Assessing Social-Emotional Development in Children

From a Longitudinal Perspective

for the National Children's Study

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This paper addresses five dimensions relating to the assessment of social-emotional development in children: (1) Social Competence; (2) Attachment; (3) Emotional Competence; (4) Self-perceived Competence; and (5) Temperament/Personality.

Social Competence. The first dimension is social competence, which we define theoretically as effectiveness in developmentally appropriate social interactions (Rose-Krasnor, 1997). Such effectiveness should be assessed using a multi-informant, multi-method perspective—i.e., who considers the social interaction effective? Informants should include parents, teachers (preschool/childcare, elementary, high school), agemates (i.e., peers), and children themselves, as well as independent observers. Each of these informants has a unique viewpoint that can enrich our understanding of the child's social competence strengths and weaknesses.

Next, for each informant, a number of more specific skills crucial to social effectiveness need to be measured. What is measured differs across developmental epochs, as detailed later in this white paper. In general, however, these specific skills would include elements like cooperation, helpfulness, ability to resolve conflicts, etc. (see Compendium of Measures, p. 1). Thus, measures that tap effectiveness in social interaction are recommended, as this construct may be differently perceived at different ages depending on each age's developmental task. Multiple informants are extremely desirable, as is sufficient breadth of coverage, at each age level, for the various skills that instantiate such effectiveness.

Attachment. The second dimension is attachment**,** which begins as the deep and enduring connection established between a child and caregiver in the first several years of life. From this early foundation, close relationships with others throughout life may take on the characteristics of attachment. Furthermore, the properties of childhood attachment and adult attachment are much the same and show similar characteristics.

Attachment relationships are defined by these properties (Weiss, 1991):

- Proximity seeking: Attempting to remain within a self-defined protective range, which is reduced in threatening situations.
- Secure base: Presence of attachment figure fosters security and leads to exploration.
- Separation protest: Threat to accessibility of attachment figure leads to protest and attempts to avoid separation.
- Elicitation by threat: When anxious, individuals display attachment feelings and direct themselves towards attachment figures.
- Specificity: Attempts to substitute other figures do not succeed, even where the quality of care and attention is equivalent.
- Inaccessibility to conscious control: Attachment feelings and separation protest persist even after permanent separation (e.g., death).
- Persistence: Attachment does not wane through habituation. Separation produces pining, which only slowly abates and does not desist but is incorporated into a despairing outlook.
- Insensitivity to attachment figure's behavior: Attachment persists even where the attachment figure's behavior is abusive. This can result in the association of feelings of anger or miscue with attachment feelings, which may give rise to conflict.

In the end analysis, what appears important to overall functioning is the security of such relationships. Such security is often related to competence in other domains of social, emotional, and even cognitive development. To measure attachment at differing age periods, it is recommended that parent-toddler/child relationships be measured at least through childhood; during middle childhood and adolescence, relationships with peers should be examined; and, finally, toward the end of adolescence, attachment with romantic partners can be assessed.

Emotional Competence. The third dimension is emotional competence, which we define theoretically as the multi-faceted ability to strategically be aware of one's own and others' emotions and to act on this awareness, so that one can negotiate interpersonal exchanges and regulate emotional experience (Saarni, 1990). Constituent elements of emotional competence include abilities to:

- Express and experience a broad variety of well-modulated, not incapacitating, emotions
- Regulate the experience and expression of emotion—when "too much" or "too little" emotional experience, or the expression of emotions, interferes with one's intra- or interpersonal goals.
- Understand the emotions of oneself and others.

Thus, recommended assessment measures at all age periods, except infancy, include expression and experience, regulation, and understanding of emotions (Denham, 1998).

There is probably some overlap with these skills of emotional competence and the "skill level" of social competence—after all, all aspects of social interchange involve emotion. However, we consider the elements of emotional competence separately because: (1) they are central to optimal functioning, both intrapersonally and interpersonally, and (2) they are relatively recent inclusions in this repertoire, because of theoretical and methodological advances.

