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**POSITIVE INDICATORS OF CHILD
WELL-BEING: A CONCEPTUAL
FRAMEWORK, MEASURES AND
METHODOLOGICAL ISSUES**

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IWP-2009-21

October 2009

Innocenti Working Papers

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ISSN: 1014-7837

For readers wishing to cite this document, we suggest the following form:

Lippman, Laura, H., Kristin Anderson Moore and Hugh McIntosh (2009), 'Positive Indicators of Child Well-Being: A Conceptual Framework, Measures and Methodological Issues'. *Innocenti Working Paper* No. 2009-21. Florence, UNICEF Innocenti Research Centre.

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Positive Indicators of Child Well-Being: A Conceptual Framework, Measures and Methodological Issues

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Summary: This paper highlights a number of frameworks for positive indicator development which examine the positive well-being of children. Based upon this review, it suggests a new comprehensive framework which identifies constructs for positive well-being as well as potential indicators and extant measures that fit with those constructs. In addition, the paper reviews existing data sources for examples of positive measures that are found in the proposed framework as well as research studies that have been successful in measuring these indicators. The paper then notes the data and measurement gaps that exist in comprehensively measuring the positive in children and youth. Finally, it identifies a number of conceptual and methodological issues that need consideration as efforts to define and measure positive indicators of well-being and well-becoming go forward.

Keywords: child well-being, indicators, child development, child well-being frameworks

Acknowledgments: The authors are grateful for support from the UNICEF IRC, and for comments and advice received from David Parker, Eva Jespersen, Dominic Richardson and Asher Ben-Arieh, as well as from the participants of the child well-being expert consultation held in Paris in May 2009 at the OECD and organized by the UNICEF IRC, the OECD Social Policy Division, and the European Commission. We are also grateful to research assistance provided by Katie Hamilton and Camille Whitney. Any remaining errors and omissions are entirely the responsibility of the authors.

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1. INTRODUCTION: THE IMPORTANCE OF POSITIVE INDICATORS

While the world reels from a financial crisis that is straining families and children, one might question why indicators of child well-being should incorporate positive measures. Yet, as children grow up in this challenging environment, as new families form, and governments create policies to minimize the negative impacts on well-being, it is imperative for governments to understand the mechanisms by which children and youth flourish, how to maximize human and economic potential, and how to assess and facilitate that flourishing. Indeed, it may be particularly opportune to discuss and measure positive well-being at this time of challenge. Our purpose in this paper, therefore, is to offer UNICEF, the Organization for Economic Cooperation and Development (OECD), and the European Commission a framework for developing positive indicators, as well as examples of rigorous measures of positive well-being that are supported by a growing body of multidisciplinary and multinational research. This paper was presented to the Child Well-being Expert Consultation convened by UNICEF Innocenti Research Centre (IRC), the OECD, and the European Commission in May, 2009, and the paper has been revised to incorporate the reflections of participants.

The original intent of child well-being indicators was to monitor child survival (Ben-Arieh 2008); and, as such, national social indicator systems have focused on threats to survival and well-being, sounding alarms to focus attention upon problems that needed to be rectified. The child well-being indicator movement grew out of the broader social indicator movement of the 1970s. It was in 1979 that UNICEF began the State of the World's Children reports and the World Bank published a World Atlas on the Child. Also, in 1979 Child Trends was established to monitor child well-being. The OECD also started producing reports on family demography and education during this time period (Lippman 2007).

While designed to monitor the 'well-being' of the population, statistical surveys about children and families and the indicator reports that use them have included many indicative but few positive indicators. The U.S. government's monitoring report is just one of many examples of this. *America's Children: Key National Indicators of Well-Being*, published by the U.S. Federal Interagency Forum on Child and Family Statistics (2007), includes only a few positive measures, primarily in the area of education, but presents numerous problem behaviours and conditions, such as illicit drug use, violent crime, overweight, smoking, asthma, emotional and behaviour difficulties, mortality and adolescent childbearing. In press releases about the report, 'good news' is the reduction in something bad, like a decline in the violent crime rate. With some notable exceptions, it is not currently possible to monitor increases in desired behaviours (J. Bradshaw, Hoelscher, and Richardson 2007). While it is essential for governments, international agencies, and funders to continue to monitor problems and to take action to rectify them, positive well-being needs to be incorporated in these monitoring reports, so that they can also develop policies and programmes to increase the incidence of positive behaviours, relationships, and competencies. Several countries have already successfully produced child well-being indicator volumes that are more balanced between positive and negative indicators, such as those of Ireland, England, Canada, Australia, and New Zealand (see the review of their frameworks in Appendix A).

1.1 Why Develop Positive Indicators?

There are a number of important reasons to assess positive development. A critical reason is that it represents good science. The study of child development, and of human development more broadly, encompasses both positive and negative developmental processes (Bornstein, Davidson, Keyes, Moore, and The Center for Child Well-Being 2002b; Eccles and Gootman 2002; Huston and Ripke 2006; J. Shonkoff and D.E. Phillips 2000). Thus, to focus solely on the negative is scientifically inappropriate. In addition, research on the sociology of childhood, the U.N Convention on the Rights of the Child, and the science of human capital formation and social capital support and inform the development of this field of positive indicators. Our discussion of the history of positive indicator development below incorporates contributions from these fields.

Moreover, the focus on the negative appears to contribute to a widespread perception on the part of taxpayers that things are bad for children and getting worse and that there is little we can do to improve things (Public Agenda 1997). We suspect that this negative perspective undermines the public will to invest in children, at least in the U.S., in order to prevent and ameliorate negative conditions for children and also undermines private actions, such as volunteering to work with children (L. Guzman, Lippman, Moore, and O'Hare 2003; K. A. Moore and Halle 2001; Public Agenda 1997).

In particular, positive indicators can be helpful in the many efforts to address child poverty, such as the European Commission's 2008 report, *Child Poverty and Well-being in the EU: Current Status and the Way Forward*. The rapid reduction of child poverty emerged as a priority for all EC states in 2006. However, the purpose is not solely to reduce poverty, but to ensure that all children have the opportunities they need to flourish regardless of background. Isabelle Maquet-Engsted and Hugh Frazer of the European Commission recounted at the UNICEF/OECD/EC meeting how the initial purpose of the EC report was to monitor poverty, but it quickly expanded to monitor child well-being more broadly. When positive social policies that support children's flourishing are enacted, indicators need to be able to capture these changes, or there will be a lack of awareness of the effectiveness of policies that work (Aber 1997). The OECD participants at the expert consultation emphasized the need for monitoring child well-being indicators which were policy amenable.

It is worth noting that acknowledgement of strengths is as, or perhaps more, important in disadvantaged communities and in the developing world as it is among their more advantaged counterparts. There is convergence of agreement among societies at different levels of development about the need to measure child well-being in positive ways, in addition to monitoring the negative. David Parker of UNICEF IRC noted at the above meeting that a key issue for developing countries is linking positive indicators of child well-being to indicators of the local context, and another is the struggle with insufficient data in such countries. There are examples of efforts to develop such data in developing countries. The Young Lives project is providing a longitudinal database with which to inform policy-makers of levers to improve children's lives by focusing on the interaction of poverty and flourishing in developing countries. And a pan-African policy centre is starting to monitor child participation, inspired by the UN Convention on the Rights of the Child, along with more

traditional indicators of child well-being with which to rank countries and hold them accountable (African Child Policy Forum 2008).

In addition, practitioner wisdom indicates that communities, including families and children, want to hear about and focus on developing the strengths of their communities, rather than simply reacting to unending media coverage of failure and problems.

Finally, we would argue that conceptualizing, developing and monitoring positive indicators helps a society identify the values and goals around which it is united. Having positive goals for programmes and for society, however, is not a small, arcane research task but an endeavour that can reflect and affect the goals of a nation as they appear in public reports, individual behaviour, research work, media accounts, and programme evaluation. Strategies are needed which increase understanding of the value of constructive and preventive investments to achieve positive goals.

We recognize that negative indicators receive substantial attention from the media, from policy makers, and from the public. There is concern that positive indicators will not activate the same depth and strength of concern that negative indicators can induce, even though they represent good science, reflect and promote a positive vision of children, and establish positive goals for nations. However, we suggest that it is often not the tenor of the indicator, but whether the trend is good or bad, that attracts this attention.

Clearly, high levels of, or increases in, negative behaviours such as violence and drug use attract the attention of the media, the public, and the policy community. However, it is also the case that societies acclimate to bad news and learn to tune it out. Moreover, low levels of positive behaviours, such as a lack of exercise, an absence of school engagement, or infrequent volunteering, may also receive attention from the media and public. In addition, the presence of positive characteristics in at-risk populations is of interest to policy makers (Valladares and Moore 2009) and has received ongoing research attention in the study of resilience (Steinberg 2005). It may be the case, though, that the absence of positive behaviours is less likely to stimulate policy action than the presence of negative behaviours. Thus, policy makers seem to be more likely to allocate resources to reducing crime than to improving citizenship. This is a broader issue, though, wherein it seems to be more difficult to get the public and policy makers to focus on and allocate resources toward prevention than toward treatment or punishment.

Despite this, the positive youth development approach and the language of assets have been found to resonate at the community level and among service providers, if not the tabloids; and programmes and practices that foster positive youth development are increasingly receiving policy attention at the national and community level. For example, the finding from many studies including PISA (Guzman et al, forthcoming) and the U.S. National Longitudinal Survey of Adolescent Health (Add Health) that when families eat dinner together their children have better outcomes can be found on placards in subways, in grocery stores and radio public announcements. This type of social marketing based upon positive indicators can change family behaviours and produce more positive outcomes for children.

2. HISTORY OF POSITIVE INDICATOR DEVELOPMENT

The initial focus on child well-being indicators tended to focus on child survival (Ben-Arieh 2008) but moved over time to address a broader range of competencies (Rychen and Salganik 2003). Indeed, over the past 15 years, a theoretical shift has occurred in understanding the development of children and adolescents – their needs and behaviours and how to support optimal development (Larson, 2000; Lerner and Benson 2004; Lerner and Steinberg 2004; Peter C. Scales and Benson 2005; P. C. Scales et al. 2001). This new conceptual approach is explicitly strengths-based, focusing on cultivating children’s assets, positive relationships, beliefs, morals, behaviours, and capacities to give children the resources they need to grow successfully across the life course. There has been a shift from an adult perspective on child well-being to a child perspective, with broad acceptance for children’s subjective perspectives on their own well-being and for children as reporters as a preferred method of assessing their well-being. In the future, children will be more active participants in measuring and monitoring their well-being (Ben-Arieh 2008). We use the term positive indicators to describe the competencies, skills, behaviours, and qualities, as well as the relationships and social connections, which foster healthy development across the domains of a child’s life.

The primary focus of theory and research on children, particularly adolescents (e.g., Dryfoos 1990), as well as the perception of adults (e.g., Guzman, Lippman, Moore, and O’Hare 2003), and portrayals in the media has been engagement in risky behaviours (Perkins and Borden 2003). Although childhood is filled with changes across many domains of functioning (e.g., biological, social and psychological), childhood in general and adolescence in particular are not necessarily a period of ‘storm and stress’ (Hall 1904), of inevitable conflict and crisis (Erikson 1968). Challenges and problems do occur, of course; but childhood and adolescence represent times of exploration, learning, making choices, identity consolidation, and relationship building. Developing these competencies, self-awareness, and connections with others lay the foundation for later development. Thus, the hypothesis arising from this new positive focus in developmental science is that fostering this exploration and development of socially valued skills is as important as curtailing experimentation and extensive involvement in risky behaviours, which has been the focus of attention in large portions of the practice and policy communities.

The effectiveness of interventions to treat and ‘fix’ existing issues and prevention science to halt the development of maladaptive behaviours has been extensively studied, and much has been learned (Catalano, et al. 2003; Dodge and Schwartz 1997; National Research Council and Institute of Medicine 2002). That same attention is now being paid to research, policies, and programmes that focus on enhancing personal efficacy, autonomy, and responsibility, and promoting skills such as planfulness, conflict resolution, and cultural sensitivity with the understanding that this approach will lead to adults who are prepared and engaged for work, life and citizenship (Rychen and Salganik 2003; Lippman et al, 2008; Pittman and Cahill 1991; Pittman, Irby and Ferber 2000).

This theoretical shift towards strengths-based development (Peterson and Seligman 2004; M. E. P. Seligman, Steen, Park, and Peterson 2005), as opposed to an intervention and prevention/remediation perspective about adolescent development, is now being matched

with data collected in surveys, educational assessments, and statistical systems. Historically, well-being has been conceptualized as the absence of negative or undesirable behaviours (Bornstein et al. 2002b; K. A. Moore and Halle 2001). A large and nuanced vocabulary and matching assessment measures have been developed to assess adolescent involvement in delinquent and risky behaviours, for example. Parents, educators and policy makers are clear that they do not want youth engaging in early and unprotected sex, skipping school, using and abusing illegal substances, smoking, driving recklessly, being oppositional and defiant, etc.

It is more difficult to agree, though, on what defines positive development and consequently how to measure it (Peterson and Seligman 2004). One can observe and quantify how often a child skips school or the number of births to teenagers. Moreover, the power of bad experiences or the impact of poor choices is quite powerful and potentially life altering, such as contracting a sexually transmitted disease (e.g., HIV) or being in a fatal motor vehicle accident. Indeed, research in the psychological sciences has suggested that multiple positive experiences are needed to counteract one bad experience (Baumeister, Bratslavsky, Finkenauer and Vohs 2001). This suggests that stopping bad experiences and characteristics is very important. Nevertheless, it is also important to focus on how to measure and optimize good experiences and strengths so that children and adolescents have the skills to cope with challenging experiences as they arise, and to understand how they interact with negative behaviours. More reliable and valid measures of the personal strengths of individuals are needed so that they can be placed in surveys of child well-being along with measures of academic competence and along with the traditional risk behaviours.

The changes over recent decades in our understanding of how children develop have been paralleled by important changes in how societies view children and childhood. Perhaps most important to discussion of indicators of positive child development is the concept of viewing children as a specific social group that differs from other age groups (e.g., adults, the elderly) and has commonalities, needs, and value in its own right, rather than value only as a future adult (Qvortrup 1993). One of the first large international studies to use this approach in studying children, the Childhood as a Social Phenomenon project, conducted in 16 countries in 1987-1992, found a relative lack of information about the economic and social conditions of children, themselves, as opposed to data on the conditions of their families or parents (Ben-Arieh and Wintersberger 1997; Qvortrup 1993).

The findings from the Childhood as a Social Phenomenon project, as well as other research, helped stimulate exploration into new ways of measuring child well-being (Ben-Arieh 2000). Over time, those efforts have contributed to major changes in the study of child indicators, including a shift from a focus on measuring basic needs (e.g., immunization, school enrolment, and infant mortality rates) to measures of the quality of life beyond mere survival (e.g., life satisfaction). The shift to the development of measures of well-being, in turn, helped move the child indicators field toward a focus on indicators of flourishing, as opposed to negative measures such as deviance and risky behaviours.

Additional support for these changes in perceptions of childhood has come from the UN Convention on the Rights of the Child, which was adopted in 1989 and at the end of 2008 had been ratified by 193 countries (not including the United States) (United Nations 2009). In broad terms, the Convention declares that children have the rights and freedoms of all human

beings, including adequate nutrition, health care, and education and freedom from abuse, violence, and exploitation. More specifically, participating nations agree to “undertake to ensure the child such protection and care as is necessary for his or her well-being” (Article 3), as well as “recognize the right of every child to a standard of living adequate for the child's physical, mental, spiritual, moral and social development “ (Article 27). Particularly relevant to positive indicator development is article 29.1[a], which articulates the right of the child to education focused on “the development of the child’s personality, talents and mental and physical ability to their fullest potential.” Furthermore, Melton and Kaufman (1997) argued for a policy framework emerging from the Convention that goes beyond checklists to ensure that children feel that they are being treated with dignity through their own participation. To that end, Landsdown (2005) applies this concept of children’s evolving capacities to envisioning a legal framework whereby children’s participation and transference of their rights might depend upon a demonstration, or assessment, of competencies. This would clearly necessitate assessments of these competencies using rigorous measures.

The Convention’s requirement that governments periodically report to the UN on how well they are implementing these obligations (Article 44) has prompted the creation of systems for gathering and reporting data on the quality of children’s lives (Child Rights Information Network 2009; Ben-Arieh and Goerge 2001).. The Convention has helped stimulate the development of new frameworks of indicators to monitor child well-being at both national (e.g., Spain, Ireland, Italy, New Zealand) and international levels (Belloti 2009; Bradshaw, Hoelscher and Richardson 2007; Bradshaw and Richardson 2009; Feixa 2007; Hanafin and Brooks 2005; Ministry of Social Development 2008; Richardson, Hoelscher and Bradshaw 2008).

3. THE NEED FOR POSITIVE MEASURES AND THE LIMITATIONS OF EXISTING MEASURES

While basic research has accumulated in the fields of child development, family sciences, and human development that encompasses a strong focus on normal and positive development (Bornstein, Davidson, Keyes, Moore and The Center for Child Well-being 2002a; J. Shonkoff and D. (Eds.) Phillips 2000), the concepts, findings and measures developed in these fields have had too little penetration into policy discussions or national and cross-national databases.

A number of factors account for this lack of take-up. One reason is that the measures used by child developmental researchers in academic studies tend to be quite lengthy, which makes them expensive to include in large-scale national surveys, where a single minute of survey time can cost more than US\$100,000 (Child Trends 2003). Another reason is that there is considerable scepticism among statisticians, economists, and other quantitatively oriented researchers, who view measures of positive youth development as ‘squishy’ and ‘soft’. Hard data on the psychometric properties of scales, indices and items, including concurrent and predictive validity, are needed to convince survey directors that measures of social and emotional well-being can be rigorously measured and collected. In addition, available measures have generally been developed and used with local samples that lack social and economic diversity. There is a need for evidence that positive constructs and measures are valid and reliable across varied race/ethnicity, gender, and socioeconomic status groups, as well as across nations.

In addition, practitioners are clamouring for measures to use to document the outcomes of their programmes (Park 2003), and wide acceptance is being gained for the perspective that “problem free is not fully prepared” (Pittman and Cahill 1991). In fact, the OECD in its Defining and Selecting Competencies project (DeSeCo) (Rychen and Salganik 2003) highlighted the need for the development of competencies in future workers and citizens. The United Kingdom is just one example of many countries undertaking research to identify positive indicators of well-being. The U.S. Federal Interagency Forum on Child and Family Statistics has also called for more explicitly positive measures that truly assess strengths, rather than just the absence of risk (Federal Interagency Forum on Child and Family Statistics 2007). The accumulation of evidence that positive attributes are critical for healthy youth development has led to numerous similar calls for further attention to them and for the refinement of measures that can be used in further empirical research and practice. These calls have also come from reviews of research (Roberts, Brown, Johnson and Reinke 2002), by the U.S. National Academy of Sciences’ Committee on Community Programs to Promote Youth Development (National Research Council and Institute of Medicine 2002), and by the NICHD Family and Child Well-being Research Network (Thornton 2001).

Fragmentation of existing measures. It is critical to use reliable and valid measures with clear and common meaning. Beyond this, the integration of measures into statistical systems for tracking and monitoring purposes creates additional challenges. For example, as noted, developmental scientists have long been interested in normal and positive development. Prominent researchers have examined multiple constructs related to healthy development

such as motivation (Bandura 1997; Deci and Ryan 1985), self-esteem (Harter 1998), attachment (Bowlby 1969, 1973), and empathy (Eisenberg 1998). Their work has spanned decades, and over time, constructs have become more and more differentiated. Self-worth and self-esteem are now understood as multi-dimensional constructs including perceived academic competence, physical competence, satisfaction with one's physical appearance, and social competence (Harter 1998). Similarly, motivation is understood in relation to one's goals (Alderman 1999; Pintrich and Schunk 1996), attributions for success (Weiner 1979), self-regulation (Zimmerman 1989), and perceived self-efficacy (Bandura 1997). Further, motivation is domain specific, such that achievement motivation in school is specific to reading, mathematics, science, history, or sports pursuits, and within those domains motivation is affected by ability and expectancy beliefs, perceived task difficulty and perceived task value (Eccles, Wigfield and Schiefele 1998). When these constructs are measured, they are assessed with very long and highly differentiated scales, which are not possible to include in national surveys given time and cost constraints (Moore and Lippman 2005). Moreover, the possibility exists that available constructs overlap substantially. The value of having a short set of items for policy makers, the public, and media argues against having overly nuanced and complex constructs. Work is needed to identify the most critical and non-redundant components of varied scales and indices.

