</i> , 42, 241-263.   |
| Theoretical framework                       | N/A   |
| Critical factor(s)                          | Relatedness.  |
| Outcome(s)                                  | Behavioural/social.   |
| Outcome Measure(s)                          | Behaviour problems.   |
| Methodology                                 | Correlational.  |
| Location(s)                                 | Midwest.  |
| School Level                                | 11-18 years.  |
| Purpose of Evaluation                       | To explore three aspects of peer group membership in adolescence: peer group affiliation, the importance of group membership, and a sense of belonging.   |
| Sample Population                           | Mid, late adolescents.<br>733 adolescents aged 11-18, ethnically and socioeconomically diverse; 61% females; Midwest.   |
| Research Instrument(s)                      | Parent information form – demographic info.<br>Peer group membership – 3 measures of perceived peer group membership.<br>Peer group affiliation – yes/no.<br>Group membership salience – 1-item about group importance.<br>Sense of group belonging – Group belonging Scale (14-items).<br>Behaviour problems – Youth Self-Report (112-item questionnaire).   |
| Method                                      | Participants recruited from 8 school districts and one urban minority scholarship program in the Midwest.<br>Schools were selected to reflect the targeted population.<br>Resulting racial and economic composition was representative of the larger surrounding community.<br>Adolescents completed questionnaires during class time, one parent completed parent information form.<br>Descriptive and correlational analyses conducted (t-tests and MANOVAs for group differences). |
| Key Findings                                | Girls reported higher sense of peer group belonging than boys; sense of peer group belonging was negatively related to internalizing and externalizing behaviour problem.   |
| Strengths                                   | Ethnically and economically diverse sample (stratified to match community sample demographic).<br>Examined gender difference.   |
| Weaknesses                                  | Single source data collection (Didn't look at peer/teacher reports).<br>Some dichotomous variables.   |

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|---|--|
| Title                                       | The influence of affective teacher–student relationships on students’ school engagement and achievement: A meta-analytic approach.   |
| Authors, publication date, DOI #/PMID, ISBN | Roorda, D. L., Koomen, H. M. Y., Spilt, J. L., & Oort, F. J. (2011). <i>Review of Educational Research</i> , 81, 493-529.<br>DOI: 10.3102/0034654311421793   |
| Theoretical framework                       | Extended attachment and social-motivational perspectives.  |
| Critical factor(s)                          | Autonomy, Relatedness, Competence.   |
| Outcome(s)                                  | Cognitive/learning.<br>Behavioural/social.<br>Psychological/emotional.   |
| Outcome Measure(s)                          | Students’ school engagement and achievement: test scores, grades, teacher reports, self-reported grades.   |
| Methodology                                 | Meta-analysis; comprehensive statistical analysis.   |
| Location(s)                                 | United States, Canada, Europe, Asia, Australia, and Africa.  |
| School Level                                | Pre-school to high school.   |
| Purpose of Evaluation                       | To investigate the associations between affective qualities of teacher–student relationships and students’ school engagement and achievement.  |
| Sample Population                           | Early childhood to late adolescence.   |
| Research Instrument(s)                      | N/A  |
| Method                                      | Literature review.   |
| Key Findings                                | All analyses showed significant associations between the investigated variables, providing further support that teacher-student relationships (TSRs) influence students’ school engagement and achievement; analyses revealed positive associations between positive TSRs and both engagement and achievement, and negative associations between negative relationships and both engagement and achievement. |
| Strengths                                   | Effect sizes are reported.<br>Longitudinal studies were included.  |
| Weaknesses                                  | No conclusions about causality.<br>Not generalizable beyond the included studies (used fixed model results).<br>Primary studies did not provide information about all student and teacher characteristics included in the moderator analyses.<br>In many cases, moderator analyses could not be conducted for secondary school studies.<br>Most primary studies are cross-sectional.                         |

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|---|--|
| Title                                       | Autonomy, belongingness, and engagement in school as contributor to adolescent psychological well-being.   |
| Authors, publication date, DOI #/PMID, ISBN | Van Ryzin, M. J., Gravely, A. A., & Roseth, C. J. (2009). <i>Journal of Youth and Adolescence</i> , 38, 1-12. DOI 10.1007/s10964-007-9257-4  |
| Theoretical framework                       | Self-Determination Theory.   |
| Critical factor(s)                          | Autonomy, Relatedness.   |
| Outcome(s)                                  | Psychological/emotional.   |
| Outcome Measure(s)                          | Positive psychological adjustment.<br>Well-being.  |
| Methodology                                 | Short-term longitudinal.   |
| Location(s)                                 | Upper Midwestern United States.  |
| School Level                                |  |
| Purpose of Evaluation                       | To examine whether autonomy, belongingness, achievement are related to psychological adjustment.   |
| Sample Population                           | 283, mean age = 15.3, even gender distribution, 86% white.   |
| Research Instrument(s)                      | Academic autonomy – Academic Self-Regulation Questionnaire.<br>Belongingness – Classroom Life Scale.<br>Engagement in learning – Engagement vs. Disaffection with Learning Scale.<br>Positive psychological adjustment – Dispositional Hope Scale.   |
| Method                                      | Data gathered in two stages: 1) Nov/Dec 2004, 2) May 2005.<br>Structural equation modeling.<br>Constructed models to examine whether the hypothesized models hold over time and to determine whether the variables demonstrated reciprocal relationships.<br>Used various fit indices (CFI, TLI, chi-square, RMSEA, etc.) to assess fit of models. |
| Key Findings                                | A direct link between peer-related belongingness and positive adjustment. Reciprocal relationship between academic autonomy, teacher-related belongingness and engagement in learning - does not extend to peer-related belongingness.   |
| Strengths                                   | Illustrates distinction between engagement and hope.<br>Examined both teacher and peer related belongingness.  |
| Weaknesses                                  | Students continuing on through to stage 2 sig different than students who dropped in engagement.<br>Self-report measures.  |

## APPENDIX CHAPTER 6: STUDIES OF COMPETENCE

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| Title                                       | Long-term Follow-up Results of a Randomized Drug Abuse Prevention Trial in a White Middle-class Population.   |
| Authors, publication date, DOI #/PMID, ISBN | Botvin, G., Baker, E., Dusenbury, L., Botvin, E., & Diaz, T. (1995). <i>Journal of the American Medical Association</i> , 273, 1106–1112.   |
| Theoretical framework                       | Developmental Assets™   |
| Critical factor(s)                          | Competence.   |
| Outcome(s)                                  | Behavioural/social.   |
| Outcome Measure(s)                          | Self-reported tobacco, alcohol, and marijuana use; breath samples.  |
| Methodology                                 | Experimental Design, Longitudinal.  |
| Location(s)                                 | Albany, Syracuse, and Long Island in New York State.  |
| School Level                                | Grades 7 – 12.  |
| Purpose of Evaluation                       | To evaluate the long-term efficacy of a school-based approach to drug abuse prevention.   |
| Sample Population                           | 3597 predominantly White, 12 <sup>th</sup> grade students who represent 60.41% of the initial seventh-grade sample.<br>Middle and late adolescent students.<br>56 public schools with follow-up data collect 6 years after the establishment of baseline, predominantly middle-class suburban and rural schools).   |
| Research Instrument(s)                      | Survey to self-report type, frequency, amount of current drug use.  |
| Method                                      | Teachers attended a training workshop and implemented the program. Randomized trial with intervention groups receiving the prevention program with annual provider training workshops and ongoing consultation.<br>Pre- and post-questionnaires and breath samples were collected by project staff. Students were tracked using school records, directory assistance, etc. to administer follow-up surveys. Students who were not available for in school data collection at the end of Grade 12 were surveyed by telephone or by mail. The follow-up was on average 6 years after the baseline assessment. |
| Key Findings                                | Drug abuse prevention programs conducted during junior high school can produce meaningful and durable reductions in tobacco, alcohol, and marijuana use if they 1) teach a combination of social resistance skills and general life skills, 2) are properly implemented, and 3) include at least 2 years of booster sessions. Students who received program were up to 44% less drug users, 66% fewer polydrug (tobacco, alcohol, and marijuana) users.   |
| Strengths                                   | Large scale, randomized trial with control group.<br>6 year timeline.<br>Illustrates importance of intervention programming.<br>15 sessions and “booster” sessions.   |
| Weaknesses                                  | Very limited demographics.<br>Self-reporting of students.<br>Did not include illicit drugs (other than marijuana).<br>Study is not current.   |

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|---|---|
| Title                                       | The Impact of hope, self-esteem, and attributional style on adolescents' school grades and emotional well-being: A longitudinal study.  |
| Authors, publication date, DOI #/PMID, ISBN | Ciarrochi, J., Heaven, C.L., & Davies, F. (2007). <i>Journal of Research in Personality</i> , 41, 1161–1178. DOI: 10.1016/j.jrp.2007.02.001   |
| Theoretical framework                       | Hope theory.  |
| Critical factor(s)                          | Competence.   |
| Outcome(s)                                  | Behavioural/social.   |
| Outcome Measure(s)                          | High school grades, teacher-rated adjustment, self-reported affective states.   |
| Methodology                                 | Correlational, Longitudinal, multi-level random coefficient modeling and confirmatory factor analysis.  |
| Location(s)                                 | Wollongong, New South Wales (NSW) Australia.  |
| School Level                                | Middle school, early adolescence.   |
| Purpose of Evaluation                       | Explore the distinctive effects of hope, self-esteem, and positive attributional style over a one-year period, on school grades, overall adjustment, and self-reported emotional well-being.  |
| Sample Population                           | Time 1: 784 students (394 females, mean age = 12.30 years).<br>600 students directly matched data for both Time 1&2.  |
| Research Instrument(s)                      | Children's Hope Scale.<br>Self-esteem Scale.<br>Children's attributional style.<br>Positive/negative affect PANAS-X- 4.<br>Verbal and numerical ability scores-6 numerical and 3 verbal.<br>Teacher ratings of emotional and behavioral adjustment.<br>Peer nomination inventory.<br>5 point scale: English, Math, Science, Religious Studies, Art.                               |
| Method                                      | Part of the Wollongong Youth Study (Catholic Diocese).<br>Questionnaires were completed during class time in the middle of the first year of high school and again one year later.<br>Students were fully debriefed at the end of testing.  |
| Key Findings                                | Trait hope was the best predictor of grades, attributional style was the best predictor of decreases in hostility, and self-esteem was the only distinctive predictor of increase in sadness. Self-esteem does not predict academic grades and that the links with some problem behaviors (as rated by teachers) are extremely weak. Self-esteem predicts later affective states. |
| Strengths                                   | Multi-method approach.<br>Longitudinal design.<br>Observer-reported and objective data.   |
| Weaknesses                                  | Self-reported questionnaires.<br>Did not have pretest measures for the teacher rating analyses.<br>One-year "snapshot."<br>Observer-reported behaviour.   |