However, not all of these emotional competencies—regulating internal experience of emotion (as opposed to its outward expression), or understanding one's own emotion, for example—necessarily relate to social experience. After all, a child's controlling her nervousness at a piano recital does serve to make a better "presentation of self" to the audience, her parents, and her teacher (via her displayed emotions), but it serves an arguably even more important function of allowing her to continue to function and feel good about her performance. Correctly identifying such anxiety in oneself is likely an important prerequisite to such emotional regulation.

Self-Perceived Competence. These intrapersonal aspects of emotional competence may actually relate more closely to the fourth dimension, self-perceived competence. Self-perceived competence is defined theoretically as one's evaluations of one's own abilities, including the child's own assessment of cognitive, physical, and social abilities, especially in comparison to those of others. Logically, evaluations by peers and teachers contribute to these self evaluations of abilities, and thus evaluations by others are associated with children's self-perceived competence (Kurdek & Krile, 1982).

Thus, children's self-perception of competence is a multidimensional construct that may even increase in complexity with age (Harter, 1990; Jacobs, Lanza, Osgood, Eccles, & Wigfield, 2002). These self-perceptions are important because they are related to corresponding motivation and performance; in fact, age-related changes in perceived competence are related to decreases in

task value (Cauce, 1987; Cole, 1991). Assessment of self-perceived competence is recommended because a growing number of developmental theorists and researchers have argued that global measures of other self-evaluative constructs, such as self-concept and self-esteem, are flawed. In contrast, evidence supports self-perception measures that are more domain-specific, such as those recommended in the Compendium of Measures, as important outcomes in themselves and as predictors of even later outcomes.

Specifically, self-perceived competence is distinguishable from both self esteem and self concept. Self esteem is a global affective evaluation of the self, which, because of the myriad components lumped in one overall index (Harter, 1982), can be difficult to measure with adequate psychometric reliability and validity. Some few measures with good psychometric properties do exist for assessing self esteem in children and adolescence, but the literature convincingly portrays the better specificity and predictive power of self-perceived competence.

Self concept, when used appropriately as a term, refers to the descriptive components a child or adolescent would use to answer the question, “Who am I?” (e.g., “I am a girl, I do well in school, I live in Maryland, and I own a poodle.”). Such descriptions, although inherently interesting and changing across time, are probably not as germane as self-perceived competence to the study of development across time in response to multiple exposures.

Temperament/Personality. The fifth dimension is temperament/personality. Temperament is defined theoretically as: individual differences in reactivity and self-regulation assumed to have a constitutional basis; also "the characteristic phenomena of an individual’s emotional nature, including his susceptibility to emotional stimulation, his customary strength and speed of response, and the quality of his prevailing mood, these phenomena being regarded as dependent upon constitutional make-up" (Allport, 1961, p. 34). Current theoretical and empirical views of temperament emphasize these reactivity and regulation dimensions.

Emotional reactivity specifically refers to the speed and intensity with which individuals respond to stimulation (Rothbart & Derryberry, 1981). Researchers have distinguished between different types of emotional reactivity, each reflecting the ease and intensity with which children express and experience specific emotions: fearfulness, anger proneness, and affective positivity (Rothbart & Bates, 1998).

The recently-created construct of executive control is used to describe processes that affect the initiation, inhibition, or modification of behavior, including effortful control processes (Derryberry & Rothbart, 1997). Although maturation contributes to the growth of executive control, young children vary in this capacity; such individual differences led Rothbart and Bates (1998) to describe effortful control, a component of executive control, as an important core temperament characteristic. In general, reactivity is related to negative outcomes, whereas regulation is most often related to positive outcomes, particularly in interaction with environmental factors (Rothbart & Ahadi, 1994). Because of their clear theoretical and empirical value, then, temperament measures of reactivity and regulation are recommended.