Length of existing positive measures. Recent work in the developmental sciences has taken a more inclusive and positive approach to assessing individual characteristic; however, limitations for national tracking and monitoring systems are still present. For example, Lerner and colleagues (2005) have developed the Five Cs of positive youth development (competence, confidence, character, caring and connection) in middle school and high school youth. However, the survey associated with this conceptualization is more than 20 pages. Similarly, Peterson and Seligman (2004) have developed a classification of human virtues including 24 strengths such as creativity, persistence, kindness, leadership and humour. The measurement model includes 10 questions for each of 24 unique strengths.

Challenges of developing measures for diverse populations. Because of these limitations, adapting and developing measures for use in national and cross-national surveys needs significant work with regard to item complexity, item wording, response choice categories, and use with diverse populations to ensure their reliability and validity. Specific issues that arise when measures are developed for national and cross-national surveys include: 1) surveys that were developed as paper and pencil measures are often conducted with large national and cross-national populations over the phone or are administered in classroom settings as self-administered questionnaires; (2) providing responses on abstract concepts, particularly over the phone is a challenge, (3) response bias due to social desirability may affect responses (though this is a difficulty with problem behaviours as well); (4) concerns about item wording and complexity with low-education respondents require considerable testing; (5) cultural and language diversity of respondents also require testing of items across groups; and (6) parents are often asked to report about their children and children are often asked to report about their families, with little attention to how the choice of reporter affects data quality. Unfortunately, data collection administrators often do not have the funds to carry out this developmental research.

Notwithstanding these challenges in developing positive indicators of child and adolescent well-being, the field ventures forward well aware of the challenges, but confident in the need for these indicators, and optimistic about the potential of positive measures across domains of child well-being.

4. DEVELOPING A POSITIVE INDICATOR FRAMEWORK

In this section we review major theories that support the development of positive indicators of child well-being and review current indicator frameworks as the basis for formulating a proposed framework for positive indicator development.

4.1 Theoretical Foundation for Positive Indicators

Theories of human development are inherently positive to the extent that they describe how a healthy child develops over time in a supportive environment. Although the field of human development lacks a single unifying theory (Lerner 2002), developmental stage theories such as Erikson's (1968; 1985) psychosocial theory and ecological approaches such as Bronfenbrenner's (1979; 1995) theory provide a useful time-space structure for integrating the several theories and concepts that explain positive child development.

Erikson's (1968; 1985) theory proposes that the internal maturation of the individual interacts with external demands of society in eight distinct stages across the life cycle. At each stage, the individual faces a particular challenge, or crisis, that must be resolved successfully for present well-being and future development. In infancy (0-1 year), for example, the challenge is between trust and mistrust with regard to other people (especially the primary caregiver), self, and the world. Although a certain level of mistrust is advantageous (e.g., mistrust of overly hot food), successful resolution of this crisis leads to a 'favourable ratio' (1968, p. 105) of trust over mistrust. The infant concludes that its caregivers are trustworthy and the world is a good, safe place. From this understanding emerges the psychosocial strength of hope, which is a positive outcome itself, as well as building block for future development.

In each of the next four stages of Erikson's (1968; 1985) theory, successful children resolve an age-specific crisis and develop a corresponding strength that constitutes both well-being and a step toward the next challenge. For toddlers of 1-3 years, the challenge is to become more autonomous despite the possibility of failure. Preschool children (3-5 years) develop a sense of purpose when they become able to initiate and complete their own activities while learning to cooperate with other children and adults with whom they might come into conflict. School-age children (6 years to adolescence) develop competence by learning to master academic and social skills while avoiding feelings of inadequacy or inferiority in these tasks. In adolescence, the challenge is to learn who one is and where one fits into the world. Those who succeed, Erikson argues, are well prepared for the developmental tasks of adulthood while those who fail become mired in confusion.

Bronfenbrenner's (1979; 1995) ecological theory also describes interactions between children and their environment, but it provides a more detailed picture of contextual influences and their interactions with the individual. The basic unit (microsystem) in Bronfenbrenner's model is formed by the network of interactions in any one setting (family, school, neighbourhood) where the child interacts directly with people and activities. Interrelations

among two or more microsystems (e.g., family and school) constitute a mesosystem. Beyond this structure is the exosystem, which contains settings, where the child is not directly involved but which influence, or are influenced by, a setting where the child is directly involved. The parents' work place, their groups of friends, and government social services are all settings that indirectly influence the child through their interactions with the child's family.

The three sets of ecological structures (micro-, meso-, and exo- systems) described above constitute a child's immediate developmental context. Such contexts differ in significant ways both between and within countries, owing to differences in economics, culture, race/ethnicity, religion, beliefs, lifestyles, and other context wide factors. The attitudes and beliefs that children develop, for example, can be expected to differ in important ways between collectivist and individualist countries and, within countries, between groups with high and low socioeconomic status. In Bronfenbrenner's (1979; 1995) model, the cultures, subcultures, beliefs, and ideologies that envelop and influence children's immediate developmental context constitute a macrosystem.

The psychosocial, ecological and social theories outlined above provide a time-space-relationship outline for understanding child development. Other theories, however, are needed to provide a more complete picture of the developmental interaction between individual and environment, especially in the domains of physical and cognitive growth.

In the realm of physical development, genetic-environmental interaction explains much of what happens as children mature. A child's height, for example, depends on both genes and diet: good nutrition helps children grow to their full genetic potential (Gottesman and Hanson 2005). The environment also contributes to normal brain development during childhood and adolescence via sensory input that stimulates formation of the specialized neuronal circuits that enable mature thinking (Johnson 2000; Webb, Monk, and Nelson 2001). According to Piaget, thinking develops in stages to more advanced levels as children grow into adolescence (Inhelder and Piaget 1958; Piaget 1970). At each stage, novel experiences challenge children to revise their ways of thinking in order to be able to explain the new phenomena. Vygotsky placed even stronger emphasis on the role of social and cultural interaction in shaping children's cognition (Mahn, 2003; Tudge and Scrimsher 2003). Parents, teachers, and other adults in the community provide children with apprentice-like support (scaffolding) to help them learn the skills and values of their culture. Much as good nutrition helps children grow to their genetically potential height, adult scaffolding helps children reach their cognitive potential.

Overall, the developmental theories reviewed here underscore the idea that children and their environments interact continually in the developmental process. They also highlight the complexity of that process. Child-context interactions influence growth not only in obvious domains such as physical development, but also in cognitive, psychological, and social areas as well.

In addition, social capital theory suggests the importance of including indicators of access to resources and beneficial relationships through personal or organizational networks (Coleman 1998; Putnam 1995). These networks are critical for meeting personal, familial, and social

needs and providing opportunities for children to succeed. Thus, our framework for positive indicator development needs to incorporate the social context in which children live and interact, including families, schools, and communities. As Ivar Frones commented at the UNICEF/OECD/EC expert meeting, social capital of children and their families is convertible into intellectual and economic capital and therefore needs to be monitored as an aspect of child well-being. Furthermore, relationships have been found to be of the highest importance to children in studies which ask children to define what makes them flourish in their own lives (Fattore et al. 2009; Mathews et al, 2006; Hanafin, and Brooks 2005). Hanafin commented at the UNICEF/OECD/EC meeting that children's view of their lives is largely positive and their world is their friends, family, school, and pets. If their well-being can improve in these relationships, their well-being will improve overall.

The importance of contextual influences on child well-being is echoed in recent developments in the realm of children's rights. A few centuries ago, children had little legal protection. But, over time, they have progressed from being treated as property toward having status as persons with rights to both self-determination and nurturance (Hart 1991). The UN Convention on the Rights of the Child, adopted in 1989, spells out broad international agreement about children's rights to well-being in a comprehensive array of contextual domains (UN 2009). Arguing that the family is the 'natural environment for the growth and well-being of all [society's] members and particularly children', the Convention states that governments should support families in their child-rearing work and that children should "grow up in a family environment, in an atmosphere of happiness, love and understanding" (preamble). The Convention also recognizes that extended-family members and others in the community, as well as parents, can play roles in ensuring that children enjoy the rights covered by the agreement (article 5). The convention outlines rights in other contexts, including schools (articles 28 and 29), religious institutions (article 14), arts and cultural centres (article 31), and places for leisure, play, and recreation (article 31). In short, the Convention states that children have rights in contexts throughout their environment, suggesting that society has an obligation to protect those rights by ensuring that the various contexts have at least the minimal amount of resources needed to foster child well-being and development (Melton 1996, 2008).

Theories of economic development and human capital formation have also indirectly contributed to work on positive child well-being indicators. Amartya Sen's work focusing on individual's capabilities, including positive freedom, influenced the creation of the Human Development Index (HDI) and the Human Development Report, published annually by the United Nations Development Programme since 1990. The HDI ranks countries on normalized measures of life expectancy, literacy, educational attainment, and GDP per capita. These measures are associated with greater opportunities for individuals in the areas of education, health care, income, and employment. This widely used index and its constituent measures pertain to total populations, not children. For example, it is adult literacy and educational attainment that are included in the index. However, it implies the need to measure and monitor these opportunities for children and youth, as well as the contributing factors and contextual interactions which create such opportunities and which therefore can improve a country's index. It is important to distinguish measures for children and youth from those for adults, because of changes across cohorts and because the latter are often not developmentally appropriate for children.

Theory from multiple research fields (e.g., workforce development, human rights, human development and social capital formation, health policy, developmental psychology, sociology, and education) therefore suggest the need for development of positive measures.

In the following section, we use each of these perspectives to help guide our review of current frameworks of positive indicators of child well-being.

4.2 Current Frameworks of Positive Indicators

In searching the literature for current frameworks of positive indicators, we focused on institutions and academic fields that commonly develop and use frameworks of child well-being: national and international agencies, schools, youth-development organizations, and the academic fields of developmental psychology, positive psychology, and sociology. We identified 43 frameworks and reviewed them for:

- coverage (Does it cover physical, psychological, cognitive, social, or other domains?),
- developmental focus (What stage(s) of child development does it focus on?),
- contextual elaboration (What environmental settings does it include, and are they distinguished from child well-being per se?), and
- positive perspective (Is the framework generally positive, primarily negative, or does it contain a mix of positive and negative indicators?).

Descriptions and reviews of all the frameworks are presented in Appendix A.

Below we highlight eight of the frameworks. These examples are intentionally positive in that their domains and indicators predominantly reflect positive child well-being. Each example has some limitations in terms of other selection criteria outlined above, and we discuss these qualifications as well. Two of the examples are from international research. Two each are drawn from the fields of positive child and youth development and developmental psychology. One example comes from positive psychology, and another represents social-context frameworks.

4.3 International Frameworks

Multi-National Project. The Multi-National Project for Monitoring and Measuring Children's Well-Being, begun in 1996, evolved out of a cross-disciplinary collaboration of more than 80 experts in 28 countries who aimed to develop improved capabilities for monitoring child well-being around the world (Ben-Arieh 2007). The project is currently working to develop universal measures of child well-being that are also culturally sensitive. Nearly 50 indicators have been identified and aggregated into 13 sub domains and five domains:

- Safety and physical status
- Personal life
- Civic life
- Children's economic resources and contributions
- Children's activities

Indicators in the framework are predominately positive or neutral, with some negative indicators (fewer than 30%) clustering in the areas of safety and economic well-being (Ben-Arieh 2007). Domains and sub domains cover commonly recognized areas of child well-being, as well as contextual indicators related to the family's economic security. The framework does not focus on a specific stage of child development, and it is unusual in having a domain devoted to children's economic resources and contributions to the family.

Definition and Selection of Key Competencies (DeSeCo) Project. The DeSeCo Project was created by the Organization for Economic Cooperation and Development to complement youth monitoring by its Program for International Student Assessment, which assesses knowledge and skills in reading, math, science, and problem solving (Organization for Economic Cooperation and Development 2005; Rychen and Salganik 2003). The project has identified three broad categories of competencies that individuals need to help them (and societies) cope with the complex challenges and demands of modern life and globalization. The competencies are not well-being outcomes per se; rather, they are preliminary requirements for successful outcomes in the areas of employment/income, health/safety, social connection, and political participation:

1. Acting autonomously
2. Using tools interactively
3. Functioning in socially heterogeneous groups

The domains and indicators in this framework all reflect positive development and focus on youth close to finishing compulsory education (Organization for Economic Cooperation and Development 2005). Indicators represent various aspects of cognitive, psychological, and social development but not physical development. The framework does not include measures of contextual factors, but the competencies are intended for use in multiple contexts.

4.4 Positive Child and Youth Development Frameworks

National Research Council (NRC) framework. The framework developed by an NRC panel on community-based programmes for youth in the United States is most comprehensive in identifying the assets needed to facilitate successful passage into adulthood (Eccles and Gootman 2002). The panel's work emphasizes the importance of adolescents' having assets in all four domains so that they can cope with and adapt to the tasks they face as they move into adulthood.

- Physical development
- Intellectual development
- Psychological and emotional development
- Social development

The constructs in this framework are essentially all positive (Eccles and Gootman 2002). Physical, intellectual, psychological, and social development in adolescence are covered by the framework. It does not include separate contextual domains, but the researchers do list eight supportive experiences that youth should encounter in any setting (e.g., family, school,

neighbourhood, community programme) to promote positive adolescent development (see appendix).

Positive youth development (PYD) framework. Researchers in the PYD movement have developed a “five Cs” framework of positive youth development (Lerner, 2005; Lerner, Lerner, Phelps and Colleagues 2008). This approach is based on the idea that if young people manifest the characteristics represented by the five Cs (listed below) across time, they will be on a trajectory toward an “idealized adulthood” that includes contributions (a sixth C) to self, family, the community, and its institutions.

1. Confidence
2. Competence
3. Connection
4. Character
5. Caring
6. Contribution

This is an assets-based framework, but deficit indicators are used in measuring risk and problem behaviours (Lerner 2005; Lerner et al. 2008). The framework focuses on the second decade of life and includes domains covering psychological, cognitive, and social development, but not physical development. Although the framework does not cover contextual factors, the approach includes the collection of context-related data pertaining to family, schools, and communities.

4.5 Developmental Psychology Frameworks

College and workplace readiness framework. This framework was developed to help address the question of what competencies high school students need to be ready for college, the workplace and a successful transition to adulthood in general (Lippman, Atienza, Rivers and Keith 2008). It uses a revision of the NRC framework (see above) which was expanded to include a domain for spirituality:

1. Physical development
2. Psychological development
3. Social development
4. Cognitive development
5. Spiritual development

The framework’s competencies are all positive. Its domains cover commonly recognized areas of adolescent development, and it is one of the few frameworks to designate a separate domain for spiritual development (Lippman et al. 2008). It synthesizes the consensus among three streams of research (youth development, college readiness, and workplace readiness) on the most critical competencies needed for success across fields. The framework focuses on high-school-age youth and does not include contextual indicators apart from those reflecting workplace safety and social support.

Microdata child well-being index. This index was developed using individual-level data (microdata) from a relatively new U.S. source, the National Survey of Children’s Health,

which was conducted for the first time in 2003-2004, repeated in 2007, and which is expected to be repeated every four years Moore et al. 2008). The index is based on 69 indicators aggregated into four individual domains and three contextual domains, with separate indices for children ages 6-11 years and 12-17 years. The indicators represent normative development across comprehensive individual and contextual domains at each of these two stages of development, which sets it apart from other frameworks. Each age-level index has separate indices for individual and contextual factors. Researchers planned to have an additional contextual domain (schools) and another age category (ages 0-5), but there were insufficient data for these extensions of the indices.

Individual well-being

1. Physical
2. Psychological
3. Social
4. Educational/intellectual

Contextual well-being

5. Family
6. Community
7. Sociodemographic

Indicators are scored so that a value of 1 equals a positive condition and a value of 0 equals a non-positive, neutral, or deficit condition (Moore et al. 2008), using objective criteria for scoring positive thresholds, to the extent possible. For some indicators, a value of 1 indicates the absence of a disease or other negative factor.

4.6 Additional Frameworks

Values in Action (VIA) framework. The VIA framework was created following a review of what major religious and philosophical traditions had to say about virtues (Seligman 2002). Researchers found six virtues that were relatively common across the literature and then identified 24 strengths, which they call moral traits, which lead to these virtues.

1. Wisdom and knowledge
2. Courage
3. Humanity and love
4. Justice
5. Temperance
6. Transcendence

Given that the indicators are all virtues, the framework is entirely positive (although indicators involve both positive and negative measures, with the latter being reverse coded) (Seligman 2002). The framework has domains that cover psychological, social, and spiritual well-being but not physical or cognitive well-being. The framework is used with both adults and children. Indicators in the children's version are general and do not focus on a single developmental stage. The framework does not have any measures of context.

Search Institute Assets framework. Search Institute developed its framework as part of a comprehensive change effort designed to focus community assets on strengthening

developmental processes for children and youth (P. L. Benson, N. Leffert, P. C. Scales and D. A. Blyth 1998; Search Institute 2008). The framework includes 40 developmental assets – 20 pertaining to the child (internal) and 20 to the child’s context (external) – which are aggregated into eight domains:

Internal assets

1. Commitment to learning
2. Positive values
3. Social competencies
4. Positive identity

External assets

5. Support
6. Empowerment
7. Boundaries and expectations
8. Constructive use of time

Different versions of this assets-based framework have been developed for use with children in early childhood (ages 3-5), middle childhood, and adolescence (Search Institute 2008). Indicators are all positive, and they vary appropriately to match the corresponding developmental stage. The framework has domains covering psychological, social, and spiritual development but not physical or cognitive development.

In summary, a number of promising frameworks of positive indicators have been created in recent years. Although each is limited to some extent in terms of coverage, contextual elaboration, or developmental specificity, several offer good examples of one or more of these criteria. The Multi-National Project, NRC framework, microdata, and college and workplace readiness framework are comprehensive in describing a broad range of important domains of child well-being. The microdata child well-being index and the Search Institute framework distinguish and elaborate several contexts that influence well-being. Several frameworks show developmental specificity, either by focusing on one developmental stage (e.g., DeSeCo Project, PYD framework) or by incorporating multiple age-specific frameworks (e.g., Search Institute framework and the microdata child well-being index).

5. A COMPOSITE POSITIVE FRAMEWORK

Building on the theoretical and empirical work done to date, we next suggest a conceptual framework that might provide a basis for further positive indicator development. This framework reflects several critical conceptual points. Specifically, the framework distinguishes child well-being from the contexts in which children live. It also identifies a category for relationships, and distinguishes this category from both child well-being outcomes and contexts. In addition, the framework views child well-being, relationships, and contexts as multi-dimensional. It also acknowledges the need for age-specific constructs and measures.

Child well-being domains. Although indicators are often collected within silos, such as education only or health only, it is widely recognized that well-being incorporates numerous domains. A common categorization, discussed above, includes:

Physical health, development and safety;
Cognitive development and education;
Psychological and emotional development; and
Social development and behaviour.

Coverage of these domains tends to be quite uneven and, within the domains, coverage of positive and negative constructs tends to be quite uneven. For example, health and safety problems are tracked more closely than positive health indicators; and the social behaviours that are measured tend to include behaviour problems such as drug use and violence. Indicators of psychological and emotional well-being are the least well-monitored in national and international data systems.

Relationships represent a more complex issue. Objections have been raised to including relationships as a child indicator because relationships are not located solely in the individual. But children and youth are active participants in creating relationships, and sometimes relationships are viewed as indicators of child well-being (Hair et al., 2003); however, sometimes they are seen as inputs to children's development. Moreover, relationships are not a measure of the external contexts in which children develop in the same way that housing, social services, transportation systems, and school characteristics are measures of the contexts that children and youth experience. Relationships are extremely important to the development of children (and adults) and are described as the most important aspect of their well-being by children, as noted above. Relationship quality is highly related to child well-being outcomes, and accordingly needs to be monitored (Scales 2003). Candace Curry, the principal investigator of the WHO Health Behaviour of School-Aged Children survey, has found this to be true in the HBSC data as well and so stated at the UNICEF/OECD/EC meeting. We therefore suggest that relationships be a separate category, distinct from the domains of child well-being but also distinct from contextual measures as well. This adds a category, Relationships, to our previous work. This addition addresses an ambiguity in the previous treatment of relationships in indicator systems.

Another critical issue, we think, is the distinction between indicators of child well-being and indicators of social context. Many systems and indices of child well-being combine measures

that are specific to the well-being of children with measures that describe children's contexts. It is sometimes suggested that contextual factors such as family structure, family income, and social service receipt represent indicators of child well-being. However, we contend that such measures of context represent inputs into the development and well-being of children and that it is extremely important not to confuse measures of context with measures of child well-being outcomes. Indeed, it is typically argued that family, school, and community contexts affect children's development and well-being; that is, they are independent variables while child outcomes are dependent variables. We argue, as in Bronfenbrenner's interactive ecological models (Bronfenbrenner 1998), that the process of interaction between the individual and context is central to human development, and contexts are therefore very important to measure in indicator systems; but they should be carefully distinguished from child well-being outcomes. If the two are conflated, as is often the case in existing indicator systems or indices, it is impossible to distinguish where policy and or programme interventions can be most helpful.

