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Abstract: The purpose of this study is to analyze the critical factors that support youth, ages 12 to 25, through critical life stage transitions and thriving throughout life. Using an adapted form of grounded theory rigorous review method, we created a model that represents what factors support youth thriving. We used a 9-stage process: identifying key search words, collecting academic and non-academic articles, establishing inter-rater reliability (κ =.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 theories and frameworks, three critical factors emerged as consistent and recurring: autonomy, relatedness, and competence. The evidence that links these critical factors to successful outcomes through critical transitions and long-term thriving is presented. Discussion includes the construct of engagement and how it represents a promising focus for future work of this nature. Finally, the merits of the Autonomy, Relatedness, and Competence (ARC) model as a framework for program evaluation and design are discussed.

While recent attempts have been made to explore the nature of thriving, we still lack a consolidated definition of what helps adolescents to thrive (Benson & Scales, 2009). Thriving is intentional and purposeful growth across academic, social, and professional/career life domains (Heck, Subramaniam, & Carlos, 2010). Thriving requires an absence of problem behaviours and the presence of healthy development (Dowling, Gestsdottir, Anderson, von Eye, & Lerner, 2003; Scales, Benson, Leffert, & Blyth, 2000). When youth thrive, they discover and express their unique talents and interests, are flexible and able to adapt to a variety of circumstances, and move on a
positive journey toward adulthood (Benson & Scales, 2009; Lerner, 2004; Theokas et al., 2005) in domains such as cognition, emotion, and behaviour. Thriving is not a static state, but refers to development as a process.

**Youth Development**

Since the middle of the last century, program-designers and researchers have been interested in the factors that foster development of adolescents. Approaches to youth development were initially based in child psychoanalysis (Redl & Wineman, 1951) and were designed to reduce delinquency and truancy, preferring punishment to prevention. Approaches to youth development shifted in the 1960s as researchers began to be more interested in strength development (Trickett, Barone, & Buchanan, 1996).

Over the next 20 years, youth development was studied through the conceptual lens of resiliency. Rather than studying the factors that caused youth to engage in negative behaviour, resiliency research focused on those youth who experience healthy development despite high risk, stress, and trauma. To identify at-risk youth, a series of long-term longitudinal studies tracked cohorts of youth through life stages. The Kauai Longitudinal Study, for example, monitored the development of almost 700 Hawaiian children starting in 1955 (Werner & Smith, 1982). Of the participants tracked from prenatal stages to age 40, thirty per cent of the participants were considered to be at-risk because they were born poor, experienced perinatal trauma, or were raised by unfit parents. While two-thirds of the at-risk children developed serious problems, the remaining youth developed into “competent, confident, and caring adults” (Werner, 1997, p. 103). Instead of examining 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 predict negative behaviour to factors that predict success.

While resiliency research may have provided a more contextualized picture of the development of youth than the picture provided by earlier research approaches, the field focused exclusively on at-risk youth (Damon, 2004). The needs of contemporary youth-serving organizations go beyond knowing more about at-risk youth; youth-serving organizations are also interested in the factors that affect all youth. By studying the impact of programming on all youth, positive youth development expands the scope and premises of resiliency research.

**Positive Youth Development**
Contemporary youth development research provides a comprehensive view of youth development (Eccles & Gootman, 2002). Over the past three decades, foundations, youth-serving organizations, and practitioners have promoted a wide range of theoretical approaches to promote youth success. While the approaches may differ in small ways, they subscribe to a shared conception of youth development that is known as positive youth development. Programming that utilizes positive youth development approaches help youth to promote competences, foster resilience, and encourage pro-social norms (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004).

By looking at 13 years of research, as informed by decades of previous research, this study updates the knowledge base on youth development. This project was designed to (a) review and synthesize the developmental and life course needs and the critical transitions that youth need to navigate to thrive; and (b) identify key outcomes on which programs for youth should focus to address developmental needs and transitions.