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| Title                                       | Personal competence skills, distress, and well-being as determinants of substance use in a predominantly minority urban adolescent sample.   |
| Authors, publication date, DOI #/PMID, ISBN | Griffin, K. W., Botvin, G. J., Scheier, L. M., Epstein, J. A., & Doyle, M. M. (2002). <i>Prevention Science</i> , 3, 23-33.<br>DOI: 10.1023/A:1014667209130  |
| Theoretical framework                       | Developmental tasks.<br>Problem behaviour theory.  |
| Critical factor(s)                          | Competence.  |
| Outcome(s)                                  | Psychological/emotional.<br>Behavioural/social.  |
| Outcome Measure(s)                          | Psychological distress.<br>Well-being.<br>Substance use.   |
| Methodology                                 | Quantitative self-report, longitudinal, correlational.   |
| Location(s)                                 | New York City.   |
| School Level                                | Grade 7 (at Wave 1).   |
| Purpose of Evaluation                       | To examine personal competence skills, psychological distress, and well-being, and adolescent substance use over a 3-year period in a minority sample of urban students.   |
| Sample Population                           | Mid-, late-adolescence.<br>1,184 youth.  |
| Research Instrument(s)                      | Personal competence skills – summary scores from scale measuring Decision Making, Self-Reinforcement, and Self-Regulation (5 items from the Coping Assessment Battery, 5 items from the Self-Reinforcement Attitudes Questionnaire, and 5 items from the Self-Control Schedule)<br>Psychological distress and well-being – 6 items from the Mental Health Inventory<br>Substance use – asked to report frequency of various related behaviours (e.g. smoking, drinking, etc.). |
| Method                                      | Students from 13 schools (untreated controls in a larger drug abuse prevention intervention trial). Schools had to be in a predominantly minority community.<br>Completed questionnaires at three waves (Grade 7, Grade 8, Grade 9).<br>CFA conducted to determine psychometric adequacy of model.<br>SEM used to examine the longitudinal relation between early competence, affective functioning, and later substance use.  |
| Key Findings                                | Greater competence skills predicted less distress and greater well-being over time. Competence skills promote resilience against early stage substance use by enhancing psychological well-being.  |
| Strengths                                   | 3 waves of data collection over 3 years.<br>Comprehensive assessment of “competence.”<br>Minority urban sample.  |
| Weaknesses                                  | Self-report measure of substance use.  |

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|---|--|
| Title                                       | The role of social competence in the psychological well-being of adolescents in secondary education.   |
| Authors, publication date, DOI #/PMID, ISBN | Holopainen, L., Lappalainen, K., Junntila, N., & Savolainen, H. (2012). <i>Scandinavian Journal of Educational Research</i> , 56, 199-212.<br>DOI: 10.1080/00313831.2011.581683  |
| Theoretical framework                       | N/A  |
| Critical factor(s)                          | Competence.  |
| Outcome(s)                                  | Psychological/emotional.   |
| Outcome Measure(s)                          | Psychological well-being.  |
| Methodology                                 | Quantitative self-report, correlational, longitudinal.   |
| Location(s)                                 | Mid-sized Finnish city.  |
| School Level                                | Grades 9 (at Wave 1).  |
| Purpose of Evaluation                       | To examine the relation between social competence and psychological well-being of adolescents as well as the role of academic learning disabilities with social competence and psychological well-being.   |
| Sample Population                           | Mid-adolescence (15 years).<br>412 youth (207 girls).  |
| Research Instrument(s)                      | Social competence – Multisource Assessment of Children’s Social Competence Scale .<br>Psychological well-being: Self-esteem – 10-item scale based on self-reporting scales of self-esteem;<br>School burnout – pilot version of Bergen Burnout Indicator; Depressive symptoms – Finnish depression screening test.<br>Reading – normative word level reading and reading comprehension tests.<br>Mathematics – normative test of 100 basic mathematical tasks. |
| Method                                      | Study part of an ongoing longitudinal study.<br>Measures of reading and mathematics were administered at end of Grade 9.<br>Measures administered in Grade 9 and again in the first and third years of secondary education.<br>Structural equation modeling to test proposed models.   |
| Key Findings                                | Psychological well-being was related to increased cooperation skills and decreased levels of impulsivity and disruptiveness. Cooperation skills predict psychological well-being three years later.<br>Academic learning disabilities were not related to psychological well-being or social competence.   |
| Strengths                                   | Longitudinal.<br>Comprehensive assessment of well-being.   |
| Weaknesses                                  | Finnish sample.<br>One specific age range.<br>Self-report.   |



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|---|--|
| Title                                       | Increasing emotional competence improves psychological and physical well-being, social relationships, and employability.   |
| Authors, publication date, DOI #/PMID, ISBN | Nelis, D., Kotsou, I., Quoidbach, J., Hansenne, M., Weytens, F., Dupuis, P., & Mikolajczak, M. (2011). <i>Emotion</i> , 11, 354.<br>DOI: 10.1037/a0021554  |
| Theoretical framework                       | N/A  |
| Critical factor(s)                          | Competence.  |
| Outcome(s)                                  | Cognitive/learning.<br>Behavioural/social.<br>Psychological/emotional.   |
| Outcome Measure(s)                          | Emotional functioning.<br>Long-term personality changes.<br>Work adjustment.   |
| Methodology                                 | Experimental, short-term longitudinal.   |
| Location(s)                                 | University of Liege (Belgium).   |
| School Level                                | Undergraduate students.  |
| Purpose of Evaluation                       | To build on earlier work showing that adult emotional competencies could be improved through relatively brief training. To investigate whether developing emotional competencies could lead to improved emotional functioning, long-term personality changes, and work adjustment.   |
| Sample Population                           | Late adolescence.<br>Study 1 – 58 undergrads (29 training, 29 control).<br>Study 2 – 92 undergrads (34 training, 31 drama improv group, 27 control).   |
| Research Instrument(s)                      | Global emotional competence – Trait Emotional Intelligence Questionnaire.<br>Emotion regulation – Emotion Regulation Profile Revised scale.<br>Emotion understanding – selected items from the Situational Test of Emotional Understanding<br>Personality – NEO-FFI-R.<br>Mental disorders – Brief Symptom Inventory.<br>Somatic complaints – Physical Inventory of Limbic Languidness.<br>Happiness – Subjective Happiness Scale.<br>Life Satisfaction – Satisfaction with Life Scale.<br>Global social functioning – 17-item measured designed for study.<br>Employability – interviews with scenarios, coded.<br>EC Intervention: either 3 six-hour sessions or 6 three-hour sessions; each session designed to enhance a specific emotional competence (understanding emotions, identifying self/others emotions, regulating emotions, using positive emotions to foster well-being); short lectures, role-play, group discussions, dyad work, personal diaries, readings, email reminders of the content discussed.<br>Drama Improv Intervention: 6, 3-hour workshops; warm up, basic exercises, group improve, debriefing. |
| Method                                      | 2 controlled experimental studies.<br>Study 1: used controlled design, measured personality before and several months after they implemented the training program.<br>Study 2: compared the efficiency of the training with two control groups (people who did not participate in the training program, and people who were in an improvisation drama training).   |
| Key Findings                                | 18 hours of training with email follow-up was sufficient to significantly improve emotion regulation, emotion understanding, and overall emotional competence. These changes led to long-term significant increases in extraversion and agreeableness as well as decreases in neuroticism. The development of emotional competence brought about positive changes in psychological well-being, subjective health, quality of social relationships, and employability. Effect sizes were sufficiently large.  |
| Strengths                                   | Experimental design, manipulates variable of interest therefore can infer causality.<br>Thorough assessment of variables, thorough description of intervention.  |
| Weaknesses                                  | Primarily female sample.<br>Sample motivated for self-change which may bias the effects.   |

|   |  |
|---|--|
| Title                                       | Team sports achievement and self-esteem development among urban adolescent girls   |
| Authors, publication date, DOI #/PMID, ISBN | Pedersen, S., & Seidman, E. (2004). <i>Psychology of Women Quarterly</i> , 28, 412-422.<br>DOI: 10.1111/j.1471-6402.2004.00158.x   |
| Theoretical framework                       | Five Cs (or related)   |
| Critical factor(s)                          | Competence.  |
| Outcome(s)                                  | Psychological/emotional.   |
| Outcome Measure(s)                          | Self-esteem development.   |
| Methodology                                 | Quantitative self-report, correlational, short-term longitudinal.  |
| Location(s)                                 | Public schools of three northeastern cities.   |
| School Level                                | No grade noted, simply the highest grade of each targeted elementary school.   |
| Purpose of Evaluation                       | To examine the contribution of achievement in team sports to adolescent girls' self-esteem development.  |
| Sample Population                           | Early, mid adolescence.<br>247 girls (13 at Wave 3, 16 at Wave 4)for being at-risk.  |
| Research Instrument(s)                      | Self-esteem – global self-worth subscale of the Self-Perception Profile for Adolescents.<br>Team sport achievement – 3-item scale.<br>Team sports self-evaluations of interest and competence – 2-item scale.<br>Individual sports self-evaluations of interest and competence – 2-item scale. |
| Method                                      | Data taken from the Adolescent Pathways Project (APP).<br>4 waves of data collection (data used from the third and fourth waves).<br>Group comparisons to evaluate T1-T2 differences.<br>Regression analyses conducted using T1 predictors and T2 outcomes.                                    |
| Key Findings                                | Girls' team sports achievement experiences in early adolescence are positively associated with self-esteem in middle adolescence. This relationship is partially mediated by team sports self-evaluations.   |
| Strengths                                   | Longitudinal.<br>High risk, ethnically diverse, female only sample.  |
| Weaknesses                                  | Small proportions of variance accounted for.<br>Did not look at type of teams, coach support (i.e., other possibly influential variables).   |

