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CHILD WELL-BEING:
A SYSTEMATIC REVIEW OF THE LITERATURE

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ABSTRACT. A systematic review the child well-being literature in English was conducted with searches in five databases to assess the current state of child well-being research and answer the following questions: (1) How is child well-being defined? (2) What are the domains of child well-being? (3) What are the indicators of child well-being? and (4) How is child well-being measured? This review updates and expands a previous review of the child well-being literature spanning 1974–1992. Results indicate that well-being is a commonly used but inconsistently defined term frequently included in the study of child development. There are five distinct domains of child well-being: physical, psychological, cognitive, social, and economic. Positive indicators are used more often in the physical, cognitive, social, and economic domains, while more negative or deficit indicators are used in the psychological domain. There is little agreement in the research literature on how to best measure child well-being.

INTRODUCTION

The study of well-being is a significant emerging frontier in child development research. There is increasing demand for research that extends beyond the study of children's disorders, deficits, and disabilities. Now is the time to place emphasis on the positive attributes of children. By examining children's strengths, assets, and abilities, the determinants of a positive developmental trajectory can be established. Only by examining children's strengths and abilities will we discover the core elements of well-being that enable children to flourish and thrive.

The child well-being literature base is enormous and continues to expand rapidly. To the extent that this reflects ongoing research and potential advances for the promotion of well-being in children, this expansion is very promising. At the same time, however, it makes the task of locating the best and most useful information on child



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well-being more challenging. Given the gaps and unanswered questions that exist in the research base on child well-being, a systematic review is needed to assess the current state of child well-being research.

A systematic review of the English language child well-being literature spanning 1974–1992 (Toles et al., 1993) summarized the child well-being research base. This review updates and expands on that review to assess the current state of the English language child well-being research.

METHODOLOGY

This review focuses on the 1991 to 1999 child well-being literature. Its purposes are: (1) to examine the definitions of child well-being; (2) to examine the indicators of child well-being; and (3) to examine the instruments used to measure the indicators of child well-being, thus contributing to a more integrated understanding of the state of the research base.

This systematic review of the child well-being research base updates and expands the Toles et al. (1993) review. Both reviews used a three-phase methodology: a key term search, a title screen review, and a content screen review. We replicated this methodology to facilitate comparing our findings with those of the 1972–1992 review. One significant variation in the more current review is the inclusion of studies of children living in developing countries. Our search strategy identified articles that studied children from thirty-one different countries around the world. Of these articles, thirteen studied children from developing countries.

In applying this methodology, several challenges became apparent. First, of the articles on child well-being included in this review, almost half (47%) included deficit indicators of child well-being. Second, multiple definitions, indicators, and measures of well-being are used. We must empirically define well-being and ascertain the scope of what well-being encompasses. Finally, the well-being literature base spans a variety of disciplines and examines well-being in a myriad of ways. Well-being is a complex, multi-faceted construct that has continued to elude researchers' attempts

TABLE I
Database Search Results

	Database					
	PsychINFO (1990–99)	Socio- logical abstracts	ERIC (1990–99)	MEDLINE (1990–99)	HealthSTAR (1991–99)	Total (1990– 99)
	Citations of key terms, per database					
Quality of life	97	225	73	317	14	737
Life satisfaction	46	84	34	—	—	164
Well-being	230	38	146	209	9	632
Wellness	9	51	63	9	4	136
Total	382	398	316	535	27	1658

Note. Duplicate articles arising from the same article appearing in multiple databases are included in the total number.

to define and measure it. Reviewing the research base on well-being is therefore difficult.

DATABASE SEARCHES

The updated review searched five computer databases: PsychINFO, Sociological Abstracts, ERIC, MEDLINE and HealthSTAR. The databases were searched on-line using the OVID and Galileo search engines. The searches also included key terms to limit the search to humans in the age range birth to eighteen years. Following this algorithm, 1,658 articles were identified. A summary of the key terms and the yields is presented in Table I.