As development proceeds, temperament’s biological predispositions are modified by environmental inputs and become elaborated into individual difference dimensions more similar

to adult dimensions of personality (Shiner, 1998; Shiner & Caspi, 2003). These individual difference dimensions include, but are not limited to, sociability, social inhibition, dominance, negative emotionality, aggressiveness, prosocial disposition, persistence/attention, mastery motivation, inhibitory control, and activity level. Aspects of these characteristics that were originally biologically-based temperamental attributes accumulate or diminish in response strength based on the pattern of reinforcement during development, and become elaborated into cognitive and affective representations that are quickly and frequently activated—i.e., personality traits. This elaboration may involve a number of processes that are involved at varying points of the child-to-adolescent period, including learning processes, environmental elicitation, environmental construal, social comparison processes, environmental selection, and environmental manipulation (Shiner & Caspi, 2003). Personality is defined as "the dynamic organization within the individual of those psychophysical systems that determine his unique adjustments to his environment" (Allport, 1937, p. 48; Shiner & Caspi, 2003).

There is also evidence that child/adolescent personality dimensions are associated with, and become increasingly similar to, the "Big Five" in adulthood, which includes the following dimensions (Shiner, 1998):

- Extroversion: Active, assertive, energetic, enthusiastic, outgoing, surgent, and talkative versus silent, passive, and reserved
- Agreeableness: Appreciative, forgiving, generous, kind, sympathetic, and trusting versus hostile, selfish, unsympathetic, uncooperative, rude, and mistrustful
- Conscientiousness: Efficient, organized, planful, reliable, responsible, thorough, able to delay gratification, and has high aspirations versus careless, negligent, and unreliable
- Neuroticism: Anxious, self-pitying, tense, touchy, unstable, worrying, and moody
- Openness to experience or intellect: Artistic, curious, imaginative, creative, has wide interests, and insightful versus shallow and imperceptive.

These dimensions of personality, or closely related demarcations, are associated with later adaptation in adulthood, including academic attainment, work competence, rule-abiding versus antisocial conduct, and romantic and friend relationships (Shiner, 2000; Shiner, Masten, & Roberts, 2003). It is difficult to pinpoint how childhood/adolescent personality impacts later outcomes, however; longitudinal designs, such as the National Children's Study (Study), and more dynamic models of personality development will be useful in answering such process-oriented questions (Shiner & Masten, 2002).

It obviously is difficult to disentangle temperament and personality. On the one hand, temperament is seen as more biologically-based, and is most often studied in infants and children. However, temperament can be assessed through adulthood, and research suggests links between temperament dispositions and the Big Five personality factors (Rothbart, Ahadi, & Evans, 2000). Thus, it is difficult to specify any excision of one of these constructs or the other to save time and/or money. If only one construct were to be chosen, however, temperament is probably the better bet; its assessment measures are both more specific (i.e., including multiple scales of reactivity and regulation that could enhance our understanding of emotional competence) and, at the same time, modestly to moderately related to concurrent measures of personality.

Socialization Agents' Behavior

Although it is important to evaluate the social and emotional status of children and adolescents, often the behavior of adults also is pivotal in the development of these attributes. Therefore, it is necessary to identify elements of parenting that are important in fostering or hindering social-emotional competencies, across these developmental epochs. Examples of socialization dimensions include both those general to parenting, negative and positive, and those more specifically related to socialization of emotional competence.

Commonly accepted dimensions of parenting that have been found to contribute to later child and adolescent outcomes include (Maccoby & Martin, 1983):

- Warmth as a style dimension of parenting—including affection, sharing activities
- Limit-setting as a style dimension of parenting—including structuring the child's environment, having "house rules"
- Use of reasoning/inductive discipline as a more specific parenting practice
- Use of power assertive/punitive discipline as a more specific parenting practice.

These parenting styles and practices are often related, especially in interaction with personal variables such as temperament, with important child and adolescent outcomes, although there are suggestions that some of these effects may be culture-specific. Measures selected to be included in the Compendium reflect these dimensions.