|   |   |
|---|---|
| Title                                       | Contribution of developmental assets to the prediction of thriving among adolescents.   |
| Authors, publication date, DOI #/PMID, ISBN | Scales, P. C., Benson, P. L., Leffert, N., & Blyth, D. A. (2000). <i>Applied Developmental Science</i> , 4, 27-46. DOI: 10.1207/S1532480XADS0401_3  |
| Theoretical framework                       | Developmental Assets™   |
| Critical factor(s)                          | Autonomy, Relatedness, Competence.  |
| Outcome(s)                                  | Cognitive/learning.<br>Behavioural/social.<br>Psychological/emotional.  |
| Outcome Measure(s)                          | Thriving indicators (school success, leadership, helping others, maintenance of physical health, delay of gratification, overcoming adversity).   |
| Methodology                                 | Quantitative self-report, correlational   |
| Location(s)                                 | Primarily American urban cities, however some country/farm areas.   |
| School Level                                | Grades 6-12.  |
| Purpose of Evaluation                       | To examine the contribution of developmental assets to the prediction of thriving behaviours among adolescents. To investigate the effects of gender, grade, and levels of youth assets on 7 thriving indicators: school success, leadership, valuing diversity, physical health, helping others, delaying gratification, and overcoming adversity.   |
| Sample Population                           | Early, mid, late adolescence.<br>6,000 youth, from six racial ethnic groups.  |
| Research Instrument(s)                      | Developmental assets – Profiles of Student Life: Attitudes and Behaviors.<br>Thriving – one-item for each thriving indicator on the PSL-AB.<br>School success – self-reported grades.<br>Leadership – how many times they've been a leader in a group/organization.<br>Helping others - # of hours/week reportedly spent helping others.<br>Maintenance of physical health – self-report of eating right foods and exercising.<br>Delay of gratification – how likely to save money for something.<br>Valuing diversity – extent to which they know people of different races.<br>Overcoming adversity – “that people who know them who say they give up when things get hard.” |
| Method                                      | Data taken from the Search Institute Profiles of Student Life: Attitudes and Behaviors (PSL-AB) survey conducted during 1996-1997 school year.<br>1000 youth from six different ethnic groups were taken for data analysis (for a total of 6000).<br>Group comparisons and regression analyses (using assets to predict thriving).  |
| Key Findings                                | The higher the number of positive developmental factors that a young person is exposed to, the more likely he or she will be to also report thriving outcomes. -evaluations.  |
| Strengths                                   | Large, comprehensive, diverse sample.<br>Supports the developmental assets framework.   |
| Weaknesses                                  | Single-item measure of thriving indicators.<br>Correlational.   |

|   |  |
|---|--|
| Title                                       | Social competence and antisocial behavior: Continuity and distinctiveness across early adolescence   |
| Authors, publication date, DOI #/PMID, ISBN | Sorlie, M., Hagen, K. A., Ogden, T. (2008). <i>Journal of Research on Adolescence</i> , 18, 121-144. DOI: 10.1111/j.1532-7795.2008.00553.x   |
| Theoretical framework                       | Transactional framework.   |
| Critical factor(s)                          | Competence.  |
| Outcome(s)                                  | Behavioural/social.  |
| Outcome Measure(s)                          | Antisocial behaviour.  |
| Methodology                                 | Quantitative, short-term longitudinal, correlational.  |
| Location(s)                                 | Six schools in a Norwegian municipality.   |
| School Level                                | Wave 1 – 8 <sup>th</sup> grade.<br>Wave 2 – 10 <sup>th</sup> grade.  |
| Purpose of Evaluation                       | To examine the degree of continuity and distinctiveness in social competence and antisocial behavior using a longitudinal structural equation model.   |
| Sample Population                           | Wave 1 – early adolescence (13 years) Wave 2 – mid adolescence (15 years).<br>391 middle school students , their parents, and teachers groups.   |
| Research Instrument(s)                      | Social competence – Social Skills Rating System.<br>Self-reported antisocial behaviour – 10-items from the Bergen Questionnaire on Antisocial Behavior.<br>Parent-rated problem behavior – asked parents to express their level of concern re their child's problem behaviors.<br>Teacher-rated antisocial behavior – classroom externalizing problems subscale of the Social Skills Rating System.<br>Sociometric scores – asked to name three classmates with whom they wanted to work in class and three students whose company they preferred at recess. |
| Method                                      | Students were assessed twice – once in grade 8 and again in grade 10.<br>Teachers and parents also completed their questionnaires.<br>SEM to determine continuity and construct distinctiveness.   |
| Key Findings                                | Social competence showed considerable stability across middle school, more so than antisocial behaviour. Low social competence at age 13 predicted antisocial behaviour at age 15, over and above the variance explained by the earlier assessment of antisocial behaviour. Results suggest that the two constructs (social competence and antisocial behaviour) should be considered two separate dimensions.   |
| Strengths                                   | Multi-informant, longitudinal analysis.<br>Assesses stability and continuity of variables using SEM.   |
| Weaknesses                                  | Results may not generalize beyond specific population.<br>Significant differences between those who were tested at T2 and those who were not (on a few key measures).  |

|   |   |
|---|---|
| Title                                       | The relation between adolescent social competence and young adult delinquency and educational attainment among at-risk youth: The mediating role of peer delinquency.   |
| Authors, publication date, DOI #/PMID, ISBN | Stepp, S. D., Pardini, D. A., Loeber, R., & Morris, N. A. (2011). <i>Canadian Journal of Psychiatry</i> , 56, 457-465.<br>PMID:21878156   |
| Theoretical framework                       | Transactional framework.  |
| Critical factor(s)                          | Competence.   |
| Outcome(s)                                  | Cognitive/learning.<br>Behavioural/social.  |
| Outcome Measure(s)                          | Delinquency.<br>Educational attainment.   |
| Methodology                                 | Longitudinal, quantitative self-, teacher-, parent-reports, correlational analyses.   |
| Location(s)                                 | Public schools in Pittsburgh.   |
| School Level                                | 1 <sup>st</sup> , 4 <sup>th</sup> , 7 <sup>th</sup> grade.  |
| Purpose of Evaluation                       | To examine trajectories of adolescent social competence as a resilience factor among at-risk youth.   |
| Sample Population                           | At-risk boys.<br>Studied during late adolescence (oldest cohort).<br>257 at-risk boys.  |
| Research Instrument(s)                      | Social competence – Child Behavior Checklist, Teacher Rating Form.<br>Peer delinquency – Self-reported delinquency scale, Substance use scale.<br>Delinquency seriousness – coded by researchers.<br>Educational attainment and academic achievement – highest level at age 20.   |
| Method                                      | Data taken from ongoing longitudinal study of development of antisocial and delinquent behaviour among inner-city boys (PYS).<br>Began collecting data in 1987, 8 waves of data collected.<br>Studied the oldest cohort.<br>Used latent growth curve modeling analyses to review trends throughout 8 waves.   |
| Key Findings                                | Boys with high levels of social competence decreased their involvement with deviant peers throughout adolescence, which predicted less serious forms of delinquency in early adulthood. Social competence had a direct effect on educational attainment in early adulthood. Boys who developed social competencies in adolescence went further in school irrespective of their involvement with delinquent peers. |
| Strengths                                   | Comprehensive longitudinal study.<br>Focused on at-risk boys (to examine resilience).   |
| Weaknesses                                  | Findings may not generalize to community/female samples.<br>Cannot infer causation.   |

## APPENDIX CHAPTER 7: STUDIES OF TRANSITIONS

|   |  |
|---|--|
| Title                                       | Continuities in depression from adolescence to young adulthood: Contrasting ecological influences.   |
| Authors, publication date, DOI #/PMID, ISBN | Gootman, L. M., & Sameroff, A.J. (2004). <i>Development and Psychopathology</i> , 16, 967–984<br>DOI: 10.1017/S095457940404009X  |
| Theoretical framework                       | Ecological.  |
| Critical factor(s)                          | Competence, Autonomy.  |
| Outcome(s)                                  | Behavioural/social.<br>Psychological/emotional.  |
| Outcome Measure(s)                          | Family functioning.<br>Degree of friends' prosocial/antisocial values.<br>Neighborhood cohesiveness and problems.  |
| Methodology                                 | Face to face and telephone interviews and self-administered questionnaire.<br>Correlational.   |
| Location(s)                                 | Philadelphia (inner city areas).   |
| School Level                                | Elementary, middle, high and post secondary.   |
| Purpose of Evaluation                       | To examine the ecological variables that influence depression in males and females from adolescence to young adulthood.  |
| Sample Population                           | 372 parents and target youth who participated in the first and second waves of the Philadelphia Family Management study.<br>90% of the target adolescents were between the ages of 12 and 15 years at Wave 1 and between the ages of 19 and 22 years at Wave 2.<br>Early, middle and late adolescence.<br>Excluded families from middleclass and upper middle-class areas of the city as well as the most impoverished areas.  |
| Research Instrument(s)                      | Assessments directed at family, peer, and neighborhood variables.<br>Peer variables were adapted from scales used in the National Youth Survey.  |
| Method                                      | Data came from the first and second wave of the Philadelphia Family Management longitudinal study of parents and children.<br>Participants came from four inner city areas of Philadelphia where poverty rates vary from 10% to more than 40%.<br>60% of the families were African American, 33% were White, and 7% were Puerto Rican.<br>Data was gathered through an interview and self-administered questionnaire.<br>Correlational analyses were performed for males and females, separately.<br>Hierarchical regression analyses were performed to examine the effects of family, peer, and neighborhood factors on depression.<br>Regression analyses were used to examine interactions between gender and ecological variables. |
| Key Findings                                | Contextual variables in adolescence had a more significant impact on change in depression for males, whereas contemporary variables in young adulthood had a more significant impact on change in depression for females.  |
| Strengths                                   | Longitudinal and simultaneous analysis of multiple settings provides a more balanced view of the many contributors to depression.  |
| Weaknesses                                  | Sample attrition was not random.<br>Methodology changed from the adolescent to the young adult assessment.<br>Study was not exhaustive: many ecological factors associated with depression not examined.<br>Self-reporting.  |