Title Screen Review

Two raters independently screened the 1 658 citations obtained from the computerized database searches. The articles were sorted into relevant and non-relevant sets based on a title screen review. After screening the titles, the total number of relevant citations was 415. These citations did not include articles pertaining to clinical populations since all articles containing cancer, tumor, transplant, transplantation, syndrome, or disease in the title were excluded.

Articles were included if their titles contained any of the following terms: well-being or wellness, quality of life, life satisfaction, satisfaction with life, self-esteem, health, or happiness. In addition, articles had to contain one of the following terms in the title: child (or synonym), adolescent (or synonym), student (or synonym), pediatric, or measure, measures, measuring, correlates, determinants, instrument, scale, or index.

The two raters agreed on the inclusion of all but ten articles. Five articles contained synonyms for measure. These terms included "schedule", "questionnaire", and "assessment". One article contained the term "undergraduate", considered to be a synonym for student. Both raters agreed to include the aforementioned articles. The raters initially disagreed as to whether "obesity" should be excluded as a syndrome; however, after discussion, they agreed to include it. Lastly, three articles were included in the original search because they contained key terms within parentheses after the title. Both raters agreed to exclude these citations, as the word in parentheses were considered not part of the title. In sum, seven of the ten articles were included and three were excluded.

Content Screen Review

The remaining 415 citations were then screened using the exclusion criteria presented in Table II (Toles et al., 1993). As a result of this process, 240 citations were excluded. The second rater then screened a random 10% of these articles and found that both raters agreed on all except one article on "family life satisfaction". After discussion, they decided to include this article.

RESULTS

The results of the title and content screen are illustrated in Table III.

DEFINITIONS

Well-being is a term that is commonly used but inconsistently defined in the study of child development. A systematic review of the child well-being literature reveals that the definition of well-being is highly variable. Well-being has been studied across a wide

TABLE II
Content Screen Exclusion Criteria

Focus is a clinical condition.
The sample does not include a general or community population.
Focus is well-being of parents.
Sample has mean age of greater than 18 years; if the sample included children and adolescents, there is no specific analysis of them as a subgroup.
Focus is fetal or neonatal well-being.
Purpose is debate of ethical issue (e.g., Baby Doe).
Focus is mortality issue.
No references are cited.

TABLE III
Title and Content Screen Results

Database	Years searched	Results of search	Results after title screen N (% of total)	Results after content screen N (% of total)	Inter-rater reliability Cohen's Kappa
PsychINFO	1990–99	382	164 (39.5%)	122 (46.2%)	0.995
Sociological abstracts	1990–99	398	88 (21.2%)	43 (16.3%)	0.949
ERIC	1990–99	316	93 (22.4%)	49 (18.6%)	1.000
MEDLINE	1991–99	535	63 (15.2%)	45 (17.0%)	0.981
HealthSTAR	1990–99	27	7 (1.7%)	5 (1.9%)	1.000
Combined database results		1,658	415 (100.0%)	264 ^a (100.0%)	0.980

Note. There are 89 duplicates included in this value (264^a). Final number of citations after content screen = 175.

range of disciplines, age groups, cultures, communities and countries, resulting in an assortment of definitions. Unfortunately, the great variability among definitions and indicators of well-being hampers efforts to compare findings across studies.

Well-being has been defined by individual characteristics of an inherently positive state (happiness). It has also been defined on a continuum from positive to negative, such as how one might measure self-esteem. Well-being can also be defined in terms of one's context (standard of living), absence of well-being (depression), or in a collective manner (shared understanding).

A consistent, unified definition of well-being is needed. To further this end, well-being could be defined and operationalized at the individual level within a specific domain (physical, social, cognitive, or psychological) or at the environmental level by incorporating effects of the developing child's environmental context. A more useful definition of well-being would be one that is similar to the one adopted by Yarcheski, Scoloveno, and Mahon (1994). Yarcheski et al. used Columbo's (1986) conceptualization of adolescent well-being, which described well-being as "a multidimensional construct incorporating mental/psychological, physical, and social dimensions" (p. 288). This type of consistent approach leads to a more comprehensive definition spanning multiple domains and influences. In our review, we found five similar definitions presented in Table IV.