Moreover, we find that child outcome and context measures are only moderately correlated. Specifically, in as yet unpublished analyses, we have developed positive and negative indices of child well-being, as well as positive and negative indices of children's contexts. We find that, while the contextual indices are significantly correlated with the outcome indices, the correlations are modest, generally ranging from .10 to .30. [We have also developed an omnibus measure of the "condition of children" that combines child outcomes with child contexts; but the construction of that omnibus index carefully distinguished measures of contexts from measures of outcomes (Moore et al., 2008).]

Thus, domains are defined for individuals, for relationships, and for contexts in the framework below. Building on Bronfenbrenner's ecological model, we suggest that constructs and indicators regarding the Relationships and Context domains be identified within five domains: family, peers, school, community, and the larger macrosystem.

As shown in Table One, there are three over-arching categories and four to five domains within each category. In addition, within each domain, there are multiple and distinct constructs that need to be measured to provide a full picture of development in that domain.

While there are many reasonable ways to identify child well-being domains, we suggest four here: physical health and safety; cognitive development and education; psychological/emotional development; and social development and behaviour. The three categories and the domains within each are summarized below; and the constructs within each domain are shown in the table below.

Individuals

- Physical health, development, and safety
- Cognitive development and education
- Psychological/emotional development
- Social development and behaviour

Relationships

- Family
- Peers

School
 Community
 Macrosystems
 Context
 Family
 Peers
 School
 Community
 Macrosystems

It is assumed that the constructs and measures that comprise each domain would vary by age of child (Child Trends 1984). For example, the markers of positive development for a preschool child are quite different from those of an adolescent. Child Trends has argued for dividing childhood into three stages, each six years in duration – 0-5; 6-11; and 12-17. Each stage can be sub-divided into two three-year stages as well.

It should be noted that early adulthood, or emerging adulthood, represents another important age group. While we have confined our discussion here to children and youth under age 18, in developed nations, young adults 18 and older are still developing; many are attending school or training; few have entered lifelong jobs or careers; and many or most have not yet become parents or entered committed partnerships or marriages. Accordingly, a solid argument could be made for conceptualizing and assessing positive developmental outcomes at ages 18 through the early or mid-twenties, although we have not done so here.

In the chart below, we list for the most part well-researched constructs of positive well-being that have been found to be related to positive outcomes for children and more often in the research, for youth. We draw examples from our work, which incorporates international surveys but which is more concentrated in the United States, and we welcome additions or replacements with examples from other countries or international surveys.

The chart is separated into three sections: individual, relationships, and context. The first column in each section lists the constructs on positive well-being, the second column lists examples of indicators for that construct, and the third column lists sources for measures of those indicators. The sources listed typically do not measure all, but only some, of the suggested indicators in column two. Some of the sources are international data sets, and others are sources of measures that we have used at Child Trends in our survey development activities or are familiar with from the author’s use of these scales and their quality from our research. The international sources cited are listed and described below the chart, as well as some of the other, typically American, researchers, whose work is cited as a source of a measure. Full citations can be found in our list of references, and we have provided an appendix with an annotated bibliography and a description of the data sources in a separate document.

Table One: Conceptual Framework Depicting Domains, Constructs, Indicators, and Sources
POSITIVE INDICATOR FRAMEWORK CHART

Domains/ Constructs	Indicators	Sources for Extant Measures
INDIVIDUAL		
<u>Physical health, development, & safety</u>		
Overall Health	Positive health status, health maintenance care	Health Behaviors in School-Age Children (HBSC); European Union Statistics on Income and Living Conditions (EU-SILC)
Healthy habits	Eating, exercise, sleep habits	HBSC; EU-SILC
Safe from accident, injury	Wearing bicycle helmets, seatbelts, etc.	Every Child Every Promise Survey (ECEP)
Risk management skills	Skills and knowledge to avoid drug and alcohol use and risky sex	HBSC; National Longitudinal Survey of Youth (NLSY); The National Longitudinal Survey of Adolescent Health (Add Health)
<u>Cognitive development and education</u>		
Educational attainment	Secondary and postsecondary enrollment and completion; career and technical training; licenses, attainment expectations	OECD INES System and its publication, Education at a Glance; ICCS
Educational achievement	in language, math, science, reading, writing, etc.; Curricular-based achievement and literacy	TIMSS; PISA; PIRLS; etc.
Academic self-concept	Self-perception of academic performance, ability	HBSC; PISA
Critical thinking	Evaluation/analytical/problem-solving skills	PISA
Knowledge of essential life skills	Financial management, decision-making skills, home maintenance, etc.	
Positive attitude toward learning	Curiosity, active learning strategies, mastery motivation, study skills	PISA; TIMSS; Patterns of Adaptive Learning Scales (PALS); (Wolters et al., 2005)
School engagement	Behavioral, emotional, and cognitive engagement	(Fredericks et al., 2005; Matthews et al., 2006); HBSC; TIMSS; International Citizenship and Civic Education Study (ICCS)
Interactive use of technology	Able to use computers and communication technology; internet; networking sites	(Rychen & Salganik, 2003); PISA; ICCS
Creativity	Arts: music, writing, art, theater, dance, etc.; ability to develop new views, approaches to tasks	National Assessment of Educational Progress (NAEP) Arts Assessment
Civic knowledge	Knowledge of tenets of democracy, government, laws, justice, tolerance	ICCS; NAEP – Civic Assessment
Career and technical knowledge	Knowledge of occupations, salary ranges, requirements needed	

Psychological/emotional development

Overall psychological, emotional well-being	Happiness, subjective well-being, flourishing, life satisfaction	HBSC; What Young People Think (UNICEF opinion poll); EU-SILC; Panel Study of Income Dynamics Child Development Supplement (PSID-CDS)
Self-management	Age-appropriate autonomy, emotional self-regulation, persistence, constructive time use	(Seligman, 2002); PISA; TIMSS
Agency	Planfulness, resourcefulness, positive risk-taking, realistic goal setting, motivation	(Matthews et al., 2006; Rychen & Salganik, 2001; Rychen & Salganik, 2003; Snyder, 2005)
Confidence	Positive identity and self-worth	(Lerner et al., 2005; Lerner et al., 2008)
Optimism and resilience	Positive outlook and constructive adaptation to adverse events	(Lerner et al., 2005; Lerner et al., 2008)
Sense of purpose	Believing one's life is meaningfully connected to a larger picture	(Damon et al., 2003; Matthews et al., 2006)
Spirituality	Transcendence	WVS; (Matthews et al., 2006; Smith & Denton, 2005);
<u>Social development & behavior</u>		
Moral character	Ethical behavior, integrity	(Lerner et al., 2005; Lerner et al., 2008)
Prosocial values	Caring, empathy for others	(B. Barber, 2005; Lerner et al., 2005; Lerner et al., 2008; Matthews et al., 2006)
Social intelligence	Communication, cooperation, conflict-resolution skills, trust, intimacy	PISA; National Survey of Children's Health (NSCH);
Cultural intelligence	Cross-cultural competence	(Rychen & Salganik, 2001; Rychen & Salganik, 2003); Every Child Every Promise Survey (ECEP)
Environmental awareness and behavior	Knowledge, positive behaviors	ECEP
Civic awareness, motivation	Age-appropriate concern and motivation regarding community, social or public issues, Civic knowledge, civic self-image and self-efficacy and connectedness	ICCS; (Benson et al., 2005);

RELATIONSHIPS

Family

Positive relations w/parents	Warmth, closeness, communication, support, positive advice	(Hair et al., 2005; Matthews et al., 2006); HBSC; What Young People Think (UNICEF opinion poll); EU-SILC
Positive relations w/ siblings, extended family	Warmth, closeness, communication, support, positive advice	(Volling & Blandon, 2005); EU-SILC
Positive functioning of family as a whole	Outings, celebrations, vacations, family meals together	NSCH; (L. Guzman & Jekielek, 2004); PISA 2000;

Peers

Positive friendships	Supportive friendships, quality of relationship with peers, opportunity to meet friends or invite friends home	(Matthews et al., 2006); Add Health, What Young People Think (UNICEF opinion poll); EU-SILC
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School

Positive relations w/ teachers	Student report of teacher support	(McNeely, 2005); ICCS
Positive engagement and connection	Participation in school clubs and extracurricular activities at school Sense of belonging at school and peer acceptance	ICCS; ECEP; HBSC; Add Health (Matthews et al., 2006; McNeely, 2005); EU-SILC; ICCS

Community

Positive relations w/ nonfamily adults	Advice, support, communication	ECEP
Engagement in community institutions	Participates in organized recreation activities,	NLSY; National Study of Youth and Religion (NSYR);
Sense of belonging in community	Participates in activities at community orgs/institutions	What Young People Think (UNICEF opinion poll); ICCS
Civic engagement	Current or past participation with organizations such as human-rights groups, religious associations or youth clubs. Intentions regarding future political and civic participation as adults (e.g. voting, campaigning, volunteer work)	ICCS
Constructive and non-taxing employment	Hours worked	International Labor Organization statistics
Positive digital/ electronic relationships	Hours spent and content of media interactions	(Lenhart & Madden, 2007; Lenhart et al., 2007; Rankin Macgill, 2007; D. F. Roberts & Foehr, 2008; D. F. Roberts, Foehr, & Rideout, 2005); ICCS

Macrosystems

Positive group identity	Relates positive to own group membership without disparaging others	(Umaña-Taylor, 2005)
Engages w/ positive ideologies, movements	Cultural, spiritual, political, economic	ICCS

CONTEXT		
<u>Family</u>		
Positive parenting	Warmth, communication, role modeling, time/discussion with children, appropriate structure/monitoring, high expectations	NLSY, ADD Health , PISA; ICCS
Parental activities and enrichment	Read books to child, go to the library, go on outings	PIRLS, PISA, TIMSS, NHES
Parent involvement in community	School, religious institution, community organizations	HBSC, National Household Education Surveys (NHES); WVS, EVS
Resources	Steady parental employment and adequate income/benefits, adequate housing, child care, parent education, number of adults in household, health services, cognitive/developmental resources (books, phone, internet, magazines, newspapers)	EU-SILC ; TIMMS; PISA; PIRLS; WVS;
Social capital	Quantity and quality of social, family and business networks	
Safe household	Absence of smoke, in good repair, no lead, etc.	American Housing Survey (AHS); EU-SILC
<u>Peers</u>		
Positive peers	Peers who do not engage in risky behavior and who are good students	Education Longitudinal Study (ELS); (Matthews et al., 2006)
<u>School</u>		
Access to good schools	Parent satisfaction with school or wishing to transfer	Phi Delta Kappan poll
Safe schools	Safe from bullying, discrimination, crime?	ECEP
<u>Community</u>		
Safe neighborhoods	Safe from violence, crime, environmental toxins	AHS; EU-SILC
Positive physical environment	Recreation facilities and spaces	EU-SILC
Caring adults	Appropriate structure, high expectations	ECEP
Activities	Organized child/youth/recreational activities	EU-SILC
Community institutions/ organizations	Active religious, social, political, environmental organizations and civic institutions	
Services	Adequate social/economic services	EU-SILC
Positive social norms	Values support diversity, tolerance, work, families	WVS and EVS
<u>Macrosystems</u>		
Cultures/ subcultures	Societal values, lifestyles, spending patterns	WVS and EVS
Belief systems	Spiritual, philosophical, political, economic	WVS and EVS

6. MEASUREMENT AND DATA GAPS

The chart above provides a basis for optimism regarding the ability to measure positive well-being in children and youth. For most of the constructs and indicators, there are measures available, and for a majority, there are international data sources that have actually collected data on the topic. The sources listed in the chart are not exhaustive, but provide examples of measures for indicators listed in column 2 of the table. However, these sources do not include the same countries or age groups of children and youth, nor are they administered in the same year, all of which are problematic for comparability of data. However, the measures found in these surveys could be used for an instrument or instruments that could be administered during the same time frame across countries to render an assessment of positive child well-being across countries.

Measures or surveys were not found for the following constructs:

Social capital

Knowledge of essential life skills

Career and technical knowledge

Existence of community, religious, and civic institutions

Many of the measures listed are from the U.S. research literature, particularly in the domains of psychological/emotional development and social development/behaviour, where we are less familiar with non-U.S. sources, as well as international surveys.

It is also striking that many of the surveys are focused on adolescents, such as PISA or HBSC and ICCS. Young children in early childhood and of primary school age are under-represented in international data sources, as well as in the research studies containing measures of the constructs. Therefore, a portrait of positive well-being among young children is not available, and in many cases, measures are lacking that are appropriate for their age.

7. METHODOLOGICAL ISSUES IN DEVELOPING POSITIVE INDICATORS

Many challenges confront the conceptualization and measurement of positive outcomes. In this section, we highlight some of the major issues, beginning with several conceptual issues.

Defining what is a positive indicator. Defining whether or not something is positive is often fraught with difficulty (Moore, Evans, Brooks-Gunn and Roth 2001). While negative indicators such as death, disability, depression, school dropout, and crime are widely agreed to be negative, constructs suggested as positive, such as spirituality, frugality, forgiveness, and kindness, are more complex and do not enjoy the same degree of consensus.

Varied approaches are employed to assess whether an indicator is positive. One approach is to conduct empirical analyses to assess whether children or youth with a characteristic that is hypothesized to be positive are in fact more likely to be happy and successful, both in the present and in the future. A positive indicator would be negatively correlated with negative indicators, though it is not clear how large or consistent one would expect that correlation to be.

Another approach would be to obtain opinions from experts or the public, from children, or from parents or other groups, in a poll or focus group, to obtain evidence of agreement or disagreement about whether a particular positive construct is important.

It should be noted that, in many cases, positive and negative indicators are not just the opposite ends of a single continuum, e.g., very bad to very good. Rather, it is often the case that positive indicators such as curiosity do not have a negative pole, while negative indicators such as violence do not have a positive pole (Moore, Vandivere, Atienza, and Thiot 2008).

Involving children and youth. While it is critical to build a set of positive indicators based on research, the insights of programme providers, and the needs of policy makers, it is also important to consult with children and youth. If measures of positive development are to cover both well-being and well-becoming (Ben-Arieh 2008) the input of children and youth is needed to identify the factors that make them happy, motivated, and successful as children. Indeed, the need for self-report from children on their own well-being was apparent to early conceptualizations of child well-being indicator systems (Lippman 2006), as well as more recent activities mentioned above related to the UN Convention on the Rights of the Child.

Several research projects have involved children and youth in conceptualizing outcomes, though not generally with a focus on positive outcomes. These include interviews, such as those conducted in South Africa (Willenberg and Savahl 2004), photographic input from Irish children who were given cameras (National Children's Office 2005), focus groups (Chervin, Reed and Dawkins 1998) and cognitive interviews (Matthews, Lippman, Guzman and Hamilton 2006) with children in the United States, and work with children in Australia (Mason 2007). In a 2008 study, researchers in Germany used an approach that not only asked young people for their own views on their well-being but applied it specifically to socially

disadvantaged city dwellers. The study used ethnographic research methods with about 200 children ages 6 to 13 years from Hamburg and Berlin who were attending a summer camp, focusing on the children's existing resources, strengths, and potentials, as well as their experiences with poverty and limited opportunities (Andresen and Fegter, n.d.)

Cross-national research involving children in multiple nations that systematically seeks their input into positive constructs developed by researchers to date, combined with opportunities for children and youth to suggest additional elements of positive development, represent a fruitful way to test and augment the available set of constructs. While it seems inevitable that very young children cannot be consulted on this topic, it may be possible to engage children at younger ages than is typical, if innovative and age-appropriate strategies are employed.

Cross-cultural and cross-national validity. Obtaining input from varied cultural and social groups both across countries and within countries represents another concern. Do varied groups identify the same constructs as positive? Are there some constructs that are valued by some groups but not others?

A point of discussion is whether it is necessary for positive indicators to be endorsed by all or most groups to be used within a country or across countries as an indicator of positive development. A study comparing a measure of life satisfaction among youth in Korea and the United States found similar results (Park et al. 2004). More such studies on multiple constructs of positive well-being are needed for the field.

One might examine the validity question empirically, investigating whether a characteristic is linked to fewer negative outcomes or better outcomes in adulthood. However, it seems important to engage with this issue at a non-empirical level as well. For example, if a substantial subgroup does not agree that a construct is positive, can that construct be identified as a positive indicator to be monitored in statistical systems?

Numerous methodological challenges also need to be tackled.

Micro data versus macro data. Information about individual children – micro data – represents the original source of indicator data. Micro data are typically aggregated for a nation, state, city, or province to produce an overall number – a macro-level measure. This macro indicator may also be produced for varied subgroups as well, such as income or race/ethnicity groups. Either way, trends are monitored over time for the geographic area and perhaps for varied subgroups. In addition, summary indices of “child well-being” have been produced (Land, Lamb and Mustillo 2001) that aggregate these macro indicators into an overall measure of child and contextual well-being (UNICEF 2007).

A very different approach is based on the use of micro data. In this instance, micro data are analyzed at the level of the individual and indices are calculated at the micro level, that is, for the individual. Thus, rather than summing and tracking macro-level trends, indices are produced that assess the well-being of children (Moore et al., 2008) or the quality of children's contexts (Moore et al. 2008; Scales et al. 2006). These measures provide information on the extent to which children and youth are doing well across multiple measures of well-being, rather than assessing one measure of well-being at a time. Also, our

experience to date suggests that micro indices suggest a less positive perspective on children's well-being, perhaps because they examine simultaneously whether children are prospering across multiple domains of well-being (Moore et al. 2008; Scales et al. 2008).

It is not necessary to choose either micro or macro indicators. They provide distinctive information and both are helpful in understanding children's development. For example, both types of index can be used to explore distributions and trends in countries. However, they have different data requirements. Macro indicators can be produced from multiple data sources. For example, the school completion data can come from administrative records while indicators on school engagement can come from student surveys. Micro-level measures, on the other hand, need to be assessed in a single data source that includes the full array of indicator measures, so that these specific measures of well-being can be examined for individual children and then aggregated.

Surveys versus administrative data. Reports on child well-being often begin by drawing on administrative data. For positive indicators, that could include, for example, school records and administrative data, vital statistics, and government reports on services or benefits received. Such data are limited to topics addressed by government programmes, however, since government programmes are generally funded in order to address a problem of some kind. In addition, many of the gaps in positive indicator data reflect subjective emotions and values. Accordingly, it is typically necessary to collect data from respondents, e.g., in a survey, in order to assess positive constructs.

Reporters of information. Many positive constructs, as noted, are subjective. That is, they focus on the quality of life or experience from the perspective of the person. This means that it is optimal to obtain the perspective of that person directly. This is not unique to positive constructs: Kenneth Land noted at the UNICEF/OECD/EC meeting that many economic measures in use are actually based upon a respondent's subjective perception of adequacy. Observers such as parents and teachers are often asked to provide information about the development and well-being of their child or student. Such information is presumably quite informative on topics such as how often children or adolescents read or exercise or whether they are curious. Inevitably, though, their perception on some other positive constructs, such as children's feelings of hope, self-perception, or religiosity/spirituality, may differ from that of an outside observer. In other words, while an informant can provide considerable information about the positive well-being and development of a child, to obtain a fully rounded set of positive constructs, it is probably necessary to obtain at least some information about the individual from the person him- or herself.

It should be noted, however, that the capacity of children to provide such information varies by age. Methods to obtain information from children of differing ages are being developed (Fattore, Mason and Watson 2009); but a clear picture of what constructs can be assessed by children of varying ages is currently incomplete. At the UNICEF/OECD/EC expert consultation, there was clear consensus that children need to be incorporated into research into their own well-being, but less consensus around whether measures of personal perception were policy amenable and thus should be included in the OECD's child well-being monitoring effort. Simon Chapple of the OECD argued that more research is needed on the relationship of children's background characteristics to their own perception of their lives

and for longitudinal, rather than cross-sectional, studies demonstrating relationships of children's self-perception of their well-being to long-term positive outcomes for children.

Periodicity. How often do indicators need to be collected? Information on unemployment is collected every month in the United States. Other economic information such as poverty is collected annually. Information about children is never provided on a monthly basis, and relatively little is provided annually. How often is often enough?

Since the developmental status and well-being of children is not as volatile as unemployment data (fortunately!), it is probably not needed every month; and many indicators are probably not needed annually. However, the four-year time span between waves of the U.S. National Survey of Children's Health seems very lengthy. By the time new data are collected and made available, existing information is often five years old. Policy makers are not likely to find data that are five years old very useful. (This highlights the importance of processing and releasing data quickly as well.) This is also a concern for a number of international surveys.