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|-------|---|
| Title | Resources and resilience in the transition to adulthood: Continuity and change. |
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|---------------------------------------|--|
| Authors, publication date, PMID, ISBN | Masten, A., Burt, K. B., Roisman, G. I., Obradović, J., Long, J. D., & Tellegen, A. (2004). <i>Development and Psychopathology</i> , 16, 1071-1094.<br>PMID:15704828   |
| Theoretical framework                 | Developmental Assets™<br>Developmental Tasks.  |
| Critical factor(s)                    | Autonomy, Relatedness, Competence.   |
| Outcome(s)                            | Cognitive/learning.<br>Behavioural/social.<br>Psychological/emotional.   |
| Outcome Measure(s)                    | Resiliency.<br>Adaptive resources.   |
| Methodology                           | Quantitative, mixed method, longitudinal, correlational.   |
| Location(s)                           | Minneapolis, diverse, urban neighbourhood.   |
| School Level                          | Grades 3-6 (at recruitment), data focused on 10- and 20- year follow ups.  |
| Purpose of Evaluation                 | To examine patterns of continuity and change in competence and resilience over the transition to adulthood in relation to adversity and psychosocial resources, with a focus on adaptive resources that may be important for this transition.  |
| Sample Population                     | Emerging adulthood (17-23); Young adulthood (~30).<br>173 (73 males).  |
| Research Instrument(s)                | Child (beginning of study)<br>Academic achievement – Peabody Individual Achievement Test, GPA, teacher rating of comprehension from Devereux Elementary School Behavior Rating Scale, parent interview.<br>Social competence – Revised Class Play, Child interviews.<br>Conduct – Parent interview, teacher ratings, child interview.<br>Emerging adulthood (10-year follow up); Young adulthood (20-year follow up)<br>Academic attainment – interviews of participants and parents, Status Questionnaire.<br>Social competence – Status Questionnaires, Competence Rating Scales.<br>Conduct – parent, participant interview Competence Rating Scales.<br>Measures of chronic adversity:<br>Life Events Questionnaires.<br>Psychosocial Stressor Scale.<br>Core/Adaptive Resources<br>IQ – WISC, WAIS.<br>Parent quality – interviews with parent/child.<br>SES – Duncan socioeconomic Index.<br>Competence Rating Scales. |
| Method                                | Participants taken from a larger longitudinal study on competence and resilience.<br>Families recruited in late 1970s (Grades 3-6) and followed up after 7, 10, and 20 years.<br>This study focused on the 10 year and 20 year follow ups.<br>Analyses were done in both a variable focused and person focused context.<br>Variable centered perspective – correlations within and over time and a set of regression analyses.<br>Person centered perspective – classification criteria formed and groups were compared.   |
| Key Findings                          | Continuity in competence and resilience as well as predictable change. Success in developmental tasks in emerging adulthood and young adulthood was related to core resources originating in childhood (e.g., IQ, parenting quality, SES) and also to a set of emerging adulthood adaptive resources (e.g., planfulness, future motivation, autonomy, support, etc.). These adaptive resources significantly predicted successful transitions to adulthood.  |
| Strengths                             | Breadth of assessment (multi information, multimethod).<br>Excellent retention rates.<br>Longitudinal.   |
| Weaknesses                            | Small sample.<br>Long interval assessments.  |
| Title                                 | The development of relational competence among young high-risk fathers across the transition to parenthood   |

|   |   |
|---|---|
| Authors, publication date, DOI #/PMID, ISBN | Ngu, L., & Florsheim, P. (2011). <i>Family Process</i> , 50, 184-202.   |
| Theoretical framework                       | Family systems theory, social learning theory   |
| Critical factor(s)                          | Competence  |
| Outcome(s)                                  | Behavioural/social  |
| Outcome Measure(s)                          | Relational competence<br>Paternal functioning   |
| Methodology                                 | Multi-method – quantitative self-report, observations, interviews, longitudinal   |
| Location(s)                                 | Large, mid-western city   |
| School Level                                | Less than half enrolled in high school  |
| Purpose of Evaluation                       | To examine factors associated with paternal functioning among young, high-risk fathers, with an emphasis on the role of a young mother's relational competence and her partner's paternal functioning.  |
| Sample Population                           | Mid, late adolescence<br>60 young fathers and their co-parenting partners, M age = 17.7; mean age of partners = 16.1; primarily African American - screened for being at-risk   |
| Research Instrument(s)                      | Psychopathology – diagnostic interviews based on the DSM (Diagnostic Interview for Children and Adolescents, Structured Clinical Interview for Axis I Disorders).<br>Relations with parents – Quality of Relationship Inventory.<br>Relational competence – Relational Competence Interview and RC Index (developed for study).<br>Child Abuse potential – Child Abuse Potential Inventory.<br>Parenting behaviour – Parenting Behavior Checklist and 10-minute structured play activity that was observed and coded using the Structural Analysis of Social Behavior.<br>Time with child – how many hours do you/partner spend with child each week. |
| Method                                      | Identified participants who were high risk based on the following five factors: age of paternity, school drop out, psychopathology, poor family relations, and serial fatherhood.<br>Series of questionnaires administered, interviews and observations conducted.<br>Group comparison analyses.<br>Multiple regression.<br>T1 data collected pre-birth, T2 data collected 2 years later.   |
| Key Findings                                | High-risk fathers with relationally competent partners had higher relational competence scores over time. Higher relational competence scores were associated with more positive paternal functioning scores.   |
| Strengths                                   | Multi-method, comprehensive assessment of variables of interest.<br>Unique population studied.  |
| Weaknesses                                  | Small sample size.<br>Used new measures that have not been validated and may require further refinement.  |



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|---|--|
| Title                                       | The influence of ethnic discrimination and ethnic identification on African American adolescents' school and socioemotional adjustment.  |
| Authors, publication date, DOI #/PMID, ISBN | Wong, C. A., Eccles, J. S., & Sameroff, A. (2003). <i>Journal of Personality</i> , 71, 1197-1232.  |
| Theoretical framework                       | Developmental Assets™<br>Expectancy-value theory.  |
| Critical factor(s)                          | Relatedness.   |
| Outcome(s)                                  | Cognitive/learning.<br>Psychological/emotional.<br>Behavioural/social.   |
| Outcome Measure(s)                          | Academic functioning.<br>Psychological functioning.  |
| Methodology                                 | Short term longitudinal.   |
| Location(s)                                 | East Coast metropolis (Maryland).  |
| School Level                                | Stage 1 (beginning of 7 <sup>th</sup> grade) Stage 2 (completion of 8 <sup>th</sup> grade).  |
| Purpose of Evaluation                       | To determine whether experiences with racial discrimination at school predict changes in African American adolescents' academic and psychological functioning and to determine whether the African American ethnic identity buffers these relations.   |
| Sample Population                           | 283, mean age = 15.3, even gender distribution, 86% white.   |
| Research Instrument(s)                      | Perceived discrimination by peers – frequency, 3-item scale.<br>Perceived discrimination by teachers – frequency, 5-item scale.<br>Positive connection to ethnic group – 4-item scale.<br>Achievement motivation - school utility value and self-competency beliefs (8 items).<br>Academic achievement – GPA.<br>Mental health – depressive symptoms, anger, self-esteem (Symptoms Checklist Revised, Children's Depressive Inventory, Harter's global self-worth scale).<br>Selection of friends – 7-item scale.<br>Problem behaviours – 11-item scale about whether they've done one of the behaviours.  |
| Method                                      | Data reported from the Maryland Adolescents Development in Context (MADIC) study.<br>First wave of data was collected at the beginning of Grade 7 (1991).<br>Second wave at the end of Grade 8 (1993).<br>Circumscribed focus to African American students.<br>Correlational analyses.<br>Regression analyses (time 1 predicting time 2), moderators included.   |
| Key Findings                                | Experiences of racial discrimination at school from one's teachers and peers predicts declines in grades, academic ability self-concepts, academic task values, mental health (increases in depression and anger, decreases in self-esteem and psychological resiliency), and increases in the proportion of one's friends who are not interested in school and who have problem behaviours. A strong, positive connection to one's ethnic group reduced the magnitude of the association of racial discrimination experiences with declines in academic self-concepts, school achievement, and perception of friends' positive characteristics as well as the association of the racial discrimination experiences with increases in problem behaviour. |
| Strengths                                   | Comprehensive examination of ethnic discrimination.<br>Multiple item measures used.  |
| Weaknesses                                  | Self-reporting of discrimination, delinquent behaviour.<br>Correlational analyses.   |