THE DOMAINS AND INDICATORS OF CHILD WELL-BEING

The literature reviewed resulted in the identification of five distinct domains of well-being: physical, psychological, cognitive, social, and economic. The social domain includes only sociological perspectives. Psychosocial perspectives fall within the psychological domain. The psychological domain includes indicators that pertain to emotions, mental health, or mental illness, while the cognitive domain includes those indicators that are considered intellectual or school-related in nature. Indicators for each domain were divided into negative and positive clusters (see Appendix). Negative or deficit indicators represent a one-dimensional negative state, such as anxiety or depression. Positive indicators comprise elements of a one-dimensional positive state, such as happiness, and those on a continuum, such as self-esteem (Toles et al., 1993). Table V summarizes the number of negative and positive well-being indicators studied within a domain for each age group.

TABLE IV
Definitions of Well-being

Author	Definition of Well-being
Columbo, S.A. (1986)	“A multidimensional construct incorporating mental/psychological, physical, and social dimensions”, as cited in Yarcheski et al. (1994: p. 288).
Weisner, T.S. (1998)	“The ability to successfully, resiliently, and innovatively participate in the routines and activities deemed significant by a cultural community. Well-being is also the states of mind and feeling produced by participation in routines and activities” (pp. 75–76).
Schor, E.L. (1995)	“Children’s health and well-being is directly related to their families’ ability to provide their essential physical, emotional, and social needs” (p. 413).
Keith, K.D. and R.L. Schalock (1994)	“General view of the person’s feelings regarding his/her life circumstances, including personal problems and some questions about family” (p. 84).
Martinez, R.O. and R.L. Dukes (1997)	“As self-esteem, purpose in life, and self-concept of academic ability (self-confidence)” (p. 504).

Although a wide variety of indicators have been investigated, some common themes were noted. In general, there are a greater number of indicators used to study older children. The physical, cognitive, economic, and social domains tend to measure more positive indicators of well-being, while the psychological domain relies more heavily on deficit indicators. The psychological domain has the largest total number of indicators and is the only domain where more deficit than positive indicators have been studied. Reliance on negative or deficit indicators of well-being fails to capture the positive continuum of the strengths, assets, and abilities that can be promoted in children and adolescents. For example, in one study, stress and depression were the sole indicators of adolescent well-being (McFarlane et al., 1995). Well-being is, of course, more than the absence of stress and depression. However, a core set of positive indicators of child well-being has not yet been determined.

TABLE V
Summary of Well-being Indicators by Domain, Status and Age Group

	Domain					Total
	Cognitive	Economic	Physical	Psychological	Social	
<i>Child^a</i>						
Deficit	3	0	4	25	3	35
Positive	4	1	8	21	7	41
<i>Pre-adolescent^b</i>						
Deficit	3	1	4	41	4	53
Positive	6	1	7	30	12	56
<i>Adolescent^c</i>						
Deficit	4	0	4	40	3	51
Positive	7	1	6	36	12	62
Total	27	4	33	193	41	298

^aChild includes ages 2 to 10 years.

^bPre-adolescent includes ages 8 to 13 years.

^cAdolescent includes ages 11 to 19 years.

MEASURING CHILD WELL-BEING

There is little agreement in the research literature on how to best measure child well-being. Well-being was assessed using structured and non-structured interviews, standardized tests, and single-item questions from national data sets. Objective measures of child well-being ranged from reviews of individual child case histories, educational assessments, and medical records to infant death rates, national statistics on delinquency and suicide attempts, and drug offense rates. Subjective measurement of well-being typically consisted of one of the following approaches: one-dimensional measures, multidimensional single scale measures, or the use of multiple separate measures. For each age group, there were more subjective measures than objective measures. For children, there were 137 subjective measures and 36 objective measures, for pre-adolescents, there were 220 subjective measures and 36 objective measures, and for adolescents, there were 245 subjective measures and 34 objective measures.