The value of ongoing or frequent data collection seems apparent because events that can affect children's development and well-being, such as an economic recession, cannot be predicted. Their implications can be completely missed if data are only collected every four years. Ongoing data collection allows for true monitoring of events as they unfold. The U.S. National Survey of Family Growth has moved to ongoing (continuous) data collection. This decision turns out to have been fortuitous because it will provide data on the unexpected turnabout in the U.S. teen birth rate, which increased by 5 per cent between 2005 and 2007 (Hamilton, Martin and Ventura 2009). However, it can be costly to conduct data collection on a continuing basis.

If ongoing data collection is not feasible, what frequency would be ideal? Since changes in the well-being of children do not typically occur rapidly, it is probably sufficient to collect data every two years.

Longitudinal data. Longitudinal data are generally used for basic research studies, to sort out processes and assess causality. However, longitudinal indicators can be highly informative (Moore and Vandivere 2007). For example, if poverty at a point in time is associated with negative development, long-term poverty is even more strongly associated with poor development (Duncan, Brooks-Gunn and Klebanov 1994). Similarly, ongoing positive relationships, like mentors and marriage partners, have been found to be positive (Hair et al. forthcoming). Such information suggests that the data obtained are not transitory, reflecting a particularly good or bad day, but indicative of a more long-term disposition to be happy, to have good relationships, to work hard, or to be honest in all things.

Another advantage of a longitudinal indicator is that it can be produced from a very small number of items, acquiring its reliability not from the number of items in the measure but in having a small number of items that are collected across several points in time (Moore, Halle, Vandivere and Mariner 2002).

However, creation of longitudinal indicators requires data that are collected over time, with minimal attrition, and this is very expensive. Accordingly, it is anticipated that most indicators will be obtained from cross-sectional data.

Items versus scales. With pressure on survey time due to the burden on respondents as well as the cost, there is good reason to use just one item per construct. Sometimes, this is perfectly reasonable and can produce data that are reliable and valid. In other cases, however, a construct is more complex, and multiple items are needed to capture the construct (OECD 2008). For example, positive relationships generally include multiple elements, such as closeness, communication, time together, trust, and emotional supportiveness. Research is needed to identify the minimum set of critical items needed to operationalize a construct.

Relative measures versus absolute measures. Researchers generally compare children who have more or less of some characteristic in order to conclude that more (or less) is better. These are implicitly relative measures in that children are being compared to other children. However, there is also interest in knowing whether there is an absolute amount of something that is sufficient or necessary (Steffe and Oppenheimer 2009). For example, is it critical to be completely honest or totally persistent, or is being 90 per cent honest or persistent sufficient? Or, alternatively, is it just important to be more honest or more persistent than other children or youth?

This dialogue has a parallel in the discussion of poverty. Some countries use an absolute measure of poverty, specifying an amount that is assessed or believed to be insufficient as a poverty-level income, while other countries employ a relative measure that identifies poverty as an income that is less than half the median income.

Which approach is to be preferred can be addressed by empirical analyses that compare both types of measures and identify the approach that best predicts other measures of current or future well-being.

Validity (concurrent and predictive). A critical element in the selection of an indicator is validity. Is a construct related to outcomes as one would expect? For example, does student engagement in school predict higher educational achievement? Is having close friendships with caring peers related to better mental health?

Concurrent validity is easier to examine, since cross-sectional data can be used. For example, one might anticipate that a closer parent-adolescent relationship will be associated with lower levels of alcohol and hard drugs and higher levels of educational achievement. However, with concurrent validity, causality is quite unclear. That is, parent-child relationships could reflect the child's good behaviour, or a strong parent-child relationship could lead to better behaviour and achievement.

Prospective validity provides stronger evidence of validity, as a potential indicator, such as the parent-child relationship, can be assessed in year one and the outcome (e.g., drug use or school achievement) can be assessed in year two. Information on prospective validity is harder to obtain, of course; but basic research studies, especially those using longitudinal data, can provide the evidence base needed to address validity.

Subpopulations with special needs or perspectives. While a critical goal of indicators is to provide a metric for the overall assessment and monitoring of outcomes over time and across groups, it is also critical to have measures that provide information on the development and well-being of critical sub-populations, for example, race/ethnicity subgroups, migrant populations, or populations with health conditions or special needs. Our suggestion is to incorporate these groups into the process of developing and testing indicators, so that the indicators that assess the positive development of children and youth incorporate the constructs and measures that include these varied groups. In particular, measures that are biased against these groups should be avoided. This does not mean that indicators that depict differences or disadvantages across groups are to be avoided. Indeed, one of the purposes of indicators is to assess well-being across groups, as well as across time. Rather, the goal should be to develop measures that are valid and reliable both at the national level and across nations and for major subgroups within and across nations.

Cut points. Policy makers and the press want indicators that are easy to understand and explain. Accordingly, many indicators are coded into dichotomies, and the proportion of children above and below the cut-off are reported. For example, what proportion of children are above the poverty line? What per cent of children have positive mental health? Indicators reporting that the mean score on an index of curiosity is 3.17 lack a similarly clear and intuitive meaning.

This is complex for many indicators, especially positive indicators. Negative outcomes are more often clear and easily identified than positive outcomes. Crime, school dropout, a teen birth, death, disability, and drug use are concrete, and there tends to be considerable consensus that they represent negative outcomes for children and youth. Positive outcomes are not only more difficult to conceptualize, it is more difficult to establish a definitive cut-off at which a positive outcome has been achieved.

Unfortunately, defining cut points is at present a matter of art as much as it is science. Moore, Lippman and Brown (2004) have outlined a number of criteria for defining cut-offs. These include:

- Face validity; that is, the cut-off should make sense to non-researchers
- The cut-off should be informed by theory and available research, such as studies of prospective validity
- The cut-off might reflect natural breaks in the distribution or in the categories used to collect the data
- Clinical or assessment data could be used to identify a cut-off
- Policy or programme eligibility might identify a break point (though this is less possible for international projects)
- Group size may dictate a cut-off in terms of samples above or below the cut-off
- A cut-off should not be chosen to make a political point
- If multiple cut-offs are possible, patterns and conclusions should hold regardless of which cut-off is chosen
- Illogical cases or outliers should not occur; that is, a person who reports being happy should not be coded as depressed

- Analyses should indicate that the cut-off works similarly across groups, such as race/ethnicity, income, and gender groups.

Developing procedures for establishing cut points represents another important task for the field.

8. CONCLUSIONS AND RECOMMENDATIONS

It is easy to reach conclusions on some issues, but actually implementing them will be a much greater challenge. In this section, we summarize first the issues on which we see considerable consensus, at least on the broad outlines. Then we highlight some of the outstanding challenges that will need to be addressed to implement an indicators system that incorporates positive as well as negative outcomes.

With regard to topics where there is considerable consensus, it seems that there is broad agreement among citizens, researchers, and policy makers that indicators of child well-being can provide common goals for society and that social progress can be assessed, in part, on the progress of nations in reaching these goals. In addition, there is widespread agreement that these goals need to be positive as well as negative. In other words, it is important to monitor and reduce negative outcomes such as school failure and substance abuse; but it is also important to identify and increase positive outcomes such as positive peer relationships and school engagement.

Based on available research, there also seems to be agreement that the well-being of children should be assessed across varied types of outcomes. In this paper, we identified four domains (physical health, development and safety; cognitive development and education; psychological/emotional development; and social development and behaviour). Others have chosen somewhat different categories; but they tend to be fairly similar and no one contends that a single outcome constitutes well-being.

There also seems to be considerable, though not complete, agreement that contextual indicators or assets need to be distinguished from indicators that assess the actual well-being of the child him- or herself. In other words, indicators of the child's own health, skills, knowledge, emotional state, etc. are to be distinguished from indicators of the context, such as family structure, income, neighbourhood crime, services, and school quality. Indicators of such contextual variables are extremely important in that they represent critical inputs into the development and well-being of children; however, they are not measures of child well-being *per se*.

We add the category of relationship to the framework, because relationships are not really measures of individual well-being nor measures of context. We have suggested that, given the importance of relationships to the development and well-being of children (as well as adults), they deserve their own place in the framework. Social capital formation theory supports a separate focus on relationships as mechanisms to attain well-being. We have suggested that relationships be assessed within varied domains, including family, peers, school, and the community, as well as the larger macrosystem.

We have also raised a number of methodological issues, and we suspect that there is considerable consensus on some of them. For example, the need to consult older children and youth as positive outcomes are defined and the need to obtain at least some data from children and youth themselves, while posing challenges and costs, seems critical. In addition, obtaining data that are valid across nations and across social and cultural sub-groups seems

easy to endorse, though harder to implement. Our experience working with developing countries has demonstrated intense interest in positive indicators, so there is no reason why these indicators cannot be extended to the developing world, if data systems will allow. In a vivid example, conference participants in South Africa were particularly interested in measuring hope among their children, because without hope, they felt that there was no need to monitor educational attainment, since children did not believe they would survive long enough to graduate secondary school. Likewise, HIV-AIDS monitoring efforts have come to the realization that they need to go beyond survival measures to monitoring positive psychosocial well-being among survivors, (UNAIDS Inter-Agency Task Team on Education 2006).

The challenges reflect the reality that developing valid and reliable measures that work across social and age groups, that are not redundant, and that are brief requires time and resources. In addition, including new measures in ongoing surveys will require choices about items to eliminate or ways to collect additional data. Ideally, as argued by experts attending the UNICEF/OECD/EC consultation, a comprehensive survey of children's well-being would be developed and administered cross-nationally, which would include a set of rigorous measures of flourishing from a theoretically driven conceptual framework, such as we have offered here,

Developing an agenda of next steps might include the following:

- selection of the most conceptually important constructs by a group of international experts;
- identifying available measures for those constructs beyond those that we have identified already;
- developing a programme of research to test the items qualitatively and then quantitatively;
- assessing the reliability and validity of measures across groups; and
- identifying opportunities to obtain data on positive well-being for children and youth in existing surveys, as well as through developing a new comprehensive international survey of children's well-being.

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APPENDIX A:

SUMMARY EVALUATIONS OF CURRENT FRAMEWORKS OF POSITIVE INDICATORS

A. International frameworks

- Ben-Arieh, 2007. Multi-National Project for Monitoring and Measuring Children's Well-Being.

This project aims at improving the ability to monitor child well-being around the world. The project strives to develop universal measures of child well-being that are also culturally sensitive. Some indicators are still being developed.

1. Safety and physical status
2. Personal life
3. Civic life
4. Children's economic resources and contribution
5. Children's activities

Coverage: The framework is quite comprehensive in the domains and sub domains that it covers. One domain includes measures of children's contributions to family resources, which is something not seen in many other frameworks. The framework also has a domain focusing on where and how children spend their time.

Developmental: The framework does not focus on any specific area of child development.

Contextual: The framework includes contextual measures, particularly in the area of economic indicators.

Positive: The framework is mixed, having both positive and deficit indicators. Many of the related measures have been rated as to whether they are positive, negative, or neutral.

- Bradshaw, Hoelscher, and Richardson, 2007. "An Index of child well-being in the European Union."

This framework is derived from the UN Convention on the Rights of the Child four general principles: non-discrimination, best interest of the child, survival/development, and respect for the views of the child. It uses data on 25 EU countries.

1. Material situation
2. Housing
3. Health
4. Subjective well-being
5. Education
6. Children's relationships
7. Civic participation
8. Risk and safety

Coverage: The framework is comprehensive, including indicators in the domains of physical, cognitive, psychological, and social well-being/development.

Developmental: The framework does not focus on any specific area of child development but has indicators ranging from infancy (e.g., infant mortality rate) to age 19 (deaths from accidents, ages 0-19).

Contextual: The framework includes contextual indicators in several domains including Material Well-Being, Health and Safety (e.g., per cent of children age 12 to 23 months receiving basic immunizations), and Relationships (e.g., per cent of children living in single-parent families).

Positive: The framework is mixed, having both positive (e.g., achievement in reading, math, and science) and deficit (e.g., per cent of infants born with low birth weight) indicators.

- Bradshaw and Richardson, 2009. “An index of Child Well-Being in Europe.”

This framework was used to compare child well-being in Norway, Iceland, and the 27 countries of the European Union. The study extends the researchers’ earlier EU study (Bradshaw et al., 2007) to Norway and Iceland, includes more-current data, and improves indicators used in the earlier study.

1. Health
2. Subjective well-being
3. Personal relationships
4. Material resources
5. Education
6. Behaviour and risks
7. Housing and environment.

Coverage: The framework is generally comprehensive, including indicators in the domains of physical, cognitive, psychological, and social well-being/development. It does include measures of subjective well-being (e.g., life satisfaction, well-being at school), as well as other subjective measures (e.g., child finds it easy to talk with mother).

Developmental: The framework does not focus on any specific area of child development but has indicators ranging from infancy (e.g., infant mortality rate) to age 19 (e.g., birth rates among females age 15-19).

Contextual: The framework has contextual indicators in several domains including Material Situation, Housing and Environment, Health (e.g., child immunization rates), Education (e.g., school enrolment rates) and Risk and Safety (e.g., children who have been bullied at school).

Positive: The framework is mixed, having both positive (e.g., achievement in reading, math, and science) and deficit (e.g., newborns with low birth weight) indicators.

- Organization for Economic Cooperation and Development, n.d.; Rychen and Salganik, 2003. “Definition and Selection of Key Competencies.”

This project has identified three broad categories of competencies needed to help individuals and societies cope with today’s complex challenges and demands.

4. Acting autonomously
5. Using tools interactively
6. Functioning in socially heterogeneous groups

Coverage: The three categories include indicators of cognitive, psychological, and social development but not physical.

Developmental: This framework focuses on adolescence.

Contextual: Although it is expected that these competencies will be used in different contexts, the framework does not include any measures of contextual factors.

Positive: The indicators all reflect positive well-being/development.

- Richardson, Hoelscher, and Bradshaw, 2008. “Index of child well-being in CEE/CIS countries.”

The development of this framework followed the methods used to generate two earlier frameworks produced by Bradshaw and colleagues for the EU and OECD. Data were drawn from surveys (PISA 2006, MICS 2005, MICS 2005, Young Voices 2001) and administrative data.

1. Material situation
2. Housing
3. Health
4. Education
5. Personal and social well-being
6. Family forms and care
7. Risk and safety

Coverage: The framework is generally comprehensive, including indicators in the domains of physical, cognitive, psychological, and social well-being/development.

Developmental: The framework does not focus on any specific area of child development but has indicators ranging from infancy (e.g., infant mortality rate) to age 19 (deaths from accidents, ages 0-19).

Contextual: The framework has contextual indicators in several domains including Material Situation, Housing and Environment, Family Forms and Care, and Risk and Safety (e.g., measures of peer influence in regard to tobacco, alcohol, and illegal drugs). The framework has a good selection of family indicators.

Positive: The framework is mixed, having both positive (e.g., achievement in reading, math, and science) and deficit (e.g., per cent of infants born with low birth weight) indicators.

- UNICEF Innocenti Research Centre, 2007. “An overview of child well-being in rich countries.”

This assessment was also based on the four general principles of the UN Convention on the Rights of the Child. It identifies six dimensions of child well-being and was prepared by Bradshaw et al.

1. Material well-being
2. Health and safety
3. Educational well-being
4. Family and peer relationships
5. Behaviors and risks
6. Subjective well-being

Coverage: The framework is generally comprehensive, including indicators in the domains of physical, cognitive, psychological, and social well-being/development.

Developmental: The framework does not focus on any specific area of child development.

Contextual: The framework includes contextual domains for Material Situation and Housing. The Health and Safety domain has indicators for experiences of violence.

Positive: The framework has a mix of positive and deficit indicators.

United Nations, 2001. “Millennium development goals.” (United Nations, 2001)

The 8 development goals outlined in the UN Millennium Declaration pertain mainly to general development in developing countries. In most instances, the goals are to be achieved by the year 2015.

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development

Coverage: The goals include measures of physical and cognitive well-being/development but not psychological or social.

Developmental: The goals do not focus on any single stage of child development but include indicators for individuals from infancy (e.g., infant mortality rate) to age 24 (e.g., literacy rate among 15-24-year-olds).

Contextual: The goals have indicators of several contextual factors (e.g. school enrolment, poverty rate, access to drinking water, HIV prevalence) but no measures of peer relationships.

Positive: The goals focus primarily on eliminating deficits but have at least one indicator of positive well-being/development (achieve universal primary education).

- United Nations Development Programme, 2008. “Human Development Indices: A statistical update 2008.”

This framework involves three dimensions measured by four indicators.

1. Long and healthy life (measured by life expectancy at birth)
2. Access to knowledge (measured by adult literacy rate and school enrolment rate)
3. Standard of living (measured by GDP per capita)

Comprehensive: The framework has no child-centred measures.

Developmental: Not applicable, since there are no child-centred measures.

Contextual: All three of the dimensions measure contextual factors.

Positive: The indicators are two-dimensional in that high values indicate positive factors and low values indicate negative factors.

B. Frameworks from individual countries

- Australian Institute of Health and Welfare, 2008. “Key national indicators of children’s health, development and wellbeing.”

An earlier framework has been expanded to provide data for the “A Picture of Australia’s Children 2009” report. The new framework involves 7 areas described in terms of questions, and 39 indicators (some still being developed). More “system performance” indicators have been added to the new framework. A separate set of 19 “Headline Indicators” from among the 39 indicators have also been developed as a means of focusing government policy on specific areas of children’s well-being.

1. How healthy are Australia’s children?
2. How well are we promoting healthy child development?
3. How well are Australia’s children learning and developing?
4. What factors can affect children adversely?
5. What kind of families and communities do Australia’s children live in?
6. How safe and secure are Australia’s children?
7. How well is the system performing in delivering quality health, development and well-being actions to Australia’s children?

Coverage: The framework includes domains representing physical, psychological, cognitive, and social well-being/development.

Developmental: The framework does not focus on a specific developmental stage but includes indicators primarily for ages ranging from 0-14 years, but also has some indicators for ages up to 19 years.

Contextual: The framework has indicators measuring factors in the family, neighbourhood, and “system performance” (e.g., hearing screening for newborns), but not for peers and school (apart from individual-oriented indicators).

Positive: The framework has a mix of positive and deficit indicators.

- Belotti, 2009. Italy. “Survey on Child Well-Being Indicators”

The author aggregates indicators in a framework with 10 domains (and 43 sub domains).

1. Relations and ties
2. Material well-being
3. Subjective well-being
4. Social participation
5. Time
6. Health
7. School inclusion
8. Safety and danger
9. Social and educational services
10. Social structure

Coverage: The framework includes domains representing physical, psychological, cognitive, and social well-being/development.

Developmental: The framework does not focus on a specific developmental stage.

Contextual: The framework has domains covering several contextual influences (e.g., material well-being, social and educational services).

Positive: The framework has a mix of positive (e.g., municipal spending on children) and deficit (e.g., poverty) indicators.

- Canadian Council on Social Development, 2006. “The Progress of Canada’s Children and Youth 2006.”

This report has been generated periodically since 1994, using approximately the same set of indicators, which address both individual well-being (outputs) and context (inputs).

Individual (outputs)

1. Health (physical and emotional)
2. Social engagement
3. Learning
4. Labor force profile of youth

Context (inputs)

5. Family life
6. Economic security
7. Physical safety
8. Community resources
9. Civic vitality

Coverage: The framework includes domains representing physical, psychological, cognitive, and social well-being/development.

Developmental: The framework does not focus on a specific developmental stage but includes indicators primarily for ages ranging from birth to young adulthood (24 years).

Contextual: The framework has 5 specific contextual (input) domains.

Positive: The framework has a mix of positive and deficit indicators.

- Department for Children, Schools and Families, 2008. England. “Every Child Matters.”

The “Every Child Matters Outcomes Framework” was outlined in a government Green Paper in 2003 (HM Treasury, 2003), and the initial framework was created the following year (HM Government, 2004). A revised framework was published in 2008. The domains of the framework are described using statements.

1. Be healthy
2. Stay safe
3. Enjoy and achieve
4. Make a positive contribution
5. Achieve economic well-being

Coverage: The framework has outcome domains representing physical, cognitive, psychological and social well-being/development.

Developmental: The framework covers children from birth to age 19.

Contextual: Although there are no domains specifically designated for contextual factors, indicators within the outcome domains represent family, school, peers, community, and a variety of social services.

Positive: Although domains (outcomes) and sub domains (aims) are stated in positive language, the indicators are a mix of positive and deficit indicators.

- Department of Education and Early Childhood Development, 2008; 2009. Victoria, Australia. “Victorian Child and Adolescent Outcomes Framework.”

The development of this framework emerged from a 2005 legislative act aimed at creating a “whole of government” approach to government action on behalf of children.

Individual

1. Safety
2. Health
3. Development
4. Learning
5. Well-being

Context

6. Family
7. Community
8. Support and services (e.g., schools, health services)

Coverage: The framework includes domains representing physical, psychological, and cognitive, and social well-being/development.

Developmental: The framework does not focus on a specific developmental stage but includes indicators covering ages 0-18.