At the same time, there are specific practices related to the socialization of emotional (and social) competence that also need attention (Denham, 1998; Eisenberg, Cumberland, & Spinrad, 1998). They include:

- Openness to teaching about emotions and actual teaching about emotions are related to how well children understand emotions (Dunsmore & Karns, 2001). Often, actual teaching about emotions is carried out via parent-child reminiscences about emotional experiences, especially negative ones. These conversations can be seen as impacting children's developing emotion knowledge overall, but most especially their "emotional self-concept"—
  - Self-defining ("this is the kind of emotional person I am")
  - Self-in-relation ("this is how I express and share my emotions with others")
  - Coping ("this is how I cope with and resolve negative emotion").
- Reactions to children's emotions are important because they are related to children's expressiveness and emotion knowledge (Fabes, Poulin, Eisenberg, & Madden-Derdich, 2003). That is, supportive reactions are generally positively related to aspects of emotional competence, with punitive reactions generally negatively related.
- Parents' own emotions, which form the affective environment in which the child is being raised, are related to children's own expressive styles and emotion knowledge (Halberstadt & Eaton, 2003).

Issues To Consider When Selecting Assessment Measures

Now that the domains of social-emotional development, and parental socialization, are outlined, it is important to reflect upon certain issues in assessing them.

Continuity/Organization of Assessment. Continuity/organization of assessment is the first issue to consider when selecting assessment measures in any domain, and was considered carefully in the choice of measures included in the Compendium**.** Developmentalists grapple with this issue, which they consider very important—is validity homotypic (the same construct, shown in the same way, by a very similar measure—i.e., predictive validity), or is it heterotypic (the same construct, but shown in a different way, necessitating new measures)? Thus, it often is impossible to use the same measures of each of these dimensions, because ability to use certain measurement techniques changes with children's age. Arguably even more important, instances of specific constructs may change with children's/adolescents' age, necessitating different assessment tools. However, we have found within-dimension measures that have already evidenced across-epoch predictive validity. Wherever this search is futile, we submit that careful choice of psychometrically adequate measures partially obviates the problem of changing modes of measurement.

Also related to organization of assessment, stringent controls for Type I and Type II errors must be applied when analyzing large data sets containing many measures. Of particular concern for longitudinal studies, measures may be repeatedly completed by the same respondent in intervals short enough that respondents remember their answers; in this case, "real" change would be hard to detect (Type II error). Type I errors can occur when learning occurs (e.g., when children are assessed for their emotion knowledge over relatively short intervals, any portion of variance attributable to not "knowing" the testing procedures would be smaller in test periods subsequent to the first). This change would not reflect "true" change across time, again making "real" change hard to pinpoint (Type I error).

For these varied reasons, research designs should protect against obtaining different scores in the absence of real change, or the same scores in the presence of real change. One option following Item Response Theory (IRT) is to generate assessments using items selected randomly from a larger pool. This procedure might also provide a low-cost, science-based method of developing psychometrically adequate shorter assessments in some cases.

Inclusion/Exclusion of Specific Assessment Measures. The second issue to consider is the inclusion/exclusion of specific assessment measures. Specific criteria can be used to make decisions regarding appropriate assessment measures to include and exclude. They are as follows:

- Psychometric: All measures should meet high standards for reliability and validity.
  - Reliability: Test-retest, inter-rater, and internal consistency are crucial.
  - Validity: Predictive validity, construct validity, content validity, and concurrent validity are all important and should not be compromised. The criteria used to establish predictive validity should be made explicit and built upon sound theory and/or previous research.
- Cautions related to psychometrics: Although measures should be selected to meet accepted psychometric standards, it is also important that any inequalities in psychometric soundness are considered when interpreting results. Unless all measures selected meet similar high standards, results showing that some measures have greater predictive power than others may reveal more about uneven measurement development than about development and the factors that influence it.