As the most common approach to the measurement of well-being, the use of multiple separate measures involves the assessment of presumed indicators of well-being such as self-esteem, depression, or relationships. This approach, while prevalent, has significant limitations. Studies that use a few scales to measure indicators of well-being in one or two domains miss the other dimensions. Thus, these studies may not actually measure well-being because they do not include important domains of well-being.

Positive and negative indicators of well-being, such as self-esteem and depression, are commonly measured to assess overall well-being. However, well-being is more than a sole indicator in a single domain. In order to accurately measure well-being, it is critical that the measurement tool used captures the multi-dimensional nature.

Measurement of well-being frequently diverges from the multi-dimensional nature of the construct. Researchers often report that they are measuring a child's well-being when in fact they are assessing a single domain or indicator of well-being, not recognizing they are merely assessing an aspect of well-being. The studies included in this review were mostly categorical with 80.0 percent measuring only a single domain, 13.1 percent measuring two domains, and 4.6 percent measuring three domains. Only four articles included in this review, or 2.3 percent, assessed child well-being in the cognitive, physical, psychological, and social domains (Ajdukovic and Ajdukovic, 1993; Evans et al., 1998; Househnecht and Sastry, 1996; McCormick et al., 1996).

For each domain, measures assessed presumed negative and positive indicators of well-being. For instance, instruments used to assess well-being by measuring positive indicators within the psychological domain include the Rosenberg Self-Esteem Scale (Rosenberg, 1965) and the Purpose in Life Scale (Crumbaugh, 1968). Examples of instruments measuring deficit indicators within the psychological domain include depression and anxiety measures, such as the Child Depression Inventory (Kovacs, 1981), the State-Trait Anxiety Inventory (Spielberger, 1983), and the Hospital Anxiety and Depression Scale (Zigmond and Snaith, 1983). Some measures, such as the Affect Balance Scale (Bradburn, 1969) and the General Well-Being Scale (Andrews and Whitney, 1976), identi-

fied a balance between the positive and negative psychological state to assess well-being.

Measures in the social domain assessed family and peer relationships, the availability of emotional and practical support, personal resources, socially desirable behaviors, and interpersonal, and communication skills. In the cognitive domain, assessment focused primarily on academic achievement and intelligence tests; however, measures of creativity, memory, classroom behavior, perceived competence in academic ability, and whether or not the child or adolescent was satisfied with or liked school were also identified. Instruments in this domain also included measures that assessed parents, school counselors, and teachers' perception of children's academic performance.

The economic and physical domains had the fewest number of instruments. Economic measures included assessments of family resources, adequacy of parental income, and economic hardship. These measures were primarily used in determining government assistance and child support. Measures in the physical domain assessed physical health. These measures included physical examinations, assessments of participation in physical activities, wellness knowledge, and eating attitudes. Negative health behaviors were also assessed in some instances in which the study examined variables of risk behavior, such as smoking and drug use.

There is no standard method to assess well-being in children. The majority of authors used multiple separate measures of presumed indicators of well-being in an effort to capture a more complete assessment of the state of the child's well-being. Some studies examined well-being using only instruments that measured deficit indicators such as depression and anxiety, while others used measures of only positive indicators such as self-esteem and life satisfaction. Some used a combination of the two. A child's well-being cannot accurately be assessed by examining only whether or not the child exhibits a particular "mood" or "feeling". Assessing specific indicators such as depression or self-esteem reflects a facet of the child's psychological well-being and not well-being in its entirety.

In conclusion, a voluminous number of instruments are currently being used to assess child well-being. Many of these instruments were not designed to measure well-being as a construct but rather

measure specific indicators of well-being. Using these measures, researchers have equated either the presence or absence of a specific presumed indicator to “well-being”. Further research needs to be done in the area of defining and measuring well-being as a construct. The development of a multi-domain instrument, which captures both subjective and objective data using an ecological approach in examining the child’s performance, would be most useful. Table VI illustrates a sampling of instruments that have been used to assess well-being.