## APPENDIX CHAPTER 8: INTERVENTION-SPECIFIC TABLES

### Autonomy

| 1. Impact of a positive youth development program in urban after-school settings on the prevention of adolescent substance use |  |
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| Authors, publication date, DOI #/PMID, ISBN  | Tebes, J., Feinn, R., Vanderploeg, J., Chinman, M., Shepard, J. ... Connell, C. (2007). Impact of a Positive Youth Development program in urban after-school settings on the prevention of adolescent substance use. <i>Journal of Adolescent Health, 41</i> , 239-247. doi:10.1016/j.jadohealth.2007.02.016   |
| Theoretical framework  | Five Cs (or related)   |
| Key Components and /or Considerations  | The Positive Youth Development Collaborative (PYDC) uses the Adolescent Decision Making for the Positive Youth Development Collaborative (ADM-PYDC). This program included 18-session curriculum designed to reduce substance abuse in urban areas. The curriculum included sessions designed to support the development of stress management, effective decision making, personal values, and dealing with social stresses. |
| Outcome(s)   | Behavioural/social   |
| Outcome Measure(s)   | Assessment of demographic characteristics, gender, age, grade level; race/ethnicity, living situation, family moves, parental educational levels; Risk of Harm scale for attitude toward substance use; Likert Scale   |
| Methodology  | 18-session curriculum; Surveys before, directly after, and one year following the intervention   |
| Location(s)  | New Haven, USA   |
| School Level   | Middle school, high school   |
| Purpose of Evaluation  | To examine the effectiveness of an after-school program delivered in urban settings on the prevention of adolescent substance use  |
| Sample Population  | Mid adolescence  |
| Research Instrument(s)   | Quantitative questionnaires  |
| Method   | Questionnaires, multilevel regression model, comparison with pre-test substance abuse attitudes according to a "Likert Scale"  |
| Key Findings   | Results indicated a reduction in substance use and an elevated understanding of harmful behaviours. Notably, these developments were maintained according to the follow up interview one year later. The authors conclude that risk behaviour in urban environments can be mitigated by after-school programs that specifically advocate substance use prevention.   |
| Strengths  | Youth participated in the program design and implementation process. Excellent connections made between youth and community partners. Strong use of survey data to substantiate claims. Use of a control group for comparison.   |
| Weaknesses   | Some contradictions between the results and the abstract. Results claim a non-significant change in attitude compared to the abstract.   |

## 2. Predictors of adolescent successful development after an exchange: The importance of activity qualities and youth input

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|---|--|
| Authors, publication date, DOI #/PMID, ISBN | Lawford, H., Ramey, H., Rose-Krasnor, L., & Proctor, A.. (2012). Predictors of adolescent successful development after an exchange: The importance of activity qualities and youth input. <i>Journal of Adolescence</i> , 35, 1381-1391.   |
| Theoretical framework                       | Five Cs (or related)   |
| Key Components and /or Considerations       | The authors recommend that program developers develop a model by which younger advisory team members are able to graduate into group facilitator roles. Furthermore, the authors recommend that programs be developed that foster the eight features of program development posited by Eccles and Gootman (2002): structure, safety, supportive relationships, sense of belonging, positive morals, active role development, social skills development, and connections with extended community. |
| Outcome(s)                                  | Cognitive/learning, Behavioural/social, Psychological/emotional  |
| Outcome Measure(s)                          | Safety, structure, supportive relationships, feelings of belongingness, positive values and social norms, opportunities for efficacy, skill-building, and connections to family, school, and community   |
| Methodology                                 | Quantitative Self-Report Questionnaire   |
| Location(s)                                 | Canada   |
| School Level                                | Grade 7-12   |
| Purpose of Evaluation                       | Examine the factors involved in predicting successful development after intensive exchange experience  |
| Sample Population                           | Mid-adolescence  |
| Research Instrument(s)                      | Successful adolescent development was measured using an index of 6 items based on Lerner and colleagues' (e.g., Lerner, Dowling, & Anderson, 2003) six Cs of youth positive development, self-report questionnaire   |
| Method                                      | Quantitative self-report, Exploratory factor analysis  |
| Key Findings                                | Positive features of the program and the adolescents' input into the planning and duration of their exchange positively predicted successful development.  |
| Strengths                                   | Longitudinal (short-term)  |
| Weaknesses                                  | No control group   |

| 3. A preliminary evaluation of an abstinence-oriented empowerment program for public school youth |  |
|---|--|
| Authors, publication date, DOI #/PMID, ISBN   | Abel, E. & Greco. M. (2008). A preliminary evaluation of an abstinence-oriented empowerment program for public school youth. <i>Research on Social Work Practice, 18</i> , 223-230. DOI: 10.1177/1049731507308990  |
| Theoretical framework   | Developmental Assets™  |
| Key Components and /or Considerations   | The Family Action Model for Empowerment (FAME) is a community-based program designed to address risky sexual behaviours using family-centred promotion. The program dosages are 1-hour instructional sessions for eight weeks followed by eight sessions of activity sessions (e.g. art, music, dance, theatre, and creative writing). The purpose of the content is to help youth to improve interpersonal relationships, deal with peer pressure, and open communication lines with parents. |
| Outcome(s)  | Psychological/emotional  |
| Outcome Measure(s)  | Cohen's <i>d</i> ; paired samples <i>t</i> test; Parental communication: Quality of Parent Adolescent Communication Scale (Peterson et al. 1983)   |
| Methodology   | Time-limited test before and after the intervention; 18 week intervention groups; No control group; difference between pre and post surveys are considered   |
| Location(s)   | Multiple cities, USA   |
| School Level  | Grades 5-9   |
| Purpose of Evaluation   | To evaluate the process and outcomes of an abstinence-oriented empowerment in a multicultural population   |
| Sample Population   | Early to mid-adolescence   |
| Research Instrument(s)  | Paper test   |
| Method  | Written test, multiple statistical analysis  |
| Key Findings  | Each of the targeted variables- open communication, attachment, and attitude toward abstinence in parent-child relationships- were increased through this program. A psychoeducational focus in combination with an assets-driven model may be a useful approach to increase positive youth development. Better designed studies could give credence to this claim.  |
| Strengths   | Uses diverse population sample   |
| Weaknesses  | Effect sizes were small; No control group; Poorly conducted; Lack of generalizability  |

#### 4. Wisconsin 4-H youth development: Arts and communication program evaluation

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|---|--|
| Authors, publication date, DOI #/PMID, ISBN | Taylor-Powell, E., & Calvert, M. (2006). Wisconsin 4-H youth development: Arts and communication program evaluation.<br><a href="http://www.uwex.edu/ces/pdande/evaluation/pdf/AC-finalreport.pdf">http://www.uwex.edu/ces/pdande/evaluation/pdf/AC-finalreport.pdf</a>  |
| Theoretical framework                       | Five Cs (or related)   |
| Key Components and /or Considerations       | The 4-H Youth Development program is based on four key components: (i) mastery outcomes (e.g., communication, decision-making); (ii) independence (e.g., self-esteem, self-determination); (iii) belonging (e.g., social skills); and (iv) generosity (e.g., service to others).   |
| Outcome(s)                                  | Behavioural/social, Psychological/emotional  |
| Outcome Measure(s)                          | Focus groups, participant surveys, existing records  |
| Methodology                                 | Qualitative and quantitative   |
| Location(s)                                 | Wisconsin, USA   |
| School Level                                | Grades 3-12  |
| Purpose of Evaluation                       | To evaluate the impact of the 4-H Arts and Communication Program in Wisconsin. Belonging, mastery, independence, and generosity (aka the Four Essential Elements of Positive Youth Development) were selected as the framework to measure an effective positive youth development program. Participation in the 4-H program increased access to opportunities, interconnectedness with community, artists, and mentors, increased skills necessary to belonging, positive self-concept, and leadership opportunities.  |
| Sample Population                           | Early to mid-adolescence   |
| Research Instrument(s)                      | Participant survey   |
| Method                                      | Focus groups, quantitative surveys, descriptive statistics, basic content analysis   |
| Key Findings                                | The 4-H Arts and Communication Program has the most powerful impact in developing mastery, independence, belonging, and generosity. Belonging, mastery, independence, and generosity (aka the Four Essential Elements of Positive Youth Development) were selected as the framework to measure an effective positive youth development program. Participation in the 4-H program increased access to opportunities, interconnectedness with community, artists, and mentors, increased skills necessary to belonging, positive self-concept, and leadership opportunities. |
| Strengths                                   | Qualitative and quantitative data  |
| Weaknesses                                  | Single point in time, difficult to attribute effects to 4-H  |

**5. Comparing socioemotional outcomes for early adolescents who join after-school programs for internal or external reasons**

|   |   |
|---|---|
| Authors, publication date, DOI #/PMID, ISBN | Berry, K., & LaVelle, T. (2012). Comparing socioemotional outcomes for early adolescents who join after-school programs for internal or external reasons. <i>Journal of Early Adolescence</i> , 33, 77-103. DOI: 10.1177/0272431612466173   |
| Theoretical framework                       | Five Cs (or related), SDT   |
| Key Components and /or Considerations       | While this study did not specifically highlight components of a specific intervention, it did provide useful considerations for program designers. Programs should be designed to account for the motivating factors behind participation.  |
| Outcome(s)                                  | Cognitive/learning, Behavioural/social, Psychological/emotional   |
| Outcome Measure(s)                          | Survey questions test “self-joined” and “other-joined”; Survey evaluated self-efficacy, trust in staff, pro-social behaviour, time spent outside of school; autonomy and influence.   |
| Methodology                                 | External evaluation; Student surveys at the beginning and end of the year; Controls for gender  |
| Location(s)                                 | Southern California, USA  |
| School Level                                | 6 <sup>th</sup> -8 <sup>th</sup> grades   |
| Purpose of Evaluation                       | To use Self-Determination Theory to test whether a student's reason for joining after-school program is related to proximal or distal motivations   |
| Sample Population                           | Early adolescence   |
| Research Instrument(s)                      | Quantitative survey   |
| Method                                      | Surveys, quantitative analysis comparison between self-joined and other-joined  |
| Key Findings                                | Students who joined the program on their own initiative experienced significant increases in self-esteem, autonomy, and pro-social behaviours compared to those who joined as a result of others. Moreover, students who claimed their motivation was internal at the beginning of the program but later reported their reason for staying in the program was external reported lower developmental assets. These results suggest that locus of motivation predicts youth developmental outcomes. |
| Strengths                                   | Program is very well designed with considerations made for well-being and engagement. Good research foundation.   |
| Weaknesses                                  | Authors cite the need for a more comprehensive assessment of motivation prior to and during the program. Students were allowed only one reason for joining. Self-reported survey is overly reliant on memory, feelings, etc. Study does not consider alternative reasons for joining.   |