Contextual: The framework has indicators measuring factors in the areas of family, community, and “supports and services,” but few in the area of peers.

Positive: The framework has a mix of positive and deficit indicators.

- Fattore, Mason, and Watson, 2007a; 2007b. New South Wales, Australia. “Children’s understandings of well-being.”

The authors interviewed 126 children to help with the process of developing a set of well-being indicators to monitor children's well-being over time. The research surfaced 3 fundamental themes and 6 other themes that constitute children's perceptions of well-being.

1. AGENCY (the power to take independent action)
2. SECURITY (feeling safe and secure)
3. POSITIVE SENSE of SELF ("I am a good person")
4. Activities (freedom, competence, and fun)
5. Adversity in children's lives (dealing with difficult times)
6. Material and economic resources (what families need to get by)
7. Physical environments
8. Physical health
9. Social responsibility and moral agency

Coverage: The themes reflect domains representing physical, psychological, and cognitive, and social well-being/development.

Developmental: The themes do not focus on a specific developmental stage.

Contextual: Some of the themes directly address contextual influences such as parents and neighbourhoods/communities.

Positive: N/A.

- Federal Interagency Forum on Child and Family Statistics, 2007. "America's Children."

This biennial report, based on data from more than 20 federal sources, reports on the condition of children in the U.S.

1. Family and social environment
2. Economic circumstances
3. Health care
4. Physical environment and safety
5. Behaviour
6. Education
7. Health

Coverage: The report covers cognitive (primarily educational) and physical/health outcomes but says little about psychological or social well-being/development.

Developmental: The report does not focus on a specific developmental age but includes indicators for children ages 0-17.

Contextual: The report includes indicators of several contextual influences, including family, neighbourhood, and demographic influences.

Positive: The report presents a mix of positive and deficit-oriented indicators.

- Feixa, 2005. Spain/Catalonia. "System of Key Indicators of Childhood and Adolescence."

The system was created by CIIMU (Instituto de Infancia y Mundo Urbano) to describe the realities and living conditions of children, who have had high levels of social invisibility. The framework is divided into 10 areas. Two of the areas are "transversals" and involve a more focused look at issues of concern.

1. Socio-demography
2. Family
3. Family policies
4. Education
5. Transition from school to work
6. Health and quality of life
7. Identity and cultural consumption
8. Poverty and social exclusion

9. Gender (transversal)
10. Immigration (transversal)

Coverage: The framework includes domains representing physical, psychological, and cognitive well-being/development.

Developmental: The framework does not focus on a specific developmental stage but includes indicators for ages ranging from 0-17 years.

Contextual: The framework has indicators measuring factors in the family, school, and public policy areas (e.g., financing for families and schools), and a few social indicators (e.g., access to mobile phones and Internet).

Positive: The framework has a mix of positive and deficit indicators.

Government of Canada, 2006. "The Well-being of Canada's Young Children: Government of Canada Report 2006."

This report is a biennial report using data collected under a framework of early childhood indicators. The original framework has been expanded to include family and community indicators.

Individual

1. Physical health and motor development
2. Emotional health
3. Social knowledge and competence
4. Cognitive learning and language communication

Context

5. Family
6. Community

Coverage: The framework includes domains representing physical, psychological, cognitive, and social well-being/development.

Developmental: The framework focuses on children age 0-5.

Contextual: The framework has 2 specific contextual domains for family and community but none for peers or school.

Positive: The framework has a mix of positive and deficit indicators.

- Land, Lamb, and Mustillo, 2001. U.S. Child and Youth Well-Being Index (CWI).

This is a composite index that charts the annual change in 28 national-level social indicators into a single number to represent how children in the U.S. are faring over time. The 28 single-item indicators are classified into 7 domains of well-being drawn from quality-of-life work with adults. An expanded version of the index has an additional 16 indicators in the same 7 domains (Land, Lamb, Meadows, and Taylor, 2007). (2001)

1. Material well-being
2. Social relationships (with family and peers)
3. Health
4. Safety and behavioural concerns
5. Education attainment
6. Community connectedness
7. Emotional and spiritual well-being

Coverage: The framework is generally comprehensive, including domains covering physical, cognitive, psychological, social and spiritual well-being/development.

Developmental: The index does not focus on a specific developmental stage, but has indicators covering the ages 1-17, as well as some ranging up to age 29 (e.g., rate of BA completion, ages 25-29).

Contextual: The index has domains representing contextual influences in the family and neighbourhood/community.

Positive: The framework includes both positive and negative indicators, although a majority of indicators are deficit oriented.

- Ministry of Social Development, 2008. “Children and young people: Indicators of wellbeing in New Zealand 2008.”

The social well-being framework used for this report was also used for an earlier report in 2004. The framework has 10 domains of well-being that were established through a consultation process involving governmental and nongovernmental agencies.

1. Health
2. Care and Support
3. Education
4. Economic security
5. Safety
6. Civil and political rights (e.g., voting)
7. Justice (e.g., criminal activity)
8. Cultural identity
9. Social connectedness
10. Environment (built and natural)

Coverage: The framework includes domains representing physical, psychological, cognitive, and social well-being/development.

Developmental: The framework does not focus on a specific developmental stage but includes indicators for ages ranging from birth to college.

Contextual: The framework has indicators measuring factors in the family (e.g. parental relationships, household crowding), school (e.g., retention of students in secondary schools), and neighbourhood (e.g., fear of crime, road casualties). Social connectedness is represented by indicators measuring telephone and Internet access in the home.

Positive: All of the desired outcomes for the domains are stated positively, but the indicators involve both positive and deficit measures.

- National Children’s Office, 2005; Hanafin and Brooks, 2005. Ireland. “The development of a national set of child well-being indicators.”

A project to develop indicators of child well-being for Ireland took a child rights perspective and involved children and parents in conceptualizing the dimensions.

1. Physical and mental well-being
2. Emotional and behavioural well-being
3. Intellectual capacity
4. Spiritual and moral well-being
5. Identity
6. Self care
7. Family relationships
8. Social and peer relationships
9. Social presentation

Coverage: The framework includes dimensions that represent physical, psychological, cognitive, social, and spiritual well-being/development.

Developmental: Although the framework does not focus on a particular developmental stage, some indicators can be divided into age categories of 0–4, 5–9, 10–14, and 15–17 years.

Contextual: The framework has indicators reflecting contextual factors in the areas of family, community, and peers, as well as children’s relationships and formal/informal supports.

Positive: The framework has both positive and deficit indicators.

C. Positive child and youth development frameworks:

- Benson, Scales, Hawkins, Oesterle and Hill, 2004.

The authors have identified eight concepts of development needed for successful young adult development.

1. Physical health
2. Psychological and emotional well-being
3. Life skills
4. Ethical behavior
5. Healthy family and social relationships
6. Educational attainment
7. Constructive engagement
8. Civic engagement

Coverage: The framework has categories that include physical, psychological, cognitive, and social well-being/development.

Developmental: The framework focuses on young adulthood.

Contextual: The framework focuses entirely on the individual.

Positive: N/A.

- Boys and Girls Clubs of America, n.d.

This framework presents a list of key developmental outcomes that organizational programmes are designed to promote.

1. Positive self-identity
2. Educational, employment, social, emotional and cultural competencies
3. Community and civic involvement
4. Health and well-being
5. A moral compass

Coverage: The framework includes domains that cover physical, psychological, cognitive, and social well-being/development.

Developmental: The framework focuses broadly on youth.

Contextual: The framework does not include contextual indicators.

Positive: N/A.

- Catalano, Berglund, Ryan, Lonczak, and Hawkins, 1999. “Positive Youth Development in the United States.”

In reviewing the state of the positive youth development field, the researchers created an operational definition of positive youth development that included 11 objectives. The researchers also identified 3 contextual domains.

Positive youth development goals

1. Bonding

2. Resilience
3. Competence (social emotional cognitive, behavioural, moral)
4. Self-determination
5. Spirituality
6. Self-efficacy
7. Positive identity
8. Belief in future
9. Recognition for positive behaviour
10. Opportunities for prosocial involvement
11. Prosocial norms

Social domains

1. Family
2. School
3. Community

Coverage: The goals address psychological, cognitive, social, and spiritual well-being/development, but not physical.

Developmental: The goals do not focus on a particular stage of development but are aimed at individuals age 6-20.

Contextual: The goals identify 3 contextual domains.

Positive: The goals all reflect positive well-being/development.

- Eccles and Gootman, 2002. “Community programmes to promote youth development.”

This framework is most comprehensive in identifying the assets necessary to facilitate a successful passage into adulthood. It emphasizes the importance of adolescents having assets in all four domains so that they can cope with and adapt to the tasks they face as they move into adulthood.

1. Physical development
2. Intellectual development
3. Psychological and emotional development
4. Social development

The authors have also proposed a provisional list of 8 features of positive developmental settings that youth need to experience daily across the various settings in which they are engaged.

1. Physical and psychological safety
2. Appropriate structure
3. Supportive relationships
4. Opportunities to belong
5. Positive social norms
6. Support for efficacy and mattering
7. Opportunities for skill building
8. Integration of family, school, and community efforts

Coverage: The framework is comprehensive in having domains covering physical, intellectual, psychological, and social well-being/development.

Developmental: The framework focuses on adolescence.

Contextual: The framework articulates a set of 8 contextual factors, or settings, that support positive development.

Positive: The constructs in this framework are essentially all positive.

- Gambone, Klem, and Connell, 2002. “A community action framework for youth development.”

The authors identify a set of developmental markers that are linked to early adulthood success.

1. Learning to be productive
2. Learning to connect
3. Learning to navigate

Coverage: The set includes markers representing cognitive and social development.

Developmental: The markers focus on early adulthood.

Contextual: The markers focus on the individual.

Positive: The markers are all stated positively.

- Lerner, 2005; Lerner, Lerner, Phelps, and colleagues, 2008. “The 6 Cs.”

The hypothesis behind this approach is that if young people manifest the first 5 Cs across time, they will be on a trajectory toward an “idealized adulthood” with integrated reinforcing contributions (the sixth C) to self, family, community, and institutions of civic society.

7. Confidence
8. Competence
9. Connection
10. Character
11. Caring
12. Contribution

Coverage: The framework includes domains covering psychological, cognitive, and social well-being/development, but not physical.

Developmental: The framework is designed to focus on the second decade of life.

Contextual: Although the domains do not cover contextual factors, the approach includes collection of context-related data pertaining to family, schools, and communities.

Positive: This is essentially an assets-based framework, but deficit indicators are used in measuring risk and problem behaviours.

- Moore and Lippman, 2005. “What do children need to flourish?”

An implied framework of positive development is presented in the major divisions of this book.

1. Positive formation of self: character, attitudes, spirituality, and identity
2. Healthy habits, positive behaviours, and time use
3. Positive relationships with parents and siblings
4. Positive attitudes and behaviours toward learning and school environments
5. Enacting positive values and behaviours in communities

Coverage: The framework has domains that cover physical, psychological, social and spiritual well-being/development, but not cognitive.

Developmental: The framework does not focus on a single developmental stage.

Contextual: The framework does not have domains of context, apart from “classroom social environment.”

Positive: The domains in this framework are essentially all positive.

- Pittman, Irby, and Ferber, 2000. Forum for Youth Investment.

The authors suggest that youth will meet key developmental milestones or outcomes by participating in youth development activities that include the following inputs.

1. Safe and stable places
2. Basic care and services
3. Healthy relationships with peers and adults

4. High expectations and standards
5. Role models
6. Resources and networks
7. Challenging experiences and opportunities to participate
8. High-quality instruction and training.

Coverage: The framework does not have domains of child well-being/development.

Developmental: The framework is not developmental because it doesn't measure child well-being (apart from relationships); rather, it focuses on inputs.

Contextual: The framework focuses entirely on contextual factors, listing 8 of them.

Positive: N/A.

D. Developmental psychology frameworks:

- Brown and Weitzman, 2004. "Early childhood development in social context."

The framework in this chart book focuses on early childhood and is based on a model of early childhood development (Zaslow, Calkins, Halle, Zaff, and Margie, 2000) that is comprehensive, contextual, and developmental. (2004)

1. Socio-emotional development
2. Intellectual development
3. Child health
4. Family functioning
5. Parent health
6. Health care receipt
7. Community/neighbourhood factors
8. Child care
9. Demographics

Coverage: The framework has topic areas that reflect domains of physical, social, and cognitive well-being/development but not psychological.

Developmental: The framework focuses on early childhood.

Contextual: Six of the 9 topic areas reflect contextual factors.

Positive: The framework is mixed, having both positive and deficit indicators.

- Lippman, Atienza, Rivers, and Keith, 2008. "A developmental perspective on college and workplace readiness."

This development of this framework was based on the one developed by the National Research Council (Eccles and Gootman, 2002).

1. Physical development
2. Psychological development
3. Social development
4. Cognitive development
5. Spiritual development

Coverage: The framework has domains covering physical, psychological, social, cognitive, and spiritual well-being/development.

Developmental: The framework focuses on high-school-age youth.

Contextual: The framework does not focus on contextual factors, apart from indicators for workplace safety and social support.

Positive: The competencies in the framework are essentially all positive.

- Moore, Evans, Brooks-Gunn, and Roth, 2001. “What are good childhood outcomes?”

The authors couple a positive development approach and the perspectives of the disciplines of child development, economic human capital, and sociology to develop a list of good childhood outcomes. They present examples of these outcomes in 15 clusters.

1. Trust, intimacy and security
2. Age-appropriate autonomy
3. Initiative, curiosity, exploration, and self-regulation
4. Competent language use
5. Cognitive development and general knowledge
6. Social problem-solving skills
7. Personal identity
8. Connections with parents and relationships with friends
9. Skills in reading and math
10. Ability to delay gratification
11. Ability to take practical risks and develop an occupational choice
12. Motivation toward entrepreneurship over the life course
13. Extension of strong family attachments to nonfamily members
14. Cooperation and concern for other social groups
15. Volunteering time, energy, money, or goods on behalf of other persons

Coverage: The list has domains that cover psychological, social, and cognitive well-being/development, but not physical.

Developmental: The list is not explicitly developmental, but the authors note the need for age-appropriate indicators.

Contextual: The framework does not include measures of contextual factors.

Positive: All the outcomes in the list are essentially positive.

- Moore and Theokas, 2008. “Conceptualizing a monitoring system for indicators in middle childhood.”

The development of this framework was based on an extensive review of conceptual frameworks of adolescent development and research on child well-being indicators.

Individual

1. Physical well-being
2. Cognitive/educational well-being
3. Psychological well-being
4. Social well-being

Context

5. Family context
6. Peer context
7. School context
8. Neighbourhood/community context

Coverage: The framework is generally comprehensive, including indicators in the domains of physical, cognitive, psychological, and social well-being/development.

Developmental: The framework focuses specifically on middle childhood (6-11 years).

Contextual: The framework emphasizes the importance of contextual (input) factors and has four domains specifically dedicated to measuring them: Family, Peers, School, and Neighbourhood.

Positive: The framework is mixed, seeking to strike a balance between positive (strengths/assets) and deficit (weaknesses) constructs.

Moore, Theokas, Lippman, Bloch, Vandivere, and O'Hare, 2008. "A microdata child well-being index."

This index was developed using individual-level data (microdata) from a relatively new US survey (National Survey of Children's Health), which was conducted for the first time in 2003-2004 and was expected to be repeated every four years. The index is based on 69 indicators aggregated into four individual domains and three contextual domains, with separate indices for children ages 6-11 years and 12-17 years. Each index also has separate indices for individual and contextual factors. Researchers planned to have an additional contextual domain (schools) and another age category (ages 0-5), but there were insufficient data for these extensions of the indices.

Individual well-being

8. Physical
9. Psychological
10. Social
11. Educational/intellectual

Contextual well-being

12. Family
13. Community
14. Sociodemographic

Coverage: The index includes physical, cognitive (educational/intellectual), psychological, and social well-being domains.

Developmental: The index actually includes separate indices for children (6-11 years) and adolescents (12-17 years).

Contextual: The index includes three contextual domains for family, neighbourhood and sociodemographic factors.

Positive: Indicators are worded so that a value of 1 equals a positive condition and a value of 0 a deficit condition. For some indicators, a value of 1 indicates the absence of a disease or other negative factor.

E. Positive psychology frameworks:

- Lickona and Davidson, 2005. "Integrating excellence and ethics for success in school, work, and beyond."

The authors identify eight strengths of character that are predictive of human flourishing over a lifetime.

1. A lifelong learner and critical thinker
2. A diligent and capable performer
3. A socially and emotionally skilled person
4. An ethical thinker
5. A respectful and responsible moral agent
6. A self-disciplined person who pursues a healthy lifestyle
7. A contributing community member and democratic citizen
8. A spiritual person engaged in crafting a life of noble purpose

Coverage: The framework has domains that cover aspects of psychological, social, physical, and cognitive well-being/development.

Developmental: The framework does not focus on a single stage of child development stage.

Contextual: The framework does not have any domains related to context.

Positive: The strengths all stated positively.

- Seligman, 2002. “Authentic Happiness.”

Seligman and Petersen (with the Values-in-Action Institute) and others created this framework of 6 virtues after reviewing what major religious and philosophical traditions had to say about virtue. The researchers then identified 24 strengths, or moral traits, that lead to these virtues. VIA has copyrighted the questionnaire (VIA Signature Strengths Questionnaire) for the framework:

7. Wisdom and knowledge
(curiosity, love of learning, judgment, ingenuity, social intelligence, perspective)
8. Courage
(valour, perseverance, integrity)
9. Humanity and love
(kindness, loving)
10. Justice
(citizenship, fairness, leadership)
11. Temperance
(self-control, prudence, humility)
12. Transcendence
(appreciation of beauty, gratitude, hope, spirituality, forgiveness, humour, zest)

Coverage: The framework has domains that cover psychological, social and spiritual well-being/development but not physical or cognitive.

Developmental: The framework is used with both adults and children. Indicators in the children’s version are general and do not focus on a single developmental stage.

Contextual: The framework does not have any measures of context.

Positive: The framework is entirely positive, with no negative indicators (although it has negative measures that are reverse coded).

F. Sociological and social context frameworks:

Barber and Olsen, 1997. “Socialization in context.”

The researchers identify three central developmental needs of youth and specify four relevant contexts. Indicators were chosen to measure how well each context addresses each need.

Developmental needs:

1. Connection (positive emotional bonds with significant others)
2. Regulation (consistent, fair limits placed on one’s behaviour)
3. Psychological autonomy (opportunity to value, express, and experience one’s own thoughts and emotions)

Contexts:

1. Family
2. School
3. Peers
4. Neighbourhood

Coverage: The framework does not have discrete child well-being outcome domains.

Developmental: The framework focuses broadly on youth.

Contextual: The framework is entirely contextual in that it describes how contextual factors are related to each of the developmental needs.

Positive: The framework has a mix of positive and deficit indicators, although deficit indicators have been reverse-scaled or reverse-coded so that high scores indicate positive outcomes.

- Benson, Leffert, Scales, and Blyth, 1998; Search Institute, 2008 40 developmental assets.

Search Institute created a framework of 40 developmental assets, half of them pertaining to the child (internal assets) and half pertaining to context (external assets). The framework has 4 types of internal assets and 4 types of external assets.

Internal assets

9. Commitment to learning
10. Positive values
11. Social competencies
12. Positive identity

External assets

1. Support
2. Empowerment
3. Boundaries and expectations
4. Constructive use of time

Coverage: The framework has domains covering psychological, social, and spiritual (e.g., sense of purpose) well-being/development but not physical or cognitive.

Developmental: Three versions of the framework focus on early childhood (age 3-5), middle childhood, and adolescence.

Contextual: The 20 contextual (external) assets involve family, neighbours, peers, schools, religious institutions, and neighbourhood.

Positive: The 40 assets are all positive.

Lippman, 2004. "Indicators of Child, Family, and Community Connection."

This chart book presents indicators of the social context of families, describing the situation within families and how families connect with the community. The indicators are organized into 6 areas.

1. Family structure
2. Family functioning.
3. Family, work, and child care
4. School involvement and civic engagement
5. Religiosity
6. Social connections

Coverage: The framework does not have child well-being indicators apart from a few in the domain of social connections (e.g., youth connection to school peers).

Developmental: The framework covers families with children of all ages.

Contextual: All six areas focus on contextual factors.

Positive: The framework is mixed, having both positive and deficit indicators.

- Pollard and Lee, 2003. Review of the literature on child well-being.

In their review of the literature on child well-being, the authors identified a commonly used framework involving 5 domains.

Individual

1. Physical well-being
2. Psychological well-being
3. Cognitive well-being
4. Social well-being

Context

5. Economic well-being

Coverage: This set of domains is generally comprehensive, including with domains covering physical, cognitive, psychological, and social well-being/development.

Developmental: N/A.