CONCLUSIONS

Inconsistent use of definitions, indicators, and measures of well-being has created a confusing and contradictory research base. Findings from this review point to significant gaps in the child well-being literature and suggest future directions for research. Currently, studies on well-being frequently employ “bait and switch” tactics: well-being is in the title of the article yet, upon further inspection, well-being is measured in only a single domain or with primarily deficit indicators. Inconsistencies in defining well-being were not the only limitations identified in prior studies. Much of the research base is correlational in nature, which does not allow for an examination of direction of effects. Other studies measure well-being inconsistently.

Well-being is often framed within a model of child deficits rather than a model of child strengths. This emphasis might lead researchers, policymakers, and practitioners to focus research and intervention efforts on children’s deficits and discount the potential to identify and promote children’s strengths.

Several limitations of this study should be noted. Although the systematic search strategy was thorough, limiting the key words searched restricted the scope of the literature retrieved. A second potential limitation is the exclusion of non-journal articles, precluding gleaning information from unpublished literature.

TABLE VI
Well-being Instruments

Instrument	Description	Indicator	Domain	Age	Reliability*
Perceived Competence Scale for Children (Harter, 1982)	Designed to measure children's perceptions of their competence and self-adequacy	Cognitive competence, peer relationships, scholastic performance, physical skills/competence, & global self-worth	Physical, social, psychological, and Cognitive	8-13 yrs	0.70-0.87
Multidimensional Students' Life Satisfaction Scale (Huebner, 1994)	Assesses children's subjective perceptions of life satisfaction in five conceptually relevant domains.	Life satisfaction	Psychological and social	Grades 3-8	0.90 for the total scale
Cognitive Abilities Test (Thorndike and Hagen, 1986)	Designed to assess the development of cognitive abilities related to non-verbal, quantitative, and verbal reasoning and problem-solving skills	Reasoning and problem-solving	Cognitive	5-18 yrs	Low 0.90s

TABLE VI
Continued

Instrument	Description	Indicator	Domain	Age	Reliability*
Family Adaptability and Cohesion Scales (FACES III) (Olson et al., 1985)	20-item scale designed to assess family functioning	Family cohesion and family adaptability	Social	Adolescents, Adults	0.68
Battelle Developmental Inventory Screening Test (Newborg et al., 1988)	Designed to be used as a tool for screening, diagnosis, and evaluation of early development	Self-concept, affect, coping, adult interaction, peer interaction, social role, personal responsibility, eating, dressing, attention, toileting, receptive and expressive communication, academic skills, memory, reasoning, cognitive development, perceptual motor, locomotion, muscle control, and body coordination.	Social, psychological, physical, and cognitive	Birth to 8 yrs	0.97

*Note. Test-retest reliability.

FUTURE DIRECTIONS

The future child well-being research agenda can be built upon what has been learned. A logical next step is to develop a set of core positive indicators of child well-being in each domain in conjunction with a set of instruments that measure them. Such work would yield important contributions to the conceptualization and measurement of child well-being and, ultimately, improve the practice of promoting the well-being of children.

APPENDIX

Indicators by Domain and Age Group^a

Domain (status) indicators	Age group		
	Child	Pre-adolescent	Adolescent
Cognitive (negative)			
Academic incompetence			*
Concentration	*	*	*
Developmental delay	*	*	*
School Behavior problems	*	*	*
Cognitive (positive)			
Academic achievement	*	*	*
Cognitive ability	*	*	*
Quality of school life			*
School function	*	*	*
School integration		*	*
School-related behaviors	*	*	*
Self-concept of academic ability		*	*
Economic (negative)			
Child support		*	
Economic (positive)			
Child support	*	*	*

Continued

Domain (status) indicators	Age group		
	Child	Pre-adolescent	Adolescent
Physical (negative)			
Health compromising behaviors	*	*	
Physical abuse	*		
Physical manifestations of stress	*	*	*
Physical symptoms of illness	*	*	*
Substance abuse			*
Substance use		*	*
Physical (positive)			
Exercise	*	*	*
Full immunization coverage	*		
Health promoting behavior	*	*	
Nutrition	*	*	*
Personal body care	*	*	*
Physical appearance	*	*	
Physical health	*	*	*
Safety-related behavior	*	*	*
Well-being			*
Psychological (negative)			
Adjustment problems	*	*	
Aggression	*	*	*
Anger	*	*	*
Anxiety	*	*	*
Behavior problems	*	*	*
Delinquency			*
Depression	*	*	*
Despondency	*	*	*
Deviant behaviors	*	*	*
Distress		*	*
Eating-related behavior problems		*	
Emotional problems	*	*	*