6. Autonomy support, basic need satisfaction and the optimal functioning of adult male and female sport participants: A test of basic need theory.

|   |   |
|---|---|
| Authors, publication date, DOI #/PMID, ISBN | Adie, J. W., Duda, J. L., & Ntoumanis, N. (2008). <i>Motivation and Emotion</i> , 32, 189-199. DOI 10.1007/s11031-008-9095-z  |
| Theoretical framework                       | Self-Determination Theory (BNT – Basic Needs Theory).   |
| Key Components and /or Considerations       | Relationship between autonomy and athletic achievement<br>Optimal functioning (physical and psychological)  |
| Outcome(s)                                  | Psychological/emotional   |
| Outcome Measure(s)                          | Subjective vitality, emotional and physical exhaustion, well/ill being.   |
| Methodology                                 | Quantitative self-report questionnaire; structural equation modeling.   |
| Location(s)                                 | United Kingdom  |
| School Level                                | N/A   |
| Purpose of Evaluation                       | To test the theoretical model of coach autonomy support, motivational processes and well/ill being. To discern which basic psychological needs mediate the link between autonomy support and well-/ill-being and to explore gender invariance in the model.   |
| Sample Population                           | Late adolescence  |
| Research Instrument(s)                      | Health Care Climate Questionnaire.<br>Five item perceived competence subscale of the Intrinsic Motivation Inventory.<br>Acceptance subscale of the Need for Relatedness Scale.<br>A five item version of the Subjective Vitality Scale.<br>Five item emotional and physical exhaustion subscale from the Athlete Burnout Questionnaire.   |
| Method                                      | Structural Equation Modeling (SEM) analyses.<br>Participants all engaged in team sports (most at club level) volunteered for study after being invited by the principle investigator.<br>Multi-section questionnaire administered before or after practice.   |
| Key Findings                                | Coach autonomy support predicted participants' basic need satisfaction for Competence, Autonomy, Relatedness. Basic need satisfaction predicted greater subjective vitality when engaged in sport. Low levels of autonomy - more susceptible to feeling emotionally and physically exhausted from sport investment. Autonomy and competence partially mediated the path from autonomy support to subjective vitality. |
| Strengths                                   | Tested and supported BNT hypothesis.<br>Structural equation modeling to examine multiple outcome variables simultaneously and control for measurement error.  |
| Weaknesses                                  | Cross-sectional data.<br>Findings based on correlational data.<br>Self-report instruments.<br>Diversity of team sports participants limits generalizability.  |

## Relatedness

| 7. The life skills program IPSY: Positive influences on school bonding and prevention of substance misuse |  |
|---|--|
| Authors, publication date, DOI #/PMID, ISBN   | Wenzel, V., Weichold, K., & Silbereisen, R. K. (2009). The life skills program IPSY: Positive influences on school bonding and prevention of substance misuse. <i>Journal of Adolescence</i> , 32, 1391–1401.  |
| Theoretical framework   | Developmental Assets™<br>Other – Life Skills   |
| Key Components and /or Considerations   | Life skills program<br>Substance misuse<br>IPSY (information + psychosocial competence = protection) was implemented over a 3-year period via specially trained teachers. The life skills program IPSY (Weichold, 2002) is a comprehensive program for the prevention of adolescent misuse of legal substances like alcohol and tobacco. |
| Outcome(s)  | Behavioural/social, Psychological/emotional  |
| Outcome Measure(s)  | Process evaluation; substance use and school bonding; IPSY-training  |
| Methodology   | Quantitative study based on process evaluation data (concerning the basic program in grade 5) and on data from the outcome evaluation including four points of measurement   |
| Location(s)   | Germany  |
| School Level  | Grade 5-7  |
| Purpose of Evaluation   | To evaluate whether a life skills program (LSP) for the prevention of substance misuse can have positive influences on a school context and on school.   |
| Sample Population   | Early to mid-adolescents<br>The sample for this study comprised 952 students who took part in data collection at all four measurement points.  |
| Research Instrument(s)  | Questionnaires on process and outcome evaluation   |
| Method  | IPSY-program has been implemented and evaluated within a German large-scale longitudinal trial in the Federal State of Thuringia (former East Germany), utilizing a quasi-experimental design (intervention/control group; pre-test, post-test, and two follow-ups) with school-wise assignment to the respective groups.                |
| Key Findings  | The program was well-implemented, highly accepted by teachers and students; teachers profited; positive effects on alcohol use and school bonding.   |
| Strengths   | Intervention and control group; longitudinal study.  |
| Weaknesses  | Self-reported data   |



**8. An Evaluation Study of the Young Empowered Sisters (YES!) Program: Promoting Cultural Assets Among African American Adolescent Girls Through a Culturally Relevant School-Based Intervention**

|   |   |
|---|---|
| Authors, publication date, DOI #/PMID, ISBN | Thomas, O., Davidson, W., McAdoo, H. (2008). An Evaluation Study of the Young Empowered Sisters (YES!) Program: Promoting Cultural Assets Among African American Adolescent Girls Through a Culturally Relevant School-Based Intervention. <i>Journal of Black Psychology</i> , 34, 281-308. doi: 10.1177/0095798408314136  |
| Theoretical framework                       | Developmental Assets™<br>Other (Nguzo Saba principles; Conscientization and praxis; Holistic Learning)  |
| Key Components and /or Considerations       | YES! is a culturally relevant, school-based after-school intervention designed for African American high school girls. The goals of the intervention are to instill a healthy Black identity, promote a collectivist orientation, increase an awareness of racism, and encourage participation in liberatory activism. To achieve the goals of the intervention, three overarching themes were integrated within the intervention's curriculum: cultural values, African American history, and contemporary culture |
| Outcome(s)                                  | Behavioural/social, psychological/emotional   |
| Outcome Measure(s)                          | Pre- and post-intervention surveys  |
| Methodology                                 | Quantitative between-groups experimental design (an intervention and a control condition).  |
| Location(s)                                 | USA   |
| School Level                                | Grades 9-10   |
| Purpose of Evaluation                       | To examine the effects of a culturally relevant school-based intervention in promoting cultural assets (i.e., ethnic identity, collectivist orientation, racism awareness, and liberatory youth activism) among a group of African American adolescent girls.   |
| Sample Population                           | Mid-adolescence   |
| Research Instrument(s)                      | Pre- and posttests were administered to assess intervention effects.  |
| Method                                      | The Multigroup Ethnic Identity Measure (MEIM) was used to assess participants' ethnic identity.<br>The Racism Awareness Scale.<br>The Racism Awareness Scale.<br>Intentions to Liberatory Youth Activism Scale (ILYAS) and the Liberatory Youth Activism Scale (LYAS).  |
| Key Findings                                | In comparison to those who did not participate, participants in the intervention had a stronger ethnic identity, stronger sense of communalism, enhanced awareness of racism, and greater intention to, and increased participation in, liberatory youth activism at the end of the program.  |
| Strengths                                   | Culturally relevant intervention.   |
| Weaknesses                                  | Measures created for the purpose of the study; lack of follow-up after the initial posttest; no generalization of the intervention findings to other populations; level of cultural specificity.  |

## 9. Making a difference: An impact study of Big Brothers Big Sisters

|   |   |
|---|---|
| Authors, publication date, DOI #/PMID, ISBN | Tierney, J. P., Grossman, J. B., & Resch, N. L. (2000). Making a difference: An impact study of Big Brothers Big Sisters. <a href="http://www.issuelab.org/fetch/publicprivate_ventures_104.pdf">www.issuelab.org/fetch/publicprivate_ventures_104.pdf</a>  |
| Theoretical framework                       | OTHER – undeclared  |
| Key Components and /or Considerations       | When working within the mentor program, program designers should design structured training programs for mentors. Effective programs should also include components that strengthen peer relationships and develop healthy self-concept.  |
| Outcome(s)                                  | Cognitive/Learning, Behavioural/Social, Psychological/Emotional   |
| Outcome Measure(s)                          | Surveys   |
| Methodology                                 | Qualitative, longitudinal.  |
| Location(s)                                 | USA   |
| School Level                                | Grades 6-12   |
| Purpose of Evaluation                       | To demonstrate young lives can be positively affected by social intervention.   |
| Sample Population                           | Early to mid-adolescence  |
| Research Instrument(s)                      | Qualitative surveys   |
| Method                                      | Surveys were conducted before and 18 months after BBBS program. Case managers also completed data collection forms when seeking potential participants, when a match was made, and after the program. Multivariate analysis techniques  |
| Key Findings                                | Big Brothers Big Sisters provides mentoring relationships that are effective demonstrated in decreased drug use, violence and improved school behaviours and relationships. The mentoring program specifically used by the BBBS program is effective for urban youth. PYD programs are more effective when they utilize a holistic, collaborative approach. |
| Strengths                                   | Longitudinal (18 months)  |
| Weaknesses                                  | Self-reported data  |