- Examiner effects: It is also critical to determine whether characteristics of the examiner affect the results (whether a stranger, gender, ethnicity, match with child's demographics). Educational background, as well as type and intensity of training or certification required for obtaining reliable and valid data, should be determined.
- Informant: Where possible, multiple informants of the same dimension's measurement are recommended, because behavior is often context-specific, making it difficult to determine what a child knows or can do with a brief assessment conducted by one informant at one specific point in time. Multiple informants are also desirable because parent and teacher reports may reflect characteristics or biases of the respondent; for example, teacher reports especially may be biased according to child characteristics that include but are not limited to culture, ethnicity, race, and gender. Moreover, discriminations among children tend to improve with teacher-education, and teachers with more years of experience tend to give children higher ratings. In addition, precautions should be taken to ensure teacher-rating tools do not lose sensitivity when used with every child.
- Direct assessments of children should also be included, both structured and unstructured. These observational measures should be theoretically based to ensure construct validity, and should comprise a relatively small set of dependent variables that yield meaningful, easily analyzed and interpreted, data. Further, observing in varying contexts is important for the following reasons:
  - Protocols for collecting and coding observational assessments must be developed that measure social competency in the context of interactions with adults and peers during dyadic and group contexts.
  - Context dictates both the meaning of observed behaviors (e.g., aggressiveness), and whether children have the opportunity to display particular competencies. Thus, instruments should be developed that incorporate observing, coding and indexing behaviors according to theoretically based and well-specified context parameters.
- Parent- and teacher-report measures should be validated using standard direct assessments; however, this suggestion is complicated by the lack of standardized instruments for directly assessing children, especially during infancy and in the areas of social, emotional, and behavioral development. There is a particular need to develop standard direct assessments that adequately cover essential constructs in all domains across the period of early childhood.
- Another criterion is the cost of assessment in terms of time, skill, and equipment—we struggle with the very real tradeoffs between scientific adequacy and the logistical demands of such a huge study.
- Appropriateness to varying subpopulations is the final criterion for inclusion or exclusion of a measure, which we must consider. Norms and psychometric data for measures must be obtained for diverse samples that represent the demographics of U.S. children and families. Large-scale studies provide an opportunity to obtain this information. Problems with existing instruments, such as floor and ceiling effects, need to be eliminated to make them sensitive measures for children varying in background. Important subcriteria of this important issue include:
  - The child's/adolescent's native language and dialect must be considered when selecting, using, or developing new measures. This can be a very difficult issue. Bilingual assessments cannot be performed exclusively in only one language, or separately in both languages, suggesting that composite scores may be preferable. Moreover, identical assessments generally cannot be obtained in both languages because simple translations

do not make equivalent measures. One decision is whether to allow code switching or language switching within a test.

- Cultural sensitivity must be considered when selecting constructs and instruments. Differences in cultural norms and values (e.g., Asian and U.S. Caucasian values regarding emotion regulation and child competence) have implications for using information gleaned from assessment measures selected here. Most behaviors (e.g., self-regulatory behaviors) are important for human functioning in a variety of cultures, but the contexts for displaying these behaviors, and the conditions that elicit them (or not) may differ. Ultimately, decisions about measurement probably depend in part on the purpose of the study. A desirable approach would be to operationally define a set of core expected outcomes, assess whether cultural differences moderate effectiveness, and if so, determine how and why.

Developmental Milestones

Finally, any study of development must take into consideration what changes and what stays the same across time. Thus, instruments should track change and stability in all dimensions, without floor or ceiling effects. Ideally, measures would provide continuous assessment of progress from age 1 year through age 21 years. Of course, as already suggested, there are developmental milestones and tasks that make differing epochs require differing measurement tools. A developmental task represents our culture's definition of "normal" development at different points in the lifespan, the work to be accomplished during a particular period, such as becoming more autonomous. To do this with existing measures, instruments would most likely have to be aligned across periods, as shown in Table 1, which shows the general developmental tasks in each domain for each developmental period, for which assessment tools have been sought.