Contextual: The set has a domain covering the contextual domain of economic well-being.

Positive: N/A.

- Scales, Benson, Bartig, Streit, Moore, Lippman, et al., 2006. America's Promise: 5 promises.

The 5 promises focus on aspects of families, schools, and communities that can be changed to ensure more young people experience the supports and opportunities that enable youth to thrive.

1. Caring adults
2. Safe places with structured activities
3. A healthy start and future
4. Effective education
5. Opportunities for community service

Coverage: The framework does not have any indicators of child well-being/development; rather, indicators focus on contextual influences.

Developmental: Researchers have developed age-appropriate indicators (i.e., for ages 0-5, 6-11, 12-17, and 18-21) for each of the five promises.

Contextual: The framework is entirely contextual, covering 5 areas of supports and opportunities in the community.

Positive: The indicators are all positive.

G. School-related frameworks

- Bowen, Rose, and Bowen, 2005. School Success Profile.

This survey was developed for middle and high school students. It is designed to be used both for evaluating schools and programmes and for monitoring effects on individual students. The survey has 22 dimensions aggregated into 7 domains.

Individual

1. Personal beliefs and well-being
2. School attitudes and behavior
3. Academic performance

Context

4. Neighborhood
5. School
6. Friends
7. Family

Coverage: This survey has dimensions covering physical, psychological, and social well-being/development.

Developmental: The survey focuses on middle and high school students.

Contextual: The survey has four domains covering 14 contextual dimensions.

Positive: The survey has a mix of positive and deficit indicators, with a predominance of the former.

- School Success Profile, 2009. Elementary SSP.

This survey was developed from the School Success Profile (Bowen et al., 2005) for children in grades 3-5. It has 3 parts, which are given to children, parents and teachers. The responses address 26 dimensions, which are aggregated into 8 domains.

Individual

1. Health and well-being
2. Social behaviour at home and school
3. School performance

Context

4. Neighborhood
5. School
6. Friends
7. Family
8. Parent education involvement

Coverage: This survey has dimensions covering physical, psychological, and social well-being/development.

Developmental: The survey focuses on children in grades 3-5.

Contextual: The survey has five domains covering 15 contextual dimensions.

Positive: The survey has a mix of positive and deficit indicators, with a predominance of the former.

- WestEd. (n.d.). California Healthy Kids Survey.

This survey is structured by 7 modules rather than by a developmental framework. The core module covers 4 areas of concern, the supplemental module explores factors promoting “resilience” (i.e., positive development), and the other 5 modules look comprehensively at specific issue areas. Apart from the core module, all modules are given on a voluntary basis, depending on the desires of the administering agency (usually a school district).

1. Core (resilience, alcohol/drug use, tobacco use, violence/safety).
2. Supplement (resilience)
3. Alcohol and other drug use, violence, gambling, neighbourhood safety, and suicide
4. Tobacco use
5. Physical health and nutrition
6. Sexual behaviour and attitudes
7. After-school time use

Coverage: The survey has at least some indicators representing the domains of physical, psychological, cognitive, and social well-being/development.

Developmental: The survey has separate versions for elementary, middle, and high school.

Contextual: The survey includes indicators measuring contextual influences of family, peers, neighbourhood, and school.

Positive: Apart from the supplemental module, the survey is predominantly deficit-oriented, although some positive indicators appear in the core module (resilience indicators) and elsewhere in the survey.

APPENDIX B:

DATA SOURCES

Major International Data Sources for Positive Indicators

In this section we identify a range of international data resources that contain many of the desired constructs and indicators. These databases are listed below and then are described, as they are relevant to the goal of identifying positive indicators:

1. **EQLS: European Quality of Life Survey**
2. **ESS: European Social Survey**
3. **EU-SILC: European Union Statistics on Income and Living Conditions**
4. **HBSC: Health Behaviours in School-Age Children (WHO)**
5. **ICCS: International Citizenship and Civic Education Study (building on the previous CIVED from IEA)**
6. **INES: International Indicators of Education Systems (OECD)**
7. **PIRLS: Progress in International Reading Literacy Study**
8. **PISA: Programme for International Student Assessment**
9. **TIMSS: Trends in International Mathematics and Science Study**
10. **What Young People Think (UNICEF Opinion Poll)**
11. **WVS: World Values Survey and EVS: European Values Study**

EQLS: European Quality of Life Survey

The European Quality of Life Survey was first given in 2003 and most recently in 2007, in 30 countries. Respondents are ages 18 and older. The survey includes some positive indicators related to family resources such as parental employment; household income; number of adults in the household; and housing ownership. The survey also asks whether the household could afford various purchases that might increase quality of life, such as: adequate heating; a week vacation per year; a meal with chicken, meat or fish every second day. Additionally, it includes questions on parental volunteering and housing and neighbourhood quality.

ESS: European Social Survey

The European Social Survey is given every two years, beginning in 2002-03, with a current round in 2008-09. Respondents are ages 15 and older. The survey focuses on measuring respondents' values, attitudes and social behaviours and includes sections on social trust, well-being, media use, and political interest and participation. Modules on "Family, work, and well-being" and "Personal and Social Well-being: Creating indicators for a flourishing Europe" are included in the survey on a rotating basis.

EU-SILC: European Union Statistics on Income and Living Conditions

The EU-SILC was first given in seven countries in 2003, and expanded with each annual provision to reach 31 European countries in 2009. The survey is coordinated by Eurostat and allows for comparisons on key variables relating to various dimensions of well-being. For example, measures of economic and material security include the household's level of cultural goods (e.g. books, internet service, educational games); parental employment; and adequate income. Housing indicators (that can be found for households with children) include having adequate light and heating facilities; lack of

problems such as damp walls, leaky roofs, etc.; adequate space (measured as the rooms per person) and a quiet space to study. Neighbourhood quality can be measured positively as a lack of problems with pollution, violence and crime; having local schools; adequate public transportation; recreation and sports facilities, including places for children to play; and green areas. Health indicators for children include access to health care; eating breakfast every day regular and adequate protein intake; eating healthy foods (including at least 5 or more portions of fruit and vegetables per day); getting regular physical activity; and mental well-being. The survey also asks about children's social well-being including opportunities to meet friends or invite friends home; contacts with family and friends; number of friendships; social participation; access to extracurricular activities; and well-being at school. Some indicators relate to quality relationships with parents, for example, children reporting respectful relationships or spending time talking with parents. Each year the survey has a particular focus in which more questions are asked beyond the core variables; in 2009, adult and children material deprivation was the focus of the thematic module. Some of the core EU-SILC variables may be amended based on a review by the European Statistical System planned for 2011-12.

HBSC: Health Behaviours in School-Age Children (HBSC) by the World Health Organization

The HBSC is a cross-sectional survey that began in 1983, with a second round in 1985. Since then, it has repeated every four years with the most recent survey conducted in 2005-2006 in 41 countries. The questionnaire is given to 11-, 13- and 15-year-olds in different parts of Europe, North America and Israel. Approximately 1500 students are surveyed from each age group in each country. Its purpose is to cross-nationally examine adolescent health behaviours and to understand the factors associated with the behaviours, including positive hygiene, nutrition, and physical activity indicators as well as self-reported overall health status. Other positive topics included are life satisfaction; attitude toward school; self-perception of academic performance; family support; teacher support; peer relationships and peer culture; school climate; and parental involvement.

ICCS: International Citizenship and Civic Education Study

The International Citizenship and Civic Education Study, a cross-sectional school-based assessment and survey, is scheduled for data collection in 38 countries from 2008-09. It builds on the 1999 Civic Education Study (CIVED) and is conducted by the International Association for the Evaluation of Educational Achievement (IEA). The ICCS assesses students' knowledge of democratic practices and institutions, and also asks students about topics such as their school club and classroom participation, engagement, leadership, involvement in school government, and relationships with their teachers. Such items are much more extensive than in the other surveys included in this review.

INES: International Indicators of Education Systems (OECD)

The INES Project began in 1988 as a way for OECD nations to gather comparable statistics on education. These are published in the annual publications "Education at a Glance" and "Education Policy Analysis." Positive educational indicators collected include secondary and tertiary educational attainment.

PIRLS: Progress in International Reading Literacy Study

PIRLS is a cycle of internationally comparative reading assessments conducted at the fourth grade and carried out every five years. It has been conducted twice, initially in 2001 and again in 2006. The reading literacy assessment scores can be used as positive indicators under the cognitive/education domain for individual outcomes in our framework chart. Parents are also asked about mostly literacy-related activities they or other adults in the home engage in with the child (e.g., talk with the child

about his/her reading or go to a library or bookstore) and the activities they might have engaged in before the child started school (e.g. write letters or words or read books).

PISA: Programme for International Student Assessment

PISA is an international school-based assessment given to students fifteen years of age in reading, mathematics, science literacy and general learning competencies. The purpose of the survey is to capture the yield of educational systems on everyday learning for those about to leave secondary school. Administered by the Organization for Economic Cooperation and Development (OECD) every three years, the most recent round took place in 2006 in 57 countries, and future surveys are planned for 2009, 2012, and 2015.

Topics on the student survey that can be used as positive indicators, in addition to the actual assessment results, include parental communication (in 2000); strategies of self-regulated learning; academic self-concept, motivation and goal orientations; and social skills required for cooperative or competitive learning. An optional parent questionnaire was added in 2006.

TIMSS: Trends in International Mathematics and Science Study

TIMSS is an international school-based assessment of mathematics and science for students in fourth and in eighth grades. It was first administered in 1995 and repeated every four years, most recently in 2007, with the next round scheduled for 2011. In 2007, students from over 60 countries participated. Topics of interest include the results of the assessment as well as the student survey items on educational resources in the home; and the student's self-expectations for educational attainment; attitudes and beliefs about learning and school; and study habits. It does not include a parent questionnaire.

What Young People Think: UNICEF Opinion Poll

What Young People Think was conducted in over 70 countries between late 1999 and early 2001. The version of the poll called "Young Voices" was used in 26 countries in Central and Eastern Europe and the Commonwealth of Independent States as well as in 9 countries in Western Europe. Some countries of interest that were given a comparable version of the poll, called "Speaking Out! Voices of Children and Adolescents in East Asia and the Pacific" include Australia, South Korea, Singapore, and Hong Kong. UNICEF regional offices oversaw interviews of the children ages 9-17, which asked them open-ended as well as targeted questions about their lives, families, schools, communities and governments. Although small sample sizes undermine analyses, positive indicators include children's reports of the quality of their relationships with parents and with peers; participation in local organizations or clubs; life satisfaction; and parenting responsiveness (e.g. their opinion is considered when a decision concerning him/her is taken at home or their parents respond positively to their good behaviour).

WVS: World Values Survey and EVS: European Values Study

The World Values Survey is a comprehensive investigation of political and social attitudes of young adults and adults (ages of respondents vary slightly by country, from ages 15 and over to ages 18 and over). The survey includes over 80 societies and countries from all major world regions. The European Values Survey is sometimes given in lieu of the WVS, and includes more questions specific to Europe, although the core questions asked are the same. The EVS was first given in 1981 and is given every nine years, most recently in 2008, in 45 European countries. Respondents are ages 18 and older. These surveys can be used to find some information about family resources and parental

involvement in the community: the surveys ask about civic participation, such as belonging to volunteer organizations.

National Surveys and Research Studies from the United States

National Longitudinal Survey of Youth (NLSY)

The NLSY consists of three panels of data, the 1979, Children and Young Adults, and 1997. The first wave of the NLSY79 consisted of about 12,000 adolescents and youth ages 14 to 22 in 1996. The NLSY79 Children and Young Adults were the children of the women interviewed in the NLSY79. The first wave of the NLSY97 consisted of about 9,000 adolescents 12 to 16 years old in 1997. The NLSY addresses issues of risky behaviours, relationships with parents, engagement in the community, parenting, and showing affection to one's child.

The National Longitudinal Study of Adolescent Health (Add Health)

Add Health began in 1994 with 90,000 students in grades 7 through 12. All answered a questionnaire, and 12,105 of these, one parent, and a school administrator participated in interviews. The survey asks about friends, friendships, and risky behaviours. The survey also addresses positive relations with teachers (McNeely, 2005).

Patterns of Adaptive Learning Scales (PALS)

Scholars at the University of Michigan have administered PALS since 1990 in nine school districts, three Midwestern states, and in varying student samples. The survey addresses positive attitudes towards learning.

(Wolters, Pintrich, and Karabenick, 2005)

Wolters, Pintrich, and Karabenick (2005) developed their items to measure positive attitudes toward learning, specifically the regulation of motivation to master subjects. The authors had tested the items in junior high school and high school samples.

National Assessment of Education Progress (NAEP) – Arts assessment

The NAEP was started in 1969 by the National Center for Education Statistics of the U.S. Department of Education. Eighth graders are given the arts and the civics assessments.

Panel Study of Income Dynamics – Child Development Supplement (PSID-CDS)

The Child Development Supplement is a part of the PSID, which has followed about 8,000 U.S. families since 1968. The CDS began in 1997 and asks additional information of PSID parents and their children ages 12 and under. The Child Development Supplement (CDS) is one research component of the PSID, a longitudinal study of a representative sample of U.S. individuals and the families in which they reside. Since 1968, the PSID has collected data on family composition changes, housing and food expenditures, marriage and fertility histories, employment, income, time spent in housework, health, consumption, wealth, pensions and savings, and philanthropic giving. Keyes (2007) relies on the MacArthur Foundation's Midlife in the United States (MIDUS) survey, which uses a sample of adults. However, it is one of the few surveys with positive constructs related to overall psychological and emotional well-being. Hair, Moore, Ling, and Sidorowicz (2008) review single item measures for mental health that seem positive, as well as Keyes' short, medium, and long measures. The Panel Study of Income Dynamics Child Development Supplement (PSID-CDS) incorporated Keyes' short- and medium-length measures.

Park, N., and Peterson, C. (2005).

The Values in Action Inventory of Character Strengths for Youth. In K. A. Moore and L. H. Lippman (Eds.), *What Do Children Need to Flourish? Conceptualizing and Measuring Indicators of Positive Development*. New York, NY: Springer Science+Business Media.

The authors developed the Values in Action Classification of Strengths scale, a scale of 24 positive traits under the headings of six virtues in order to assess good character. They found that the classification scale had face validity, adequate variation, internal consistency, and factorial validity. They also found that the scale had concurrent validity, with high scores on the traits being positively associated with subjective well-being, happiness, temperance, and receiving good grades in school. They were not able to assess longitudinal validity.

(Seligman, 2002)

Seligman has tested survey items measuring reliability and diligence on individual children and adolescents. These apply to the construct of self-management in the table.

(Snyder 2005) Children's Hope Scale (CHS)

Snyder's (2005) CHS was pilot tested on children ages 7 to 15 years of age, fourth through sixth graders, and five other samples of children. The scale measures agency (way-power) and motivation/goal setting (will-power).

6 C's: Confidence, Competence, Connection, Character, Caring, and Contribution

Lerner and colleagues (2002; 2005; 2005; 2004; 2008; 2004) have used the 4-H Positive Youth Development study to examine the 6 C's. The survey applies to the constructs in the table of moral character, confidence, and prosocial values.

(Damon, Menon, and Bronk, 2003)

Damon and colleagues examine the literature on adolescent sense of purpose. They examine the Purpose in Life test (PIL) (Crumbaugh and Maholick, 1967), daily journal data (Inhelder and Piaget, 1958), the Sources of Meaning Profile (SOMP) (Reker and Wong, 1988), the Personal Meaning Profile (PMP) (Wong, 1998), and others. The insights of Damon and colleagues can inform studies of the construct of sense of purpose.

National Study of Youth and Religion (NSYR)

The NSYR is directed by Christian Smith from the University of Notre Dame and Lisa Pearce from the University of North Carolina at Chapel Hill. The study began in 2001 and has three waves of data available. The study concerns questions of religion for adolescents ages 13 through 17 (Smith and Denton, 2005).

National Study of Children's Health (NSCH)

The NSCH asks questions of the parent or adult who best knows the child in the household selected for the interview. There are two separate developmental sections asking about children under 6 and then children ages 6 to 17. There are two waves of the NSCH, one from 2003, available, and one collected in 2007, to be released. The survey addresses positive social competence and has questions relating to positive functioning of family as a whole.

America's Promise Survey/Every Child Every Promise Study (ECEP)

This survey targets adolescents ages 12 to 17 and their parents. The parents answer a separate questionnaire about their children under the age of 12. The "Promises" examined in the study are the

following: caring parents, safe places, a healthy start, effective education, and an opportunity to help others. The study measures how many of these promises have been met for the individual children interviewed. The survey has positive measures relating to the constructs of safe schools, caring adults, cultural intelligence, positive engagement and connection, and positive relations with adults.

(Benson, Scales, Sesma, and Roehlkepartain, 2005)

Benson and colleagues use unpublished data from the Search Institute surveys in hundreds of communities in the U.S. to measure adolescent spirituality and its relationship with indicators of thriving adolescents.

(Volling and Blandon, 2005)

Volling and Blandon gathered information on a sample of 60 families with at least two children under the age of 6. They used the Sibling Inventory Behavior (SIB) to assess the relationships of the young siblings in the study. The SIB also contains prosocial values of companionship, empathy, and teaching/directiveness.

(L. Guzman and Jekielek, 2004)

The authors note the limited evidence of family time and family activities, and they suggest survey items to measure positive functioning of the family as a whole.

(Matthews et al., 2006)

Many measures of positive development have been tested on mostly white, suburban samples. The data in this paper come from cognitive interviews of low-income, minority children 12 to 18 years old. The authors ask questions relating to life satisfaction, hope (agency), gratitude and generosity (prosocial values), money management/frugality, spirituality and purpose, parent-adolescent relationships, positive peer relationships (positive engagement and connection as well), and school engagement.

(Lenhart and Madden, 2007; Lenhart, Madden, Macgill Rankin, and Smith, 2007; D. F. Roberts and Foehr, 2008; D. F. Roberts, Foehr, and Rideout, 2005)

Pew Charitable Trusts has sponsored monthly polls on politics, the press, and major issues since 1996, but these specific polls deal with Media use among children and youth. Also, the Kaiser Foundation sponsored a large-scale data collection effort on media use in 2004 of children age 8 to 18.

(Umaña-Taylor, 2005)

Umaña-Taylor constructs an Ethnic Identity Scale (EIS) and measures its relationship to self-esteem and familial ethnic socialization in a group of 9th and 10th grade students. This relates to the positive group identity construct in the chart.

National Household Education Surveys Programme (NHES)

This survey programme is sponsored by the National Center for Education Statistics, U.S. Department of Education. The NHES began surveying parents in 1991 with a new survey every one to three years, with the most recent in 2007. The NHES assesses parent involvement in school and home activities with students.

American Housing Survey (AHS)

The American Housing Survey is sponsored by the U.S. Department of Housing and Urban Development. Data are collected about every four years, always from the same housing units. Data are available on age of children living in the unit, safe households, and safe neighbourhoods.

Education Longitudinal Study (ELS)

This panel study tracks a cohort of 10th graders to their transition to working young adults. It began in 2002 and is sponsored by the National Center for Education Statistics of the U.S. Department of Education. The ELS contains questions on positive peers and engagement in school.

Social Capital Community Benchmark Survey (SCCB)

This cross-sectional survey conducted in 2000 in three dozen communities in the U.S. collects information on the relative strengths and areas for improvement in communities' civic behaviour, and assesses individual's sense of community, social networks, neighbourhood, and safety.

APPENDIX C:

ANNOTATED BIBLIOGRAPHY

Anderman, E. M., Urdan, T., and Roeser, R. (2005). The Patterns of Adaptive Learning Survey. In K. A. Moore and L. H. Lippman (Eds.), *What Do Children Need to Flourish? Conceptualizing and Measuring Indicators of Positive Development*. New York, NY: Springer Science+Business Media. (1997; 2005; n.d.; 2005; 2005; 2008; 2005)

The authors used the Patterns of Adaptive Learning Survey in a 1996 sample of sixth-grade students to measure various types of goals commonly held by children. The authors conducted confirmatory factor analysis (CFA), reliability analysis, and bivariate correlations (with covariance matrices). The authors conclude through CFA that the scales operate in basically the same manner for whites and blacks and for males and females. The goals children commonly strive for include mastery goal orientation (i.e. engaging in academic work to develop competence), performance-approach goal orientation (i.e. demonstrating developed competence), and performance-avoidance goal orientation (i.e. avoiding the demonstration of incompetence). The scales demonstrated face validity, internal consistency, and factorial validity. Adequate variation, however, was not demonstrated. The scales also showed concurrent validity in that mastery goal orientations were positively associated with academic efficiency, use of adaptive learning strategies, and demeanour at school. Performance-approach goal orientations were positively associated with avoidance of help seeking. Performance-avoidance goal orientations were negatively associated with academic efficiency. Longitudinal validity was not demonstrated in this study, however a previous study found that during a two-year period where students transitioned from elementary to middle school, the mastery and performance-approach goal orientations remained stable. It is unclear through this article whether previous studies used multivariate or bivariate analyses.