**10. Making a difference in schools: The Big Brothers Big Sisters school-based mentoring impact study**

|   |   |
|---|---|
| Authors, publication date, DOI #/PMID, ISBN | Herrera, C., Grossman, J., Kauh, T., Feldman, A., McMaken, J., & Jucovy, L. (2007). Making a difference in schools: The Big Brothers Big Sisters school-based mentoring impact study. <a href="http://www.bigsister.org/bigsister/file/Making%20a%20Difference%20in%20Schools.pdf">http://www.bigsister.org/bigsister/file/Making%20a%20Difference%20in%20Schools.pdf</a>   |
| Theoretical framework                       | OTHER - School-Based mentoring (SBM)  |
| Key Components and /or Considerations       | School-based mentoring (SBM) is based in part on the structure of community-based mentoring (CBM) programs. Most matches met once a week, usually in the school setting, for a span of about an hour. Matches chose their activities, which may have included tutoring, building crafts, or playing games.  |
| Outcome(s)                                  | Cognitive/learning, Behavioural/social, Psychological/emotional   |
| Outcome Measure(s)                          | Grades; surveys   |
| Methodology                                 | This study is a large-scale, national, random assignment impact study. Student performance based on school based mentoring (SBM) programs was measured by surveys administered to teachers, youth, and mentors at three intervals: (i) beginning of 2004-05 school year (baseline); (ii) In spring of 2004-05 school year (first follow-up); and (iii) in late Fall 2005, 15 months after start of baseline. Agency interviews at the beginning of the study captured qualitative data; these focused on the agency's history and infrastructure. |
| Location(s)                                 | Multiple cities, USA  |
| School Level                                | Grades 4-9  |
| Purpose of Evaluation                       | To learn about children's lives, match characteristics, and how youth benefited from school-based mentoring programs  |
| Sample Population                           | Early adolescence   |
| Research Instrument(s)                      | Self-report survey  |
| Method                                      | Impacts are measured by comparing the progress made by youth in the treatment group with that made by youth in the control group  |
| Key Findings                                | Detailed overview of the program and associated benefits - Littles are making gains academically/behaviorally, however, longer than one year is encouraged. Big Brothers and Big Sisters School-Based Mentoring program reaches many at-risk students who benefit from additional support and attention in schools.   |
| Strengths                                   | Treatment and control group (causality), Longitudinal (15 months)   |
| Weaknesses                                  | High Attrition  |


**11. Outcomes linked to high-quality afterschool programs: Longitudinal findings from the study of promising afterschool programs**

|   |   |
|---|---|
| Authors, publication date, DOI #/PMID, ISBN | Vandell, D., Reisner, E., & Pierce, K. (2007). Outcomes linked to high quality afterschool programs: Longitudinal findings from the Study of Promising Afterschool Programs. <i>Report to the Charles Stewart Mott Foundation</i> . <a href="http://www.newdayforlearning.org/docs/HIIIIPReport.pdf">http://www.newdayforlearning.org/docs/HIIIIPReport.pdf</a>   |
| Theoretical framework                       | Developmental Assets™   |
| Key Components and /or Considerations       | The research team studied afterschool programs and determined the connection between outcomes and high-quality programs. The team defined high quality programs as those that provide six components: (i) free service; (ii) for four to five days each week; (iii) strong partnership with neighbourhood and schools; (iv) a mix of recreational, arts, and enrichment programs; (v) well-trained and motivated leaders; and (vi) low facilitator-to-participant ratios. |
| Outcome(s)                                  | Cognitive/learning, Behavioural/social  |
| Outcome Measure(s)                          | Youth and teacher surveys   |
| Methodology                                 | Primary substantive analysis  |
| Location(s)                                 | Multiple cities, USA  |
| School Level                                | Grade 3-4, 6-7  |
| Purpose of Evaluation                       | To examine the relation between high-quality afterschool programs and academic and behavioural outcomes for low-income students.  |
| Sample Population                           | Early adolescence   |
| Research Instrument(s)                      | Primary surveys   |
| Method                                      | Quantitative surveys, contrast with a control group   |
| Key Findings                                | Significant improvement was noted in standardized test scores and effective work habits alongside an overall reduction in problem behaviour. Students who engaged in some form of supervised program scored consistently higher than the control group. This suggests that program intensity and consistent participation are predictors of success. Positive peer relationships and improved work habits may have also contributed to academic improvement.              |
| Strengths                                   | The study uses a control group and is longitudinal.   |
| Weaknesses                                  | Surveys are reliant on self-reporting.  |

## 12. The impact of after-school programs that promote personal and social skills

|   |  |
|---|--|
| Authors, publication date, DOI #/PMID, ISBN | Durlak, J. A., & Weissberg, R. P. (2007). The impact of after-school programs that promote personal and social skills.<br><a href="http://www.lions-quest.org/pdfs/AfterSchoolProgramsStudy2007.pdf">http://www.lions-quest.org/pdfs/AfterSchoolProgramsStudy2007.pdf</a>  |
| Theoretical framework                       | Five Cs (or related)   |
| Key Components and /or Considerations       | While this study did not specifically highlight components of a specific intervention, it did provide useful considerations for program designers. The researchers recommended four practices for skill training: (i) sequence (include connected sets of activities related to objectives); (ii) active (use active modes of learning); (iii) focus (include social skill development); and (iv) explicit (target specific skill sets). |
| Outcome(s)                                  | Behavioural/social   |
| Outcome Measure(s)                          | Grades; surveys  |
| Methodology                                 | Meta-analysis  |
| Location(s)                                 | USA  |
| School Level                                | Ages 5-18  |
| Purpose of Evaluation                       | To determine which types of after school programs offer better results; outcome of programs that focus on social skills  |
| Sample Population                           | Early to mid-adolescence   |
| Research Instrument(s)                      | Review   |
| Method                                      | Meta-analysis  |
| Key Findings                                | Youth who participate in after-school programs improve significantly in three major areas: feelings and attitudes, indicators of behavioral adjustment, and school performance. Programs that used evidence- based skill training approaches were consistently successful in producing multiple benefits for youth, while those that did not use such procedures were not successful in any outcome area.                                |
| Strengths                                   | Empirical support for After-School Programs  |
| Weaknesses                                  | Limited Access to data (meta-analysis)   |

## Competence

| 13. Community-based Arts Program for Youth in Low-Income Communities  |  |
|--|--|
| Authors, publication date, DOI #/PMID, ISBN  | Wright, R., John, L., Alaggia, R., & Sheel, J. (2006). Community-based Arts Program for Youth in Low-Income Communities: A Multi-Method Evaluation. <i>Child and Adolescent Social Work Journal</i> , 23, 635-652. doi: 10.1007/s10560-006-0079-0  |
| Theoretical framework  | OTHER – undeclared   |
| Key Components and /or Considerations  | The NAYDP, a quasi-experimental research design, was a three-year longitudinal study that evaluated community-based arts programs in five sites across Canada. The five sites participating in the study were: (a) located in urban and rural areas, (b) had a focus on youth 9–15 years, (c) were located in low-income communities, and (d) reflected the cultural and regional diversity of Canada.   |
| Outcome(s)   | Cognitive/Learning, Behavioural/social, Psychological/emotional  |
| Outcome Measure(s)   | The multi-method evaluation strategy included attendance forms, standardized behavior checklists completed by youth, parents, and research assistants, as well as interviews with youth and parents.   |
| Methodology  | Multi-method evaluation  |
| Location(s)  | Canada   |
| School Level   | Grades 4 to 10   |
| Purpose of Evaluation  | The NAYDP was launched to: (a) determine if community-based arts organizations can successfully recruit engage and sustain youths from low-income communities (9–15 years old) throughout a 9-month after-school program, (b) assess the youths' in-program progress in terms of artistic and social skills development, (c) ascertain if community-based arts programs have demonstrated positive results in improving psychosocial outcomes such as conduct and emotional problems, and (d) explore the perspectives of the youth and parents who participated in the program. |
| Sample Population  | Early to mid-adolescence   |
| Research Instrument(s)   | Youth and parent questionnaires, measuring conduct, and emotional problems, were administered before the start of the program in September 2002 (baseline), every 3 months during the program, and a follow-up 6 months after the end of the program for a total of five data collection periods.  |
| Method   | Statistical analysis involved growth curve modeling of five waves of data and interviews with participating youth and parents.   |
| Key Findings   | The results indicate that high-quality arts programs have a significant effect on children's in-program behavior and emotional problems. The findings from the qualitative interviews suggest that active recruitment, removing barriers to participation, and high parental involvement enhanced youth engagement. Perceived youth gains included increased confidence, enhanced art skills, improved prosocial skills, and improved conflict resolution skills.  |
| Strengths  | Multi-method evaluation; review of relevant theoretical and empirical literature   |
| Weaknesses   | Limitations of the matched sample design; no statistics reported   |


| 14. Promoting healthy lifestyles: the impact of Boys & Girls Clubs Of America's Triple Play Program on healthy eating, exercise patterns, and developmental outcomes |  |
|--|--|
| Authors, publication date, DOI #/PMID, ISBN  | Giannotta, F., Settanni, M., Kliewer, W., & Ciairano, S. (2008). Results of an Italian school-based expressive writing intervention trial focused on peer problems. <i>Journal of Adolescence</i> , 32,1377–1389   |
| Theoretical framework  | SDT (or related)<br>Other  |
| Key Components and /or Considerations  | Authors anticipated that level of peer victimization would moderate intervention effects, such that youth with higher levels of peer victimization would benefit more from the intervention than youth who were victimized less.   |
| Outcome(s)   | Cognitive/learning, Behavioural/social   |
| Outcome Measure(s)   | Relational and physical victimization; depressive symptoms; anxious symptoms; post-traumatic stress symptoms; positive cognitive restructuring and additional coping strategies  |
| Methodology  | Quantitative   |
| Location(s)  | Italy  |
| School Level   | Grade 7  |
| Purpose of Evaluation  | To test the effectiveness of an expressive writing intervention in decreasing the negative outcomes associated peer-related problems among a sample of Italian early adolescents.  |
| Sample Population  | The sample consisted of 155 students in grade 7th (M.12.24 yrs, SD. 0.47), 52% (N. 81) girls, 48% (N.74) boys. Almost half (49%) of the sample comprised the treatment group. There were no significant differences between the treatment and control groups with respect to number of family members, parents' level of education or parents' type of employment (full or part time), $p < 0.05$ for all variables.   |
| Research Instrument(s)   | Relational and physical victimization by peers was assessed prior to the intervention using a revised version of the Social Experience Questionnaire. Depressive symptoms were assessed with the 27-item, self-reported Child Depression Inventory.<br>Anxious symptoms were measured with the 28-item, self-reported Revised Children's Manifest Anxiety Scale.<br>Post-traumatic stress symptoms were assessed using the revised Impact of Events Scale.<br>Three subscales of the Children's Coping Strategies Checklist that comprise the Positive Cognitive Restructuring coping factor were completed. |
| Method   | Preliminary analyses were conducted to evaluate baseline differences between the treatment and control groups. Primary analyses employed a regression approach using change scores (T2 measure – T1 measure) in studied outcomes as dependent variables (Allison, 1990) and intervention condition (intervention versus control) and victimization (both physical and relational), respectively, as predictor and moderation variables. Additionally, a content analysis was conducted on the students' essays to assess adherence to the intervention instructions.   |
| Key Findings   | While analyses revealed no overall intervention effects on symptoms, victimized youth in the intervention showed increases in cognitive restructuring and avoidance coping, relative to other groups. Thus, expressive writing affected coping strategies but not internalizing problems in their early adolescent sample.   |
| Strengths  | Focus on a normative sample of adolescents versus preadolescents or mixed samples of youth   |
| Weaknesses   | Short term follow-up; small sample size to detect intervention effects.  |