**Method**

**Grounded Theory**

Primarily used as a way to develop theories through inductive analysis of qualitative data, grounded theory has been applied to a variety of tasks in a range of fields. Originally developed by Glaser and Strauss (1967) as a way to reverse-engineer hypotheses and theories, the method allows for construction of theoretical models and has roots in social sciences and emerging fields within sociology. Grounded theorists start with generally framed research questions and use emerging ideas to shape and develop models of understanding using constant comparison methods. As the theoretical foundations emerge within the data, grounded theory researchers may want to adjust the focus of the research to follow through with “hunches or even hypotheses” (Charmaz, 1990, p. 1163).

Grounded theory has been criticized for overemphasizing inductive reasoning (Charmaz, 1990). To answer this criticism, Glaser and Strauss (1967) recommended that grounded theory be understood in its context as part of qualitative methodology, which emphasizes open questioning, discursive descriptions, and exploratory analysis. In that context, grounded theory breaks new ground in a field, informed by but unhindered by previous models of theory. The tenets of theoretical foundations still have a place in a grounded theory process, but the process requires the researcher to develop new
theories which makes it particularly appropriate for fields of study which are nascent or underdeveloped. The rigour of research conducted using grounded theory can be evaluated by considering how effectively the researchers have outlined their procedures for: (a) selecting an original sample, (b) identifying major categories, (c) classifying category indicators, (d) creating sampling based on theoretical categories, (e) formulating hypotheses, (f) accounting for failed hypotheses, and (g) selecting core categories (Strauss and Corbin, 1990).

**Grounded Theory Rigorous Review**

Grounded theory analysis method is typically used for exploratory qualitative analysis, but also has applications for rigorous reviews of the literature. While many reviews tacitly apply the components of grounded theory to literature review, Wolfswinkel, Furtmueller, and Wilderom (2013) proposed a five-stage process by which researchers can apply the salient components of grounded theory to rigorous literature reviews, which the authors called the grounded theory literature review method. We adapted grounded theory literature review method for our purpose because the method is well suited to the creation of theory in newly developing fields. While researchers have been studying adolescents for decades, the study of youth development is still in its early stages. To explore the construct of youth thriving, we followed the process stages of Grounded Theory Rigorous Review: (a) define (inclusion criteria, fields, sources, terms); (b) search; (c) analyse and present (structure content) (Wolfswinkel, Furtmueller, & Wilderom, 2013).

**Define.** We identified the relevant keywords through collaboration with project partners and through further review of foundational documents. Our master list of keywords included two sections: (a) youth or adolescen* or early adult or emerging adult and 183 content-specific keywords including autonomy, decision-making, health, and mattering; and (b) framework or approach or model and 24 theory-specific keywords such as assets-based, positive youth development, and resilience.

**Search.** In line with the standard inductive method for conducting a review, our process included four steps: (a) scan abstracts and titles of articles that appear relevant, (b) collect reference materials, (c) search reference lists of collected literature, and (e) analyze collected materials to identify biases and missing pieces (O’Connor, 1992). We also incorporated network theory method in our search process (Ryan, Scapens, & Theobald, 1991). By focusing attention on a few key journals, we determined the salient
positions and retro-analyzed the chronology of ideas to their origins using four steps: (a) identify the leading journals, (b) scan the title and abstracts of the most recent year to identify relevant articles, (c) locate keywords and conceptual pillars of the theory, and (d) conduct specific reviews based on the keywords as determined in the lead journals. Our search included content published in scientific journals and content that was not published in scientific journals.

As we analyzed the literature, it became clear that we required a second cycle of searches to locate more studies relating to "needs" and "transitions." Searching for relevant keywords (e.g., needs, transitions, factors, outcomes, sample age, current), we added another 120 studies, which we coded by factor, findings, sample, methodology, effect size, and transitions.

Select. To ensure consistency of the article ratings, we used the inter-rater reliability test Kappa. Once we had established inter-rater reliability ($\kappa = .77$), we eliminated items that fell outside of the scope of the study. We removed 41 of the 298 “black literature” items and 55 of the 278 “grey literature” items.