Barber, B. (2005). Positive Interpersonal and Intrapersonal Functioning: An Assessment of Measures among Adolescents. In K. A. Moore and L. H. Lippman (Eds.), *What Do Children Need to Flourish? Conceptualizing and Measuring Indicators of Positive Development*. New York, NY: Springer Science+Business Media. (2005)

The author analyzed seven scales of positive adolescent functioning from the Ogden Youth and Family Project conducted in Utah. The scales were found to be psychometrically strong, and had face validity, adequate variation, internal consistency, and factorial validity. In terms of predictive validity, the author states that all measures of positive adolescent functioning were associated with academic achievement, antisocial behaviour, and depression (with the exception of peer functioning). An independent review of the scales by Child Trends finds that the items focus too much on interaction-based activities. Activity interaction is valuable for males, however emotional connection is valued for girls and items on emotional connection should be added.

Barber, B. L., Stone, M. R., and Eccles, J. S. (2005). Adolescent Participation in Organized Activities. In K. A. Moore and L. H. Lippman (Eds.), *What Do Children Need to Flourish? Conceptualizing and Measuring Indicators of Positive Development*. New York, NY: Springer Science+Business Media. (2005; 2006; 2009; 2005; 2006; 2007; 2008)

The authors used a longitudinal study, the Michigan Study of Adolescent Life Transitions (MSALT), to measure adolescents' participation in sports, non-sport, and activities outside of school, both sport and non-sport. The five types of activities were prosocial activities, team sports, performing arts, school involvement, and academic clubs. The sample in the MSALT was a 1983 cohort of sixth-grade students from ten school districts followed through nine waves of data collection. Most participants were white (88 per cent) and eight per cent were black. Most students came from families with incomes of \$20,000 and more. The participation measures demonstrated face validity and adequate variation, but not internal consistency or factorial validity. The authors used chi-square analyses to look for concurrent validity. Expected relationships emerged for prediction to the type of peers in one's group based on stereotypes from *The Breakfast Club* movie (brain, jock, basket case, criminal, princess). The concurrent validity of self-concept and task value was probably examined through ANOVA, because the authors report F test values and means. Both outcomes were significantly related to participation in activities. For predictive validity, the authors report previously published findings not cited in the references. In terms of concurrent predictive validity, involvement with prosocial groups was positively associated with having more friends who plan to attend college and negatively associated with having friends who use drugs. Involvement with sports groups was positively associated with alcohol use, self-concept of sports ability, and the value of sports. Involvement in performing arts groups was negatively associated with self-concept of sports ability, and the value of sports. In terms of longitudinal predictive validity, involvement with prosocial groups was negatively associated with risk behaviours, and positively associated with grade-point average (GPA). Involvement in sports groups was again positively associated with alcohol use. Those who were involved with sports were also more likely to have higher GPAs, say that they liked school, and go on to college. Involvement with academic clubs was associated with higher 12th grade GPA, and likelihood of attending college. For longitudinal predictive validity, the authors used different statistical methods (all multivariate) to examine the relationship of grade 10 involvement in activities with outcomes at waves 8 and 9. Participation in activities was significantly and positively related to educational attainment (all five types), occupational outcomes (sports and school involvement), civic engagement (prosocial), and psychological adjustment (sports and performing arts).

Ben-Arieh, A. (2008). *The Child Indicators Movement: Past, Present, and Future*. *Child Indicators Research*, 1(1), 3-16. (2008; 2008; 2005; 2005; 2005; 2007; 2004; 2005)

In all, there have been five major changes in the emphasis of the study of children: child survival to child well-being; negative outcomes to positive outcomes; "well-becoming" to "well-being;" adult perspective to child perspective; and single indicators to composite indices. Developing countries tend to focus on child survival while developed countries tend to focus on child well-being.

Ben-Arieh, A., and Goerge, R. M. (Eds.). (2006). *Measuring and Monitoring Children's Well-Being: The Policy Process* (Vol. 27). Dordrecht, The Netherlands: Springer.

In this review, the author mentioned five changes that have been occurring in the literature on child well-being, and here, proposes another change. Indicators should be created and used to inform policy decisions. There are three important questions in making indicators: "How important are international comparisons?" "How much information is needed?" "Are indicators universal and timeless, or time- and place-specific?"

Ben-Arieh, A., McDonell, J., and Attar-Schwartz, S. (2009). Safety and Home-School Relations as Indicators of Children Well Being: Whose Perspective Counts? *Social Indicators Research*, 90(3), 339-349. (2006; 2008; 2005; 1994; 2005; 2008; 2005)

Ben-Arieh, McDonell, and Attar-Schwartz examined the differences in parent-, teacher-, and child-report on three measures of home-school relations and three measures of children's safety. Each measure was a single question that had been asked of children, parents, and teachers, when the children were in 5th grade in the school year 2002-2003, 6th grade in 2003-2004, and 7th grade in 2004-2005. The sample lived in South Carolina and participated in a programme called Strong Communities.

Table: Reports of children, parents and teachers on measures of home-school relations and children's safety

Measures:	Highest Rater	Second highest	Lowest Rater
Parents participation in school meeting and events	Parents	Children	Teachers
Parent involvement in parent-teacher meetings	Parents	Teachers	
Home-school relations	Children	Teachers	Parents
Safety at school during school hours	Teachers	Children	Parents
Safety in school before and after school hours	Teachers	Children	
Safety on the way to school and back	Teachers	Children	

Benson, P. L., Scales, P. C., Sesma, J., Arturo, and Roehlkepartain, E. C. (2005). Adolescent Spirituality. In K. A. Moore and L. H. Lippman (Eds.), *What Do Children Need to Flourish? Conceptualizing and Measuring Indicators of Positive Development* New York: Springer Science+Business Media. (2005; 2007; 2009; 2007; 2007; 2005)

The authors used sample from the Search Institute Profiles of Student Life: Attitudes and Behaviours survey to examine two indicators: religious attendance and religious importance among students in grades 6 through 12. Both indicators were found to have face validity, however they did not demonstrate adequate variation, internal consistency, or factorial validity. Showing concurrent predictive validity, the relationship of religious attendance and religious importance negatively impact participation in risk behaviours such as alcohol and drug use, smoking, sexual activity, violence, and school problems and positively impact thriving behaviours such as succeeding in school, helping others, maintaining good health, exhibiting leadership, and resisting danger. The indicators did not demonstrate longitudinal predictive validity. The two indicators of spirituality do not capture aspects beyond attendance. Questions including alternative forms of religious practices need to be included, as well as scales addressing the influence of religious beliefs on a person's daily life including his/her thoughts, feelings, and actions.

Bradshaw, J., Hoelscher, P., and Richardson, D. (2006). *Comparing Child Well-Being in OECD Countries: Concepts and Methods*. Florence, Italy: Innocenti Research Center.

Bradshaw and colleagues compile an index of child well-being using the framework for children's well-being provided by the UN Convention on the Rights of the Child. They compile 6 dimensions with 18 components with 40 indicators. The dimensions are the following: material well being, health and safety, education, peer and family relationships, subjective well-being, and behaviour and risk. There is a mix of contextual and well-being items.

Bradshaw, J., Hoelscher, P., and Richardson, D. (2007). An Index of Child Well-Being in the European Union. *Social Indicators Research*, 80, 133-177. (2002; 2005; 2005; 2008)

This framework is derived from the UN Convention on the Rights of the Child four general principles: non-discrimination, best interest of the child, survival/development, and respect for the views of the child. It uses data on 25 EU countries. The framework is mixed, having both positive (e.g., achievement in reading, math, and science) and deficit (e.g., percentage of infants born with low birth weight) indicators. The 51 indicators examined in this study cover 23 domains in eight clusters: material situation, housing, health, subjective well-being, education, children's relationships, civic participation, and risk and safety. One of the measures under Material Situation is the Family Affluence Scale from the HBSC. There are data from HBSC, PISA, OECD, the WHO, EQLS, BHPS, ESPAD, and IEA/CIVED. When the domains are made into a composite index, the data are fairly robust to methods, with five countries changing rank depending upon aggregation, and they are all in the middle of the distribution of countries.

Burton, P., and Phipps, S. (2008). Economic Resources, Relative Socioeconomic Position and Social Relationships: Correlates of the Happiness of Young Canadian Teens. *Child Indicators Research*, 1(4), 350-371. (2008; 2007; 2005; 2004; 2005)

This paper examines income's influence on happiness. Specifically, the probability of reporting lack of general happiness and the probability of reporting general happiness among 12 to 15 year olds in two-parent families (National Longitudinal Survey of Children and Youth, N=1,763). Family income is significantly related to happiness. The item has face validity.

Currie, C., Molcho, M., Boyce, W., Holstein, B., Torsheim, T., and Richter, M. (2008). Researching Health Inequalities in Adolescents: The Development of the Health Behaviour in School-Aged Children (HBSC) Family Affluence Scale. *Social Science and Medicine*, 66, 1429-1436. (2005; 2008; 2005; 2006; 2002; 2005)

The Family Affluence Scale (FAS) has been used in the Health Behaviour in School-Aged Children (HBSC) data for the last 10 years and has been included in at least seven other studies. According to the authors' reading of previous studies, the FAS is moderately correlated with self-reported parental occupation and is correlated with various measures of health.

Eccles, J. S., O'Neill, S. A., and Wigfield, A. (2005). Ability Self-Perceptions and Subjective Task Values in Adolescents and Children. In K. A. Moore and L. H. Lippman (Eds.), *What Do Children Need to Flourish? Conceptualizing and Measuring Indicators of Positive Development*. New York, NY: Springer Science+Business Media.

In this article, the authors created two samples, one two-year sample, and a part-MSALT (Michigan Study of Adolescent Life Transitions) sample. The two-year sample consists of fifth- through eleventh-graders in mathematics classrooms in Year 1. The part-MSALT data are more ethnically

diverse than the regular MSALT (10 per cent black instead of 8 per cent and 85 per cent white instead of 88 per cent). The authors developed an academic scale with nine domain-specific constructs to measure ability self-perceptions subjective task values in previous work. The scales in the 2-year sample and part-MSALT sample showed face validity, adequate variation, internal consistency, and factorial validity. To measure concurrent validity, the authors may have used multivariate regression (correlation). An important note is that the authors do not report all p values, and they use $p < 0.1$ as their threshold for significance. In the part-MSALT sample (using only older students, sixth- through twelfth- grade), self-concept ability in math did not significantly predict math grades controlling for prior performance. Racial differences in this were nonsignificant ($p < 0.1$). Math value and self-concept ability in math significantly predicted students' plans to take additional math courses. This also did not vary by race. To examine the scales with younger children, the authors used the longitudinal Michigan Childhood and Beyond Study. More than 95 per cent of the children are white, and most come from middle-class and lower-middle-class backgrounds. They are in first, second, and fourth grades. The scales for younger children have face validity, and predictive validity, but unreliable factorial validity. Items assessing task values did not always factor as expected. Internal consistency for competence belief in math, reading, and sports, and the subjective task scales ranged from .53 to .82. Cronbach's alphas for competence belief in instrumental music and the subjective task scale ranged from .67 to .86. The authors found that, as hypothesized, boys had more positive perceptions and values for sports and math; girls, for reading and instrumental music. These may be bivariate analyses. The constructs of ability perceptions and subjective task value showed concurrent validity and were associated with course grades and enrolling in particular courses. The constructs that best predict future achievement behaviours are the ability perceptions scale, and the subjective task value scales of interest, importance, and utility.

Epps, S. R., Park, S. E., Huston, A. C., and Ripke, M. (2005). A Scale of Positive Social Behaviors. In K. A. Moore and L. H. Lippman (Eds.), *What Do Children Need to Flourish? Conceptualizing and Measuring Indicators of Positive Development*. New York, NY: Springer Science+Business Media. (1997)

The author uses parent and teacher ratings of the Positive Behaviour Scale to assess the presence of positive social behaviours in children. It is important to note that there can be large differences between parent and teacher ratings of children due to parents and teachers valuing different aspects of a child's capabilities. This study found some discrepancies between parent and teacher ratings of the child's behaviours. In a longitudinal study, the scale was found to have face validity, adequate variation, internal consistency, and factorial validity. Longitudinal validity was also demonstrated at the five-year follow-up, however the associations were weak between positive behaviour and positive parental relationships as well as satisfaction with friendships. The scale demonstrated concurrent validity in four ways. 1) Positive behaviour was associated with fewer problem behaviours and 2) fewer teacher reports of problem behaviour. 3) Positive behaviour was positively associated with parent and 4) teacher reports of school achievement.

Fredericks, J. A., Blumenfeld, P., Friedel, J., and Paris, A. (2005). School Engagement. In K. A. Moore and L. H. Lippman (Eds.), *What Do Children Need to Flourish? Conceptualizing and Measuring Indicators of Positive Development*. New York: Springer Science+Business Media. (2008; 2006; 2005; 2005)

The authors drew items from three previous studies and created some new items to measure three aspects of school engagement: behavioural, emotional, and cognitive. The items had face, factorial, and construct validity. The authors also conducted interviews for validity as well, and the interviews supported the scales. The alphas for each scale are the following: cognitive (8 items) 0.82; behavioural (5 items) 0.77; and emotional (6 items) 0.86.

Frønes, I. (2007). Theorizing Indicators: On Indicators, Signs and Trends. *Social Indicators Research*, 83(1), 5-23.

Frønes gives an overview of what an indicator is and what broad issues need to be considered when forming indicators for children. Indicators provide information on trends in child well-being. However, it is important to note that the same indicator can vary according to its definition, context, and time of life in which the children measured are. Indicators can be very different for young children, older children, and adolescents. Indicators always have two parts: the number and the interpretation. Children do not live in a vacuum and indicators always reflect this.

Guzman, L., and Jekielek, S. (2004). Indicators of Child, Family and Community Connections: Family Time: Office of the Assistant Secretary for Planning and Evaluation U.S. Department of Health and Human Services.

This review shows that family time is important. For example, children build bonds with parents that allow parents to transmit human capital. Children who spend more time with their parents tend to have better academic and emotional outcomes. Research has shown that time spent with family matters, but the nature of that time is a mystery to empirical research. In this review, the authors conclude that more research needs to be done to capture the diversity of family activities, the quality of family time, the meaning of family activities to individuals, and the amount of time families spend together on different kinds of activities. We need to know about time families spend together as a family unit, and we need to collect measures over a period of time. The authors also recommend items from surveys measuring the quality and meaning of family time. They suggest items from PISA and from an article by Fiese and Kline (1991). The following are three examples of item questions in their Appendix A: “My family and I get together and look through family albums and watch family videos;” “Time in the car together is an opportunity to talk things over with each other;” “In general, how often do your parents discuss how well you are doing at school.”

Hair, E. C., Moore, K. A., Garrett, S. B., Kinukawa, A., Lippman, L. H., and Michelson, E. (2005). The Parent-Adolescent Relationship Scale. In K. A. Moore and L. H. Lippman (Eds.), *What Do Children Need to Flourish? Conceptualizing and Measuring Indicators of Positive Development*. New York, NY: Springer Science+Business Media.

The authors used data from the NLSY97 to examine variations of an 8-item measure of child and family relationships and interactions. The measure was found to have face validity, factorial validity, adequate variation, and internal consistency for the 8-item scale and the 5-item scale. The 8-item scale and 4-item scale demonstrated concurrent validity; positive parent-adolescent relationship was associated with whether the child felt his/her parents were supportive. The 8-item scale also demonstrated longitudinal predictive validity; a positive parent-adolescent relationship was associated with higher grades as well as lower delinquency, less sexual activity, and fewer suspensions.

However, the measure is lacking statistical significance for children in poverty and children who are not white.

Hair, E. C., Moore, K. A., Ling, T., and Sidorowicz, K. (2008). *Options for Monitoring Positive Mental Health Among Children and Youth*. Washington, DC: Child Trends.

The authors review existing possible measures for positive mental health. Keyes has developed individual-level scales, and a few datasets offer single-item measures. Keyes' short measure does not have psychometric data available, but it has been included in the Child Development Supplement of the Panel Study of Income Dynamics. Keyes' medium and long measures have not been tested for their age appropriateness for children under age 12, but they have been tested for validity and reliability. A few items in the medium and long scales were invalid and unreliable for adolescents ages 12 to 18. The authors suggest items to assess the community's supportive role for children's mental health as well as short, medium, and long scales available. No psychometric data are available on single-item or short scale measures. The medium length measure has psychometric data available and it would be possible to obtain psychometric data on the long measure.

Hanafin, S. a., and Brooks, A.-M. (2005). *Report on the Development of a National Set of Child Well-Being Indicators in Ireland*. Dublin, Ireland: National Children's Office.

This report lists 30 indicators and five socio-demographic indicators (some have multiple questions or parts to make the indicator) to be used as standard indicators for Ireland. The positive indicators of well-being among the 30 are the following: community characteristics ("The number of children aged 11, 13 and 15 who report to feel safe in the area where they live"), environment and places ("number of children aged 11, 13 and 15 who report that there are good places in their area to spend their free time"), nutrition ("number of children aged 11, 13 and 15 who report eating breakfast five or more days per week" and "number of newborn babies who are: a) exclusively breastfed and; b) partially breastfed throughout the first 48 hours of age"), parental time with children, participation in decision-making, pets and animals, public expenditure on services for children and young people, quality of childhood care and education, relationship with parents and family, relationships with peers, self-esteem, self-reported happiness, sexual health and behaviour, things to do, and values and respect. These measures have not been fully developed nor have they been psychometrically evaluated. But they do have face validity.

Huebner, E. S. (1994). Preliminary development and validation of a multidimensional life satisfaction scale for children. *Psychological Assessment*, 6, 149-158.

The authors used two scales, the Students' Life Satisfaction Scale (SLSS) and the Brief Multidimensional Students' Life Satisfaction Scale (BMSLSS) to measure whether children were satisfied with their lives. Both scales were found to be psychometrically strong, with face validity, adequate variation, internal consistency, and factorial validity in each. The SLSS had concurrent validity in that it was positively correlated with parents' estimates of life satisfaction, and longitudinal validity in that it was negatively correlated with stress, depression, anxiety, and externalizing behaviour. The BMSLSS had concurrent validity in that measures were negatively correlated with alcohol, tobacco, and drug use as well as fighting, and longitudinal validity in that measures were negatively correlated with violent and delinquent behaviour, frequency of drug use, and peer provocation. Both scales also had longitudinal validity, predicting lower stress, anxiety, and

externalizing behaviour one year later (SLSS); and less violent behaviour, delinquent behaviour, frequency of drug use, and peer provocation two years later (BMSLSS).

Huebner, E. S., Suldo, S. M., and Valois, R. F. (2005). Children's Life Satisfaction. In K. A. Moore and L. H. Lippman (Eds.), *What Do Children Need to Flourish? Conceptualizing and Measuring Indicators of Positive Development*. New York, NY: Springer Science+Business Media.

The authors used two scales, the Students' Life Satisfaction Scale (SLSS) and the Brief Multidimensional Students' Life Satisfaction Scale (BMSLSS) to measure whether children were satisfied with their lives. Both scales were found to be psychometrically strong, with face validity, adequate variation, internal consistency, and factorial validity in each. The SLSS had concurrent validity in that it was positively correlated with parents' estimates of life satisfaction, and longitudinal validity in that it was negatively correlated with stress, depression, anxiety, and externalizing behaviour. The BMSLSS had concurrent validity in that measures were negatively correlated with alcohol, tobacco, and drug use as well as fighting, and longitudinal validity in that measures were negatively correlated with violent and delinquent behaviour, frequency of drug use, and peer provocation. Both scales also had longitudinal validity, predicting lower stress, anxiety, and externalizing behaviour one year later (SLSS); and less violent behaviour, delinquent behaviour, frequency of drug use, and peer provocation two years later (BMSLSS).

This review of the Students' Life Satisfaction Scale (SLSS) and Brief Multidimensional SLSS (BMSLSS) argues that studying life satisfaction in children is worthwhile and important to child well-being and well-becoming. Life satisfaction in children is a positive indicator of psychological well-being. Engaging in fewer risky behaviours is also correlated with life satisfaction in children. Some studies listed in this article using the SLSS have had sample age ranges from 7 to 14. The SLSS consistently has Cronbach's alphas of .7 to .8. Factor analyses have all supported a one-factor structure of the SLSS. The SLSS has significant, positive correlations with other life satisfaction measures. The BMSLSS has been used in samples ranging from sixth- to twelfth- graders. For middle school students, reliability hovers around .75, and for high school students, reliability is about .81. Studies support a one-factor structure of the BMSLSS. This measure is also significantly, positively correlated with other measures of life satisfaction.