### 15. Youth Empowerment Program evaluation: Executive version

|   |   |
|---|---|
| Authors, publication date, DOI #/PMID, ISBN | International Youth Foundation. (2010). Youth Empowerment Program evaluation: Executive version. <i>International Youth Foundation</i> .<br><a href="http://library.iyfnetwork.org/sites/default/files/library/MicrosoftYEP_Final_Report.pdf">http://library.iyfnetwork.org/sites/default/files/library/MicrosoftYEP_Final_Report.pdf</a>   |
| Theoretical framework                       | Developmental Assets™   |
| Key Components and /or Considerations       | The youth who participated in initiatives in Nigeria attended 40 hours of life- and employability-training over five days. Youth in specific areas received Information Communication Technology training (64 hours over three months). The report did not provide further details in regards to specific components.   |
| Outcome(s)                                  | Cognitive/learning, Behavioural/social  |
| Outcome Measure(s)                          | One-on-one surveys; Standardized questionnaires; Evaluation of baseline vs. exit data   |
| Methodology                                 | External evaluation of the program  |
| Location(s)                                 | Sub-Saharan Africa: Senegal, Kenya, Nigeria, Tanzania   |
| School Level                                | Post-secondary  |
| Purpose of Evaluation                       | The International Youth Foundation implemented and assessed a series of youth empowerment programs to address the enormous youth unemployment rate by improving quality of education, opportunities for formal work experience, and general job-related skills.   |
| Sample Population                           | Late adolescence  |
| Research Instrument(s)                      | Pre- and post- surveys  |
| Method                                      | Quantitative analysis   |
| Key Findings                                | Tentative results showed that average salaries increased to three times the national average. Youth who had participated in the program reported positive employment prospects even if they were not currently working. Entrepreneurship also increased significantly. Overall, youth and community partners reported high satisfaction, hopefulness, and a belief in the sustainability of this project. |
| Strengths                                   | Program is externally evaluated (limited bias).   |
| Weaknesses                                  | Only one or two cohorts are evaluated; no longitudinal consensus.   |



| 16. Promoting healthy lifestyles: the impact of Boys & Girls Clubs Of America's Triple Play Program on healthy eating, exercise patterns, and developmental outcomes |   |
|--|---|
| Authors, publication date, DOI #/PMID, ISBN  | Gambone, M. A., Akey, T. M., Furano, K., & Osterman, L. (2009). Promoting healthy lifestyles: The impact of boys & girls clubs of America's triple play program on healthy eating, exercise patterns, and developmental outcomes. <a href="http://www.bgca.org/Documents/Triple%20Play%20Study%20-%20Executive%20Summary%20-%2011-04%20-%20FINAL.pdf">http://www.bgca.org/Documents/Triple%20Play%20Study%20-%20Executive%20Summary%20-%2011-04%20-%20FINAL.pdf</a> |
| Theoretical framework  | Five Cs (or related)  |
| Key Components and /or Considerations  | The Triple Play program coordinates family participation and youth-focused interventions relating with food consumption and activity levels. The program focuses on three components defined as mind (10 sessions), body (ongoing activity programs), and soul (mentorship programs encourage belonging and social competences).  |
| Outcome(s)   | Behavioural/social  |
| Outcome Measure(s)   | Nutrition knowledge; physical activity; social skills   |
| Methodology  | Qualitative and quantitative  |
| Location(s)  | USA   |
| School Level   | Grade 4-9   |
| Purpose of Evaluation  | To examine whether the BGCA's Triple Play program impacted youth for the following: 1) healthy nutrition knowledge and behavior 2) physical activity and increased exercise levels 3) social relationship skills  |
| Sample Population  | Early adolescence   |
| Research Instrument(s)   | Surveys   |
| Method   | Pre-/post-assessment outcomes, spanning 22 months, Cluster-randomized trial (CRT), surveys, site visits, implementation reports   |
| Key Findings   | Range of impacts on health-related knowledge and behaviours for youth; overarching finding - demonstrated effectiveness of a developmental approach to improving youth's trajectories on outcomes with direct and significant social implications. Developmental approach to improving youth's trajectories on outcomes leads to increase in health and social psychological well-being.  |
| Strengths  | Longitudinal data, treatment and control groups   |
| Weaknesses   | No measure of ideal level of participation  |

17. A longitudinal examination of breadth and intensity of youth activity involvement and successful development 

|   |   |
|---|---|
| Authors, publication date, DOI #/PMID, ISBN | Busseri, M., Krasnor, L., Willoughby, T., & Chalmers, H. (2006). A longitudinal examination of breadth and intensity of youth activity involvement and successful development. <i>Developmental Psychology</i> , 42, 1313-1326. DOI: 10.1037/0012-1649.42.6.1313  |
| Theoretical framework                       | Five Cs (or related)  |
| Key Components and /or Considerations       | While this study did not specifically highlight components of a specific intervention, it did provide useful considerations for program designers (see key findings). The Youth Lifestyle Choices Community- University Research Alliance Project (YLC-CURA) is a long-term partnership between researchers and youth programmers which uses survey data to develop longitudinal research base. |
| Outcome(s)                                  | Cognitive/learning, Behavioural/social, Psychological/emotional   |
| Outcome Measure(s)                          | Two phased self-report questionnaire; three item measure of sexuality; 12 item measure of student-teacher relations; composite risk behavior and academic orientation indexes.  |
| Methodology                                 | Quantitative two part self-report questionnaire   |
| Location(s)                                 | Southern Ontario, Canada  |
| School Level                                | Grades 10-12  |
| Purpose of Evaluation                       | A longitudinal study on the connection between youth engagement and successful development through high school. Includes an exploration of duration and intensity factors on sustained development.   |
| Sample Population                           | Mid-adolescence   |
| Research Instrument(s)                      | Self-report questionnaires  |
| Method                                      | Questionnaires, regression analyses   |
| Key Findings                                | Results indicate that increased duration of involvement correlates with higher development but increased intensity does not. A dual role for youth activity participation is outlined: promoting longitudinal positive development and existing as a product of successful development.   |
| Strengths                                   | Large and varied sample population, longitudinal assessment   |
| Weaknesses                                  | Self-report questionnaire, regression analyses so no causality  |

**18. Does the neighborhood context alter the link between youth's after- school time activities and developmental outcomes? A multilevel analysis**

|   |   |
|---|---|
| Authors, publication date, DOI #/PMID, ISBN | Fauth, R, Roth, J., & Brooks-Gunn, J. (2007). Does the neighborhood context alter the link between youth's after-school time activities and developmental outcomes? A multilevel analysis. <i>Developmental Psychology</i> , 43, 760-777. DOI: 10.1037/0012-1649.43.3.760   |
| Theoretical framework                       | Five Cs (or related)  |
| Key Components and /or Considerations       | While this study did not specifically highlight components of a specific intervention, it did provide useful considerations for program designers (see Key Findings). The Project on Human Development in Chicago Neighborhoods (PHDCN) is a research team that studies the effects of families, schools, and neighbourhoods on adolescent development.   |
| Outcome(s)                                  | Behavioural/social, Psychological/emotional   |
| Outcome Measure(s)                          | The Child Behavior Checklist (CBCL)/4–18 (Achenbach, 1991); indicator variable scores; Self-report measure ( 0= no, 1= yes) for delinquent participation; hierarchal linear modelling software  |
| Methodology                                 | Data from the Project on Human Development in Chicago Neighbourhoods A multi-stage probability sampling procedure (cluster analyses)  |
| Location(s)                                 | Chicago, USA  |
| School Level                                | Grades 9, 12  |
| Purpose of Evaluation                       | To compare the impact of different measures of after-school activity participation on youth's developmental outcome deficits (substance abuse, anxiety/depression, and delinquency) over a six year period. It also considered whether these deficits were moderated by neighbourhood-level variables.  |
| Sample Population                           | Mid- to late adolescence  |
| Research Instrument(s)                      | Self-reporting surveys; Representative Interviews; PHDCN database   |
| Method                                      | Qualitative and quantitative, regression analyses   |
| Key Findings                                | Different activities impacted specific youth development outcomes in both positive and negative ways, depending on context. Violent neighbourhoods observed lower anxiety and depression using community activities and lower substance abuse by increasing connection to church groups. Team-based sport participation corresponded with higher substance abuse and delinquency scores but significantly reduced anxiety and depression. Development outcomes were influenced by patterns of participation such as duration, frequency, and intensity. |
| Strengths                                   | Uses info from large national database along with self-reporting. Self-reporting avoids biases of data from the criminal justice system.  |
| Weaknesses                                  | Self-reporting creates possibility for underreporting.  |