Analyse. We developed a standard of evidence criteria to establish a measure of quality. While many standards of evidence criteria are available, each standard is custom designed for its specific purpose. Thus, the standards of evidence criteria we used were designed for the unique purposes of this project. Applying the standards of evidence to the collected literature, we identified the best evidence by plotting the articles along five characteristics: (a) findings; (c) samples; (c) methodology; (d) effect size; and (e) transitions. We used a qualitative approach to reliability that included the creation of critical factors through synthesis of multiple meanings and resolving differences 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. We used collaborative discussion to explore biases and settle disagreements. Final analysis was conducted during the drafting process of this report.

Findings

As we moved through the literature, we consistently encountered three key frameworks (Development Assets™, the Five Cs, and SDT). Each of the theoretical frameworks we examined contributes to our understanding of the needs of youth as they move through life stages (Lerner, Lerner, et al., 2005; Vimont, 2012).
Theoretical Frameworks

**Developmental Assets™.** The Developmental Assets framework identifies a total of 40 developmental assets (20 external assets and 20 internal assets) that promote “chances of succeeding in school and becoming happy, healthy, and contributing members of their communities and society” (Search Institute, 2013, http://www.searchinstitute.org/research/developmental-assets). Youth who possess many assets are less likely to participate in at-risk behaviours (e.g., violence; sexual activity) and more likely to demonstrate prosocial behaviour and resilience (Atkiss, Moyer, Desai, & Rolland, 2011; Benson, 2007). As well as possessing practical significance for the mobilization of communities, the Developmental Assets™ framework informs theory and research.

**Five Cs.** According to the Five Cs Model the core principles of PYD are competence, confidence, connection, character, and caring/compassion. An overarching principle, contribution, is sometimes included (Armour & Sandford, 2013; Lerner, Almerigi, et al., 2005; Lerner, Lerner, et al., 2005). These interactive principles contribute to the healthy development and reduce risky behaviour (e.g., substance abuse and delinquency; Bowers, Li, Kiely, Brittian, Lerner, & Lerner, 2010; Luke, Stein, Kessler, & Kierking, 2007).

**Self-Determination Theory.** Self-Determination Theory (SDT) describes innate psychological needs. At its core, Self-Determination Theory posits that goal attainment is dependent on the extent to which the individual is able to fulfill three basic psychological needs: competence, autonomy, and relatedness (Deci & Ryan, 2000). Self-Determination Theory also values the volitional choices that allow the individual to be the causal agent of the situational improvement (Deci & Ryan).

**Critical Factors of Thriving**

Through this study, we set out to analyse the research conducted over the last 13 years as it was informed by established frameworks of youth development. A number of components emerged from the analysis which appeared to be most salient: autonomy, relatedness, and competence. According to our findings, these three factors are critical for youth thriving. These three factors (autonomy, competence, and relatedness) are the foundational components of the proposed ARC model.

**Autonomy.** Autonomy is a critical factor for positive outcomes in the development of youth. Autonomous activities are self-chosen, concordant with one’s intrinsic interests (Deci & Ryan, 1985). When youth are involved in activities that foster
autonomy, the autonomous activities provide protection in terms of negative behavioural and psychological/emotional outcomes. In turn, these outcomes are associated with long-term well-being. The connection between autonomy and positive outcomes is not constant. The context, timing, and amount of autonomy influence the rates of outcomes. Autonomy is a critical protective factor in terms of negative behavioural and psychological/emotional outcomes and is associated with long-term well-being.

**Relatedness.** Relatedness is the need to belong and feel connected with others (Ryan & Deci, 2000). When youth feel connected, they are more capable of outcomes such as academic achievement, motivation, engagement, career development and hope. These outcomes are associated with long-term achievement, psychological and behavioural adjustment, and general wellbeing. When youth feel related they engage in supportive relationships, seek out opportunities to belong, and integrate socially into family, schools and community (Eccles & Gootman, 2002). Relatedness encompasses relating to and caring for others, feeling cared for, and feeling involved with the social world (Leversen, Danielson, Birkeland, & Samdel, 2012).