TABLE 1

Developmental Period	Developmental Milestones in Social-Emotional Domain Dimensions				
	Social Competence	**Attachment**	**Emotional Competence**	**Self-Perceived Competence**	**Temperament/ Personality**
Infancy (birth to 18 or 24 months)[a]	• Interest in people; shows desire for personal attention • Capable of coordinated interaction • Initiates contact with agemates	• Formation of attachment bond with adults • Inception of "internal working model" of attachment—i.e., security or insecurity of attachment emerges	• Expression of basic emotions • Differential reaction to adult emotions • Emotion regulation; some self-soothing, much assistance by adults	• Responds to own name; recognizes self • Expresses ownership or possession (Note: these milestones are really more closely allied with self concept than perceived competence)	• Shows distinct dimensions of self regulation and reactivity
The toddler period (18–24 months through 3 years)	• Plays alongside agemates • Participates in group play	• "Goal-corrected partnership" in attachment—i.e., the beginning of autonomy as well as connectedness	• Expression of more social emotions (e.g., guilt, shame, empathy • Begins to comprehend "good" and "bad" feelings • More independent emotion regulation	• Speaks positively of self • Desires autonomy • Begins to have some idea of distinct domains of self competence	• Moderate continuity seen in dimensions of temperament, but some change seen • Regulatory dimensions become more important due to anterior cortical brain development
The preschool period through kindergarten (3 to 5–6 years).	• Beginning peer interaction while managing emotional arousal • Beginning of specific friendships and peer status • Prosocial behaviors and interactions emerge	• Enjoys familiar adults • Separates easily from parents	• Expression of "blended" emotions • Understands expressions and situations of basic emotions • More independent emotion regulation	• Shows awareness of differentiated physical, social, and cognitive abilities • Speaks positively of self • Asserts self in socially acceptable ways	• Temperament beginning to be differentiated into personality
Gradeschool	• Formation of dyadic friendships • Solidification of peer status • General diminution of physical aggression	• Begins to balance connection to parents and peers	• Use of display rules • Understands complex emotions (e.g., ambivalence, unique perspectives) • Begins independently to use cognitive strategies to regulate emotions	• Greater differentiation of self perceptions of physical, social, and cognitive abilities • Social comparison becomes even more important	• Personality traits becoming more differentiated

TABLE 1 (CONTINUED)

Developmental Period	Developmental Milestones in Social-Emotional Domain Dimensions				
	Social Competence	**Attachment**	**Emotional Competence**	**Self-Perceived Competence**	**Temperament/ Personality**
Early Adolescence (12–14 years)	• Achieving new and more mature relations with others, both boys and girls, in their age group	• Continues balancing connections with parents and peers (in some ways peers now "come out on top," but parents are still important)	• More subtle experience and expression emotion • Ever more sophisticated understanding of unique emotional perspectives • Broader array of emotion regulatory strategies	• Begins a period of heightened self-awareness • Also begins a period of heightened self-consciousness	• Personality traits becoming more differentiated • Continuity from earlier years • Temperament dimensions of reactivity and regulation remain important
Middle Adolescence (15–17 years)	• Achieving new and more mature relations with others, both boys and girls, in their age group • Achieving emotional independence from parents and other adults	• Moves into even more intimate relationships with friends of the same and opposite sex	Same as above	• Achieving a masculine or feminine social role • Accepting one's physique	• Continuity from earlier years • Temperament dimensions of reactivity and regulation remain important
Late Adolescence/Early Adulthood	• Achieving emotional independence from parents and other adults • Desiring and achieving socially responsible behavior. • Preparing for marriage, family life, and career	Same as above	Same as above	• Acquiring a set of values and an ethical system as a guide to behavior—developing an ideology and other forms of identify	• Continuity from earlier years • Temperament dimensions of reactivity and regulation remain important

[a] For the Study, the relevant age here is 12–24 months

Integrating Assessment Tools for Developmental Tasks in Social-Emotional Domains by Developmental Period

To move forward in specifying the "gold standard" social and emotional measures for potential use in the National Children's Study, it is important to guide the reader through the accompanying Compendium of Measures by age level and subdomain. Thus, the following includes, for each age level, the recommended measures for each domain, their location in the Compendium, time to administer, ease of coding/scoring, overall feasibility, possible alternatives, and need for a substudy (where applicable).

I. Infancy (birth to 18 or 24 months) and Toddlerhood (18 to 36 months)

Summary. During infancy and toddlerhood, it is crucial to obtain indices of children's attachment to caregivers, initial social responses to parents and others, and temperament. Other domain-relevant constructs, such as self-perception and parenting, are either not yet testable, as in the case of self-perception, or, for the case of parenting, judged as less relevant since disciplinary encounters are just beginning in these age ranges.