Continued

Domain (status) indicators	Age group		
	Child	Pre-adolescent	Adolescent
Externalizing behaviors	*	*	*
Fearfulness	*	*	*
Fears of future		*	
General psychological distress		*	
Health compromising behaviors	*	*	
Hopelessness		*	*
Hyperactivity	*	*	*
Impaired concentration		*	*
Inattention			*
Internalizing behaviors	*	*	*
Irritability		*	*
Loneliness		*	*
Maladjustment		*	
Negative affect		*	*
Nervousness		*	*
Neuroticism		*	
Nightmares	*	*	*
Non-psychiatric disturbances		*	*
Panic		*	*
Psychiatric symptoms	*	*	*
Psychological distress	*	*	*
Psychological health symptoms			*
Recurrent memories of bullying		*	*
Self-centeredness			*
Self-inflicted injury	*	*	*
Spitefulness	*	*	*
Stress	*	*	*
Suicidal ideation/attempts		*	*
Weeping	*	*	*
Whining	*	*	

Continued

Domain (status) indicators	Age group		
	Child	Pre-adolescent	Adolescent
Withdrawal	*	*	*
Psychological (positive)			
Adjustment	*	*	*
Attachment	*	*	*
Autonomy			*
Behavioral competence	*	*	
Behavioral functioning	*	*	*
Capacity to love			*
Cheerfulness	*		
Competence	*	*	*
Coping	*	*	*
Emotional adjustment	*	*	*
Emotional support	*	*	*
Expansiveness			*
Expectancy for success		*	*
Fulfillment			*
Global satisfaction		*	*
Global self-worth	*	*	*
Happiness		*	*
Hopefulness			*
Initiative	*	*	*
Life satisfaction	*	*	*
Mastery			*
Mental health	*	*	*
Overall functioning	*	*	*
Positive affect		*	*
Positive attitude toward school		*	*
Positive attitude toward self			*
Positive mood	*	*	
Purpose in life		*	*

Continued

Domain (status) indicators	Age group		
	Child	Pre-adolescent	Adolescent
Resilience	*	*	*
Satisfaction with gender		*	*
Satisfaction with self		*	*
Self-concept		*	*
Self-esteem	*	*	*
Self-identified strengths			*
Self-reliance			*
Self-satisfaction			*
Self-worth	*	*	*
Socio-emotional adjustment		*	*
Stress management	*	*	
Well-being	*	*	*
Social (negative)			
Anti-social behavior		*	
Negative life events			*
Peer problems	*	*	
Poverty	*	*	*
Troubled home relationships	*	*	*
Social (positive)			
Family relations	*	*	
Parent-child relations	*	*	*
Participation in cultural activities	*	*	*
Prosocial behaviors		*	*
Prosocial values		*	*
Quality of life	*	*	*
Relationships in the home	*	*	*
Relationships in the school		*	*
Relationships with peers	*	*	*
Social acceptance	*	*	

Continued

Domain (status) indicators	Age group		
	Child	Pre-adolescent	Adolescent
Social skills		*	*
Social support		*	*
Socioeconomic status	*		
Well-being			*

Note. *the symbol under age group indicates the indicator was found in the literature. ^aAge group: Child includes ages 2 to 10 years; Pre-adolescent includes ages 8 to 13 years; Adolescent includes ages 11 to 19 years.