Relatedness is initially developed through the dynamics of the parent-child relationship, in a child’s sense of security in primary relationships (Bowlby, 1969). While dimensions of parenting are important to early development (Barber & Olsen, 1997), as children move into and through adolescence, non-parental attachments become more important (Gorrese & Ruggieri, 2012; Markiewicz, Lawford, Doyle & Haggart, 2006).

**Competence.** Youth who are competent know how to handle situations effectively. As such, competence does not refer to an absence of deficits, but rather the presence of “effective human functioning in attainment of desired and valued goals” (Baumrind, 1998, p. 13). Competence in youth refers to the development of skills to perform tasks successfully (House, Bates, Markham, & Lesesne, 2010). Competence has objective components (how well one can accomplish a given task) as well as subjective components (how one feels about the likelihood of accomplishing a given task in domain-specific areas). Competence is the outcome of adaptive development (Lerner & Lerner et al., 2005) and is developed through the mastery of physical, intellectual, psychological, emotional, social, and cultural skills. Opportunities to develop these skills are crucially important because they allow youth to build a sense of competence necessary for future thriving (Eccles & Gootman, 2002).
**Engagement.** We consider engagement to be an important factor in two ways: as the convergence of the other three factors and as a process to achieve the other factors. In the first sense, engagement is achieved when all three critical factors are satisfied. When young people feel that they have competence, autonomy, and relatedness, the result is multiplicative rather than additive. When convergence occurs, youth experience increased outcomes beyond the independent effect of any one or two of the factors alone (Sheldon & Niemiec, 2006). This type of model, with a higher-order factor, is similar to the Five Cs model (Lerner & Lerner et al., 2005). A sixth C, contribution, is related to engagement and like engagement, contribution is envisioned as an overarching component: when the five Cs are present, youth contribute positively to self, family, community, and society.

As a process, engagement enhances the achievement of competence, autonomy, and relatedness. Engagement processes are effective for improving social skills and relationships (Busseri, Rose-Krasnor, Willoughby, & Chalmers, 2006; Rose-Krasnor, 2009). When young people are engaged, they are more likely to experience healthy development across a broad range of cognitive/learning, behavioural/social, and psychological/emotional indices. Unfortunately, there is limited research directly linking the engagement process to key outcomes (Rose-Krasnor, 2009).

A growing body of theoretical literature focuses on the impacts of youth engagement on organizations and communities (e.g., Zeldin, 2004); the inclusion of engagement as a higher-order concept in the proposed ARC model contributes to this cutting edge literature. Engagement as a process is necessary for meaningful integration in these contexts of family, school, work, organizations, and community to support the development of competence, autonomy, and relatedness.

Youth engagement has been defined by the Centre of Excellence for Youth Engagement as meaningful and sustained participation in an activity with a focus outside of the self (Pancer, Rose-Krasnor, & Loiselle, 2002). Engagement has three dimensions that correspond to outcomes: (1) a cognitive/learning component, including knowledge about the activity; (2) a behavioural component, comprising actions related to participation (e.g., attendance at group meetings, playing a sport); and (3) an affective component, including the emotional or subjective responses to an activity (e.g., excitement, frustration, meaningfulness). These are also known as the Head (cognitive), Heart (affective), and Feet (behavioural) of engagement (Rose-Krasnor, 2009). Although this multidimensional concept of engagement can be distinguished from participation...
or activity involvement (which involves only the behavioral dimension or ‘feet’), researchers have rarely made this distinction (Rose-Krasnor, 2009). Furthermore, much of the research in this area is focused exclusively on the ‘feet’ component; generally, behavioural activity involvement has been associated with positive health outcomes. In the extant literature, relevant ‘head and heart’ concepts include flow (Csikszentmihalyi, 1990), initiative (Larson, 2000), interest (Hunter & Csikszentmihalyi, 2003), and vital engagement (Nakamura, 2001). However, there is little empirical evidence to date that shows these activity-related characteristics have unique and causal effects on development (Rose-Krasnor, 2009).