Iversen, A. C., and Holsen, I. (2008). Inequality in Health, Psychosocial Resources and Health Behavior in Early Adolescence: The Influence of Different Indicators of Socioeconomic Position. *Child Indicators Research*, 1(3), 291-302.

This paper carries out two studies based on data from Norway collected in 2004. This paper analyzes the relationship between indicators of socioeconomic status (SES) and seven positive indicators of well-being. Study 1 looks at the following four positive indicators: (1) overall health, single item; (2) social competence, measured by the Social Skills Rating System, adequate variation, $\alpha=.9$; (3) self-esteem, measured by Rosenberg's self-esteem scale, adequate variation, $\alpha=.84$; and (4) life-satisfaction, a nine-item scale, adequate variation, $\alpha=.84$. Study 2 looks at three single items about eating fruits, eating vegetables, and exercising. The authors found in study 1 that all three indicators are significantly correlated with overall health, social competence, and life-satisfaction. Self-esteem was only associated with perceived wealth. The authors found in study 2 that only the number of books in the home was significantly related to the three health behaviours.

Kasser, T. (2005). Frugality, Generosity, and Materialism in Children and Adolescents. In K. A. Moore and L. H. Lippman (Eds.), *What Do Children Need to Flourish? Conceptualizing and Measuring Indicators of Positive Development*. New York, NY: Springer Science+Business Media.

The author adapted or developed three separate scales to measure frugality, generosity, and materialism. All three scales were psychometrically strong, with face validity, adequate variation, internal consistency, and factorial validity in each. All three scales had concurrent validity in the following ways. The frugality scale showed that low frugality was associated with higher cigarette use and fighting behaviour and lower self-esteem and environmental awareness behaviours. The generosity scale showed that low generosity was associated with lower self-esteem, less happiness, fewer environmental behaviours, more use of alcohol, and more frequent fights. The materialism scale showed that high materialism was associated with less happiness, lower self-esteem, fewer environmental behaviours, and higher anxiety. None of the scales demonstrated longitudinal validity.

Keeter, S., Jenkins, K., Zukin, C., and Andolina, M. (2005). Community-Based Civic Engagement. In K. A. Moore and L. H. Lippman (Eds.), *What Do Children Need to Flourish? Conceptualizing and Measuring Indicators of Positive Development*. New York, NY: Springer Science+Business Media.

The authors developed three measures to assess civic engagement – informal group activities to solve community problems, volunteering, and group membership. All of the measures demonstrated face validity, adequate variation, internal consistency, and factorial validity. In terms of concurrent predictive validity, participation in any of the civic activities was positively associated with increased attention to public affairs, regular attendance at religious services, feeling as if they can make a difference in the community, and being raised in a household where someone volunteers. Longitudinal predictive validity was not examined demonstrated. While the measures are strong, wording changes need to be made in order for the scales to be applicable to younger children.

Keyes, C. L. (2007). Promoting and Protecting Mental Health as Flourishing: A Complementary Strategy for Improving National Mental Health. *American Psychologist*, 62(2), 95-108.

The measure in this paper of mental health shows factorial and concurrent validity, but is used with adults only. Individual items are not presented, so face validity could not be assessed. Using the MacArthur Foundation's Midlife in the United States survey (MIDUS), Keyes shows that mental illness and mental health are two separate constructs, supporting the two-factor model (correlated with one another $r = -0.53$). He measures mental health with the scale of emotional well-being, scale of social well-being, and scale of psychological well-being from MIDUS. Findings support previous notions of mental health: more years of education are associated with higher scores on mental health, blacks report higher scores on mental health than whites, and black men report higher levels of mental health than black women.

Laghi, F., D'Alessio, M., Pallini, S., and Baiocco, R. (2009). Attachment Representations and Time Perspective in Adolescence. *Social Indicators Research*, 90(2), 181-194.

The author examines the relationship between attachment and time perspective. The authors measure sympathy as well using the Empathic concern and Perspective taking subscales from the Interpersonal

Reactivity Questionnaire. The two scales combine into a single dimension (three previous studies have looked at this and used it to measure sympathy) with an alpha of 0.73. Sympathy is significantly related to parental and peer attachment. Other psychometric properties are not reported, but a study is cited that looks at them in a similar sample.

Land, K., Lamb, V. L., Meadows, S. O., and Taylor, A. (2007). Measuring Trends in Child Well-Being: An Evidence-Based Approach. *Social Indicators Research*, 80, 105-132.

The authors present the Child and Youth Well-Being Index (CWI) as a composite indicator of trends over time. Psychometric properties are not reported, but change from 1976-2004 is compared with a question from Monitoring the Future asking 12th graders about overall life satisfaction. The two scales differ considerably, but do show similar patterns of increasing and decreasing changes. The change is more dramatic in the single-item scale.

Lauglo, J., and Oia, T. (2007). Education and Civic Engagement: Review of Research and a Study on Norwegian Youths. OECD Education Working Papers, No. 12, OECD Publishing.

Using Norwegian Social Research (NOVA) data from 2002, Lauglo and Óia's paper focuses on the relationship between education and civic engagement for adolescents ages 13-19. The authors define civic engagement by two major components: interest in political or social issues and action or readiness to act in order to voice their opinions on political or social issues. The items have concurrent validity and face validity.

Lerner, R. M. (2005). Promoting Positive Youth Development: Theoretical and Empirical Bases. Paper presented at the Workshop on the Science of Adolescent Health and Development. from <http://ase.tufts.edu/iaryd/documents/pubPromotingPositive.pdf>.

Youth development studies have left G.S. Hall's notion of adolescence as a time of "storm and stress" behind in favor of the idea that adolescent experience is diverse, and risky, problem behaviours are not a necessary condition of adolescence. The Positive Youth Development perspective takes the view that all adolescents have strengths and all adolescents can have a positive experience during their time of growth and transition through use of the developmental assets. Lerner lists the 5 C's as individual developmental assets: competence, confidence, connection, character, and caring. Then he proposes a 6th C, contribution that emerges from the other 5 C's. Lerner finds that Positive Youth Development subsumes the 6 C's (which he shows through a confirmatory factor analysis) and that the 6 C's are inversely related to risky and problem behaviours. Lerner also explores the idea of developmental regulation (the interactions and relationships between a youth and his or her context) in promoting Positive Youth Development, and finds that the two are significantly related. He uses a measure of the Selection, Optimization, and Compensation (SOC) model to measure developmental regulation. Positive Youth Development programmes may be important for developing these assets (5 C's). Many of the 5th and 6th graders in the sample participated in multiple programmes at the time of the study.

McCullough, M. E., Emmons, R. A., and Tsang, J.-A. (2002). The Grateful Disposition: A Conceptual and Empirical Topography. *Journal of Personality and Social Psychology*, 82(1), 112-127.

This paper uses four samples of students to test gratitude. The authors find that gratitude is a distinct emotion that can be measured, and they find that it is related to the Big Five personality traits (openness, conscientiousness, extraversion, agreeableness, and neuroticism) and to other emotions such as life satisfaction, optimism, happiness, vitality, hope, materialism, and envy. The six-item gratitude scale in these studies has factorial validity, construct validity, and an alpha of 0.87. The test-retest correlation was 0.82 for the gratitude scale.

McNeely, C. (2005). Connection to School. In K. A. Moore and L. H. Lippman (Eds.), *What Do Children Need to Flourish? Conceptualizing and Measuring Indicators of Positive Development*. New York, NY: Springer Science+Business Media.

The author used the National Longitudinal Study of Adolescent Health to measure two indicators of school connectedness – social belonging and relationships with teachers. Psychometric analyses performed on the scales show that the scales are weak in terms of face validity, adequate variation, internal consistency, concurrent validity, and longitudinal validity. The only item recommended for use is the item measuring school safety.

Moore, K. A., and Lippman, L. (Eds.). (2005). *What do Children Need to Flourish? Conceptualizing and Measuring Indicators of Positive Development*. New York, NY: Springer.

Moore and Lippman's volume brings together work from a conference on positive indicators. The authors attempt to define "flourishing," what it means for children and youth to flourish, and how we can measure positive outcomes for children and youth. The authors in this book found that positive traits can be measured, and the authors acknowledge that there is much work to be done in this field of positive indicators.

Moore, K. A., Theokas, C., Lippman, L., Bloch, M., Vandivere, S., and O'Hare, W. (2008). A Microdata Child Well-Being Index: Conceptualization, Creation, and Findings. *Child Indicators Research*, 1(1), 17-50.

This paper examines domains of child well-being included in an index, and reviews three previous indices: the Annie E. Casey Foundation's Kids Count Index, the FCD-Land Index (created by Ken Land and the Foundation for Child Development's Child Well-Being Index), and the domains of the National Survey of America's Families. The individual-level domains included in this paper's index are physical, psychological, social, and educational/intellectual. There are also three contextual domains: family, neighbourhood, sociodemographic. The authors find that the level of well-being in one domain is correlated with other domains, but the data show that summing the domains results in less than a third of children and adolescents meeting the criteria for well-being in all seven domains. Contextual domains accounted for more variance than age, gender, and race/ethnicity for all four individual-level domains. For subgroups, the data show the following: younger children (ages 6-11), girls, and white non-Hispanic children and adolescents score higher on well-being compared with their counterparts.

Moore, K. A., Vandivere, S., Lippman, L., McPhee, C., and Bloch, M. (2007). An Index of the Condition of Children: The Ideal and a Less-than-Ideal U.S. Example. *Social Indicators Research*, 84, 291-331.

Moore and colleagues make two main contributions to this project in this paper: they compare indices of child well-being and make two important distinctions between child measures. First, Moore and colleagues compare four indices of child well-being in this paper. The indices are sensitive to the data used, the items used, and the number of items. Second, when a measure combines contextual items and well-being items, the measure is no longer solely child well-being, but is a measure of the overall condition of children. When only child well-being measures are in an index, it can be called a measure of child well-being.

Mullan Harris, K., Berkowitz King, R., and Gordon-Larsen, P. (2005). Healthy Habits Among Adolescents: Sleep, Exercise, Diet, and Body Image. In K. A. Moore and L. H. Lippman (Eds.), *What Do Children Need to Flourish? Conceptualizing and Measuring Indicators of Positive Development*. New York, NY: Springer Science+Business Media.

The authors used the National Study of Adolescent Health (Add Health) to examine how measures such as getting adequate sleep, consuming fruits and vegetables, exercising, watching television, and perceived weight positively or negatively affect adolescent development. The measures had face validity and adequate variation as well as concurrent validity. Body mass index (BMI), healthy sleep habits, and time spent watching television were correlated with activity/inactivity and diet. However, the measures were not found to have factorial validity, longitudinal validity, or be internally consistent.

Park, N., Huebner, E. S., Laughlin, J. E., Valois, R. F., and Gilman, R. (2004). A cross-cultural comparison of the dimensions of child and adolescent life satisfaction reports. *Social Indicators Research*, 66, 61-79.

Research on the Multidimensional Students' Life Satisfaction Scale (MSLSS; Huebner, 1994) has suggested a five-factor model of children's life satisfaction, with factors corresponding to the domains of family, friends, school, living environment, and self. Because the instrument was developed with samples from Western, individualistic cultures, Park and colleagues hypothesized that in samples from a collectivistic culture (e.g., Korea), the "self" factor would not appear, leaving only a four-factor model. They compared the factorial structure of the MSLSS in samples of elementary, middle school, and high school students from collectivistic (835 Korean students) and individualistic (822 US students) cultures. The results indicated the similarity of the five-factor model across both cultural groups, suggesting that the instrument can be used for meaningful international comparisons of children's life satisfaction. The authors also suggested the exploration of other, culturally sensitive domains to improve understanding of cultural differences in students' life satisfaction.

Park, N., and Peterson, C. (2005). The Values in Action Inventory of Character Strengths for Youth. In K. A. Moore and L. H. Lippman (Eds.), *What Do Children Need to Flourish? Conceptualizing and Measuring Indicators of Positive Development*. New York, NY: Springer Science+Business Media.

The authors developed the Values in Action Classification of Strengths scale, a scale of 24 positive traits under the headings of six virtues in order to assess good character. They found that the classification scale had face validity, adequate variation, internal consistency, and factorial validity. They also found that the scale had concurrent validity, with high scores on the traits being positively associated with subjective well-being, happiness, temperance, and receiving good grades in school.

They were not able to assess longitudinal validity. Evaluation of the scale by Child Trends indicates that the measure is problematic because character should be able to stand on its own as a separate measure, rather than defining it with a collaboration of virtues. As such, the scale measures human strengths and values, and not character.

Patrick, H., and Ryan, A. M. (2005). Identifying Adaptive Classrooms: Dimensions of the Classroom Social Environment. In K. A. Moore and L. H. Lippman (Eds.), *What Do Children Need to Flourish? Conceptualizing and Measuring Indicators of Positive Development*. New York, NY: Springer Science+Business Media.

The authors examined four scales related to the social environment of the classroom – teacher support, promoting mutual respect, promoting student interaction, and promoting performance goals – on three populations of students in Michigan, Ohio, and Indiana school districts. Psychometric analyses showed that the scales had face validity, adequate variation, and internal consistency. Concurrent predictive validity was demonstrated in that students who perceive their teacher as promoting support, respect, and student interaction have positive beliefs about learning and engage in adaptive learning-related behaviours, and were least focused on performance goals. Longitudinal predictive validity was missing.

Richardson, D., Hoelscher, P., and Bradshaw, J. (2008). Child Well-Being in Central and Eastern European Countries (CEE) and the Commonwealth of Independent States (CIS). *Child Indicators Research*, 1(3), 211-250.

This article uses data on Central and Eastern European Countries (CEE) and the Commonwealth of Independent States (CIS) to create an index based on seven dimensions: material situation, housing, health, education, personal and social well-being (engagement with the peer group, social engagement, and subjective well-being), family forms and care, risk and safety. In all, this has 52 indicators within 24 components, which are within the seven dimensions. The components are fairly robust to type of aggregation (two of the 21 countries change ranking) and missing data (one country changes ranking). There are a few items singled out that strongly correlate with the overall index. There were significant correlations for indicators covering at least 18 of the 21 countries, and the highest of these was the absolute income poverty rate. The second highest was the adolescent fertility rate. The items have face validity and most are negative.

Scales, P. C., and Benson, P. L. (2005). Prosocial Orientation and Community Service. In K. A. Moore and L. H. Lippman (Eds.), *What Do Children Need to Flourish? Conceptualizing and Measuring Indicators of Positive Development*. New York, NY: Springer Science+Business Media.

The authors used the Youth Supplement Survey (YS2) developed by the Search Institute to measure prosocial orientation. The measure of prosocial orientation was a seven-item measure, and demonstrated face validity, adequate variation, internal consistency, and factorial validity. In terms of concurrent predictive validity, prosocial orientation was positively associated with a sense of belonging at school, valuing diversity, being seen as a leader, overcoming adversity, community service, and coping behaviours, and negatively associated with risk behaviours such as drug use, antisocial behaviours, and sexual behaviours. Longitudinal predictive validity was not demonstrated.

Scales, P. C., Benson, P. L., Bartig, K., Streit, K., Moore, K. A., Lippman, L., et al. (2006). *Keeping America's Promises to Children and Youth: A Search Institute-Child Trends Report on the Results of the America's Promise National Telephone Polls of Children, Teenagers, and Parents*. Washington, DC: Search Institute.

The America's Promise 2005 data attempt to measure five promises to America's children, and how many children are in an environment that allow them to meet these promises. The items and indicators have face validity and acceptable variability. The five promises are called caring adults, safe places and constructive use of time, a healthy start and healthy development, effective education for marketable skills and lifelong learning, and opportunities to make a difference through helping others. Children and youth need adults around them for support and guidance. Children and youth need to be safe both physically and emotionally. Children and youth deserve to be healthy in body and mind, and they deserve to have healthy habits that come from regular care, good nutrition, and exercise. They need the intellectual development and cultural skills that allow them to be successful in work and ready to be lifelong learners. Children and youth need to be given the opportunity to help others through volunteering and service.

Seligman. (2002). *Authentic Happiness*. New York, NY: Free Press.

In this book, Seligman argues for a positive psychology, focusing on human strengths. He argues that happiness is something we can control, and his idea of positive psychology centres around a framework created with Peterson (Values-in-Action Institute) and others. The framework is six virtues, consisting of 24 strengths. The questionnaire resulting from this demonstrates adequate variation, but no other psychometric data are presented in this book.

Snyder, C. R. (2005). *Measuring Hope in Children*. In K. A. Moore and L. H. Lippman (Eds.), *What Do Children Need to Flourish? Conceptualizing and Measuring Indicators of Positive Development*. New York: Springer Science+Business Media.

The author developed the Children's Hope Scale to assess whether children can determine how to get to their desired goals and whether they have the motivation to pursue those goals. The scale demonstrated face validity, adequate variation, internal consistency, and factorial validity. It also demonstrated concurrent validity in that hope was positively associated with higher self-perception, more accurate parental ratings of their children's hope levels, more personal control, and lower levels of depression and loneliness. It also demonstrated longitudinal validity six months later when the children were administered the Iowa Test of Basic Skills. Scores on the Children's Hope Scale predicted percentile scores on the Iowa Test.

Torney-Purta, J., Barber, C., Wilkenfeld, B., and Homana, G. (2008). *Profiles of Civic Life Skills Among Adolescents: Indicators for Researchers, Policymakers, and the Public*. *Child Indicators Research*, 1(1), 86-106.

Torney-Purta and colleagues use the IEA Civic Education Study (done in 28 countries) to suggest criteria for indicators relating to the civic life of adolescents. Using these data, the authors constructed four clusters based on the United States sample: indifferent, willing to minimally practice citizenship; alienated, refusing to accept norms of citizenship; conventional; and social justice supporters. Twelve attitudinal scales were used to construct the four clusters: norms (importance) of conventional

citizenship; norms (importance) of social-movement related citizenship; government social responsibilities; trust in government institutions; trust in news media; patriotic attitudes towards the nation; protective attitudes towards the nation; support for women's political rights; support for ethnic minorities' political rights; positive attitudes towards immigrants; internal political efficacy; and cynicism. Then these four clusters were compared across four different scales: expectations of informed voting; expectations of participation in conventional political activities; expectations of community participation; and expectations of protest participation.

Torsheim, T., Currie, C., Boyce, W., and Samdal, O. (2006). Country Material Distribution and Adolescents' Perceived Health: Multilevel Study of Adolescents in 27 Countries. *Journal of Epidemiology and Community Health*, 60, 156-161.

Although the authors focus on a negative outcome (not very healthy vs. very healthy/quite healthy), they use one positive indicator of child well-being, the Family Affluence Scale (FAS, range 0-6). The authors used the Health Behaviour in School-Aged Children (HBSC) dataset. The mean FAS ranged from 2.43 to 4.56 in the 27 countries examined in this study. The standard deviation ranged from 1.21 to 1.68. Alphas are not reported and the measure is significantly related to health. Research has shown that inequalities in FAS values are significantly related to inequalities in self-reported health, psychosomatic symptoms, physical activity and aspects of eating habits at the individual and country levels.

Umaña-Taylor, A. J. (2005). The Ethnic Identity Scale. In K. A. Moore and L. H. Lippman (Eds.), *What Do Children Need to Flourish? Conceptualizing and Measuring Indicators of Positive Development*. New York, NY: Springer Science+Business Media.

The author used the Ethnic Identity Scale to create three subscales examining three components of ethnic identity formation, exploration, affirmation, and resolution. The scales were found to be psychometrically strong with face validity, adequate variation, internal consistency, and factorial validity. Two of the subscales, exploration and resolution, also had concurrent validity in that they were both positively associated with self-esteem and familial ethnic socialization. None of the scales demonstrated longitudinal validity.

Volling, B. L., and Blandon, A. Y. (2005). Positive Indicators of Sibling Relationship Quality: The Sibling Inventory of Behavior. In K. A. Moore and L. H. Lippman (Eds.), *What Do Children Need to Flourish? Conceptualizing and Measuring Indicators of Positive Development*. New York, NY: Springer Science+Business Media.

The authors used the Sibling Inventory of Behavior (SIB) to assess sibling relationships in a sample of 60 families with at least two children under the age of 6 years. The SIB is comprised of 32 items organized into six scales, and the authors focused on the scales of companionship, empathy, and teaching/directiveness. The scales demonstrated face validity and adequate variation. The companionship and empathy scales had internal consistency with alphas over .70, while the alpha for the teaching scale was lower at .66. The authors presented past research to show that the scales had factorial validity. In terms of concurrent validity, the scales demonstrate that father-reports of empathy and teaching behaviours of the older sibling were correlated to positive sibling relationships. In terms of longitudinal predictive validity, the three-year follow-up study showed that parent reports of positive companionship and overall positive involvement were related to the amount of affection shown to the younger sibling.

APPENDIX D:

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