REFERENCES

- Ajdukovic, M. and D. Ajdukovic: 1993, 'Psychological well-being of refugee children', *Child Abuse and Neglect: The International Journal* 17(6), pp. 843–854.
- Andrews, F. M. and S. B. Withey: 1976, *Social Indicators of Well-Being: Americans' Perceptions of Life Quality* (Plenum Press, New York, NY).
- Bradburn, N. B.: 1969, *The Structure of Psychological Well-being* (Aldine Press, Chicago, IL).
- Columbo, S. A.: 1986, 'General well-being in adolescents: its nature and measurement' (Doctoral dissertation, Saint Louis University, 1984), *Dissertation Abstracts International* 46, 2246B.
- Crumbaugh, J. C.: 1968, 'Cross-validation of Purpose-In-Life Test based on Frankl's Concepts', *Journal of Individual Psychology* 24(1), pp. 74–81.
- Evans, G. W., S. J. Lepore, B. R. Shejwal and M. N. Palsane: 1998, 'Chronic residential crowding and children's well-being: an ecological perspective', *Child Development* 69(6), pp. 1514–1523.
- Harter, S.: 1982, 'The perceived competence scale for children', *Child Development* 49, pp. 788–799.
- Househnecht, S. K. and J. Sastry: 1996, 'Family life satisfaction, age, length of residency: predicting alcohol and cigarette use among Korean adolescents in Australia', *Psychological Reports* 78, pp. 187–193.
- Huebner, E. S.: 1994, 'Preliminary development and validation of a Multidimensional Life Satisfaction Scale for Children', *Psychological Assessment* 6(2), pp. 149–158.
- Keith, K. D. and R. L. Schalock: 1994, 'The measurement of quality of life in adolescence: the Quality of Student Life Questionnaire', *American Journal of Family Therapy* 22(1), pp. 83–87.

- Kovacs, M.: 1981, 'Rating scales to assess depression in school-aged children', *Acta Paedopsychiatrica* 46(5-sup-6), pp. 305–315.
- Martinez, R. O. and R. L. Dukes: 1997, 'The effects of ethnic identity, ethnicity, and gender on adolescent well-being', *Journal of Youth and Adolescence* 26(5), pp. 503–516.
- McCormick, M. C., K. Workman-Daniels and J. Brooks-Gunn: 1996, 'The behavioral and emotional well-being of school-age children with different birth weights', *Pediatrics* 97(1), pp. 18–25.
- McFarlane, A. H., A. Bellisimo and G. R. Norman: 1995, 'Family structure, family functioning and adolescent well-being: the transcendent influence of parental style', *Journal of Child Psychology & Psychiatry & Allied Disciplines* 36(5), pp. 847–864.
- Newborg, S., G. Wnek and Svinicki: 1988, *Battelle Developmental Inventory Screening Test* (Riverside Publishing Company, Chicago, IL).
- Olson, D. H., J. Portner and Y. Lavee: 1985, *Family Adaptability and Cohesion Evaluation Scales* (Life Innovations, Roseville, MN).
- Rosenberg, M.: 1965, *Society and the Adolescent Self-Image* (Princeton University Press, Princeton, NJ).
- Schor, E. L.: 1995, 'Developing communality: Family-centered programs to improve children's health and well-being', *Bulletin of the New York Academy of Medicine* 72(2), pp. 413–442.
- Spielberger, C. D., R. L. Gorsuch, R. Lushene, P. R. Vagg and G. A. Jacobs: 1983, *State-Trait Anxiety Inventory* (Consulting Psychologists Press, Palo Alto, CA).
- Thorndike and Hagen: 1986, *Cognitive Abilities Test* (Riverside Publishing Company, Chicago, IL).
- Toles, M., S. Marks, B. Fallon and D. Offord: 1993, *A Literature Review of Child Well-Being: Concepts, Measurements and Determinants*. Unpublished manuscript.
- Weisner, T. S.: 1988, Fall, 'Human development, child well-being, and the cultural project of development [Review]', *New Directions for Child Development* (81), pp. 69–85.
- Yarcheski, A., M. A. Scoloveno and N. E. Mahon: 1994, 'Social support and well-being in adolescents: the mediating role of hopefulness', *Nursing Research* 43(5), pp. 288–292.
- Zigmond A. S. and R. P. Snaith: 1983, 'The hospital anxiety and depression scale', *Acta Psychiatrica Scandinavica* 67, pp. 361–370.

Center for Child Well-being

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