Engagement represents the commonality between the highly correlated critical factors of competence, autonomy, and relatedness; hence the overlap in the ARC model. Competence, autonomy, and relatedness, in turn, serve as indicators of engagement. Growing theoretical and empirical evidence advance the concept that engagement is useful as a higher order construct for the sub-dimensions of competence, autonomy, and relatedness. Qualities of competence, such as subjective competence (Busseri & Rose-Krasnor, 2008) and a cognitive learning dimension (e.g. Rose-Krasnor, 2009) characterize engagement. Youth engagement literature identifies key qualities of autonomy, such as control (Busseri & Rose-Krasnor, 2008), influence, and input in decision-making (Lawford, Ramey, Rose-Krasnor, & Proctor, 2012). Relatedness is a key element of the definition of engagement, highlighting youth’s relationships with peers and adults, and a connection outside of the self (Pancer et al., 2002).

Engagement is a critical process of interaction, with people, with contexts, and with interests. In the preceding chapters, for all three critical factors, the literature highlights the constant interplay between individuals and context and posits that the quality of these interactions is related to positive outcomes. Likewise, for adolescents to thrive, they must be adaptive, act in ways that support their own healthy functioning, and have positive interactions with their world (Lerner et al., 2011). This focus on engagement as a critical process is supported in the literature review by Eccles and Gootman (2002), which asserts that “it is the experience of the adolescent in-setting — the processes of interaction — that is critical to development” (p. 88). Neurosciences research additionally supports this emphasis, demonstrating that experience shapes brain development and, in turn, brain activity influences the potential for a young person to participate in life’s experiences (Jetha & Segalowitz, 2011; Sercombe, 2010).
Conceptualizing engagement as a critical factor provides an opportunity for creating a developmental framework for youth programming that links critical factors for the individual in terms of autonomy and competence, as well as to relatedness in terms of the qualities of social interactions with family, peers, and non-parental adults, together with the processes/qualities of the community settings and systems that promote thriving. In turn, this conceptualization allows for an integrated model for program development that begins to link the research evidence that has been primarily gathered at the individual level of analysis, to evidence gathered at the social level of interactions between young people, their peers and adults in their lives, as well as opening the door for more effective continuity of research that explores the connections of this body of research with outcomes in terms of the systems, social conditions, and the qualities of their environments.

Discussion

While expansive and complex theories of development are common in the literature, simplified models are preferable to assist organizations and institutions in linking age-appropriate developmental outcomes and long-term thriving outcomes to program design and execution (Cohen & McDonough, 2012; Eccles & Gootman, 2002; McMurtry & Curling, 2008; Ministry of Child and Youth Services, 2012; Ministry of Child and Youth Services, 2013). The development of the ARC model, particularly the inclusion of the engagement factor, builds upon theories, concepts, and recommendations emerging from these foundational documents. The ARC model provides a synthesized approach to tracking short-term and long-term program outcomes for youth and society. As such, the ARC model is a roadmap for understanding youth development.

The findings of this study suggest that program choices be made using a four-step process. First, the context and needs of the youth need to be understood. Second, all stakeholders must agree on the theoretical framework by which the program is designed. Third, using prior knowledge, program designers must explore all models, characteristics, and program elements. Finally, all of the critical factors for youth thriving—competence, autonomy, relatedness, and engagement—should be put into place with young people.

Conclusion
The ARC model has the potential to be a unifying umbrella for the existing theories and frameworks. The literature review demonstrates the need to improve our understanding of the type of program elements that work in different 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—and engagement as an overarching factor—serve as summary factors for all of the major factors identified by the literature, both past and current.
References


Critical factors for youth thriving