To obtain information on the infants' and toddlers' social and emotional competence, the Infant-Toddler Social-Emotional Assessment or its brief version was chosen because no other measure for the age period captures, in one measure, so many of the specific subdomains delineated in the early portion of this white paper (e.g., the measure includes scales for Attention, Compliance, Prosocial Behavior, Peer Interaction, Empathy, Emotional Positivity, Task Mastery, and Emotional Awareness; Activity, Peer Aggression, Aggression/Defiance, and Negative Emotionality; Inhibition/Separation Difficulties; and Depression/Withdrawal), as well as specific age-related developmental milestones noted in Table 1.

Next, it is judged that attachment to caregivers cannot be overlooked in social-emotional assessment for this age range. Because of the complex nature of this construct, most measurement techniques take considerable time in training and observation. After careful consideration, the Attachment Q-sort is strongly recommended, but with mothers as informants (to avoid the lengthy training and observation times required of independent observers). Maternal AQS sorts (Teti & McGourty, 1996; Teti, Nakagawa, Das, & Wirth, 1991) have been shown to have validity in U.S. samples. The observation/sorting time for each mother is justified given the huge theoretical and empirical importance of the construct. Changes to the Q-sort involving, for example, likert-scale ratings only, have been deemed unacceptable by this writer and expert users because of the degradation of the measure's validity and reliability, with resultant creation of an essentially "unknown quantity."

For measuring temperament, there are a number of measures available, usually overlapping to a great extent. The Rothbart Scales were chosen for two reasons: (1) the questionnaires are derived from documented neuroscientific findings and take an integrative approach, cutting across social and cognitive areas, with parallel measures available from infancy to adulthood, and (2) the item content of the questionnaires best fits the important social-emotional constructs put forward here, particularly in their emphasis on emotion, regulation, and personality.

TIMING SUMMARY—measurements made at 18 and 30 months:

- Approximately 2 hours for mothers
- Approximately ¾ hour for fathers
- Approximately ¼ hour for teachers

Details on these measures are as follows for the **INFANCY/TODDLERHOOD AGE RANGE**:

A. Social Competence/Emotional Competence Combined: Infant-Toddler Social-Emotional Assessment (ITSEA) or Brief Infant-Toddler Social-Emotional Assessment (BITSEA): Compendium pp. 16–17

1. Time to administer: (administer at least twice, during infancy and toddlerhood)
   a. ITSEA—approximately 30 minutes
   b. BITSEA—approximately 15 minutes
2. Ease of coding/scoring—Hand-scoring not time consuming (15 minutes?)
3. Alternatives if needed—N/A
4. Substudies needed?—N/A

B. Attachment: Attachment Q-Sort (AQS), Compendium pp. 22–23

1. Time to administer, with mothers as observers:
   a. Approximately 1.25 hours
2. Ease of coding/scoring
   a. Computerized scoring rapid and error-free
3. Alternatives if needed—None that are any quicker at this age level.
4. Substudies needed?—If the Study cannot invest in this important tool for the entire sample, then I would strongly advocate substudies' usage.

C. Temperament: Infant Behavior Questionnaire (IBQ) or Infant Behavior Questionnaire-short form for infancy, Early Childhood Behavior Questionnaire (ECBQ) or Early Childhood Behavior Questionnaire-short form for toddlerhood, Compendium pp. 57–59

1. Time to administer:
   a. IBQ and ECBQ—approximately 40–60 minutes each
   b. Short Form IBQ or ECBQ—approximately 30 minutes
2. Ease of coding/scoring—Scoring facilitated by SPSS routines; enter raw scores only
3. Alternatives if needed—N/A
4. Substudies needed?—No; I strongly advise the longitudinal use of the Rothbart scales throughout the study.

D. Self-Perception and Parenting not included in this age period

1. Rationale:
   a. Self-perception just beginning and measures mostly capture normative development rather than individual differences
   b. Parenting not easily captured in self-report at this age period; direct assessments would prove even more time-consuming and costly than the AQS. However, we could begin to obtain the information listed under preschool and beyond.

E. Summary of Measurement During Infancy/Toddlerhood

1. The measures to use should be the Brief Infant-Toddler Social-Emotional Assessment and Infant Behavior Questionnaire/Early Childhood Behavior Questionnaire (Short Forms, dependent on age of child), along with the Attachment Q-sort, for mothers only. Fathers should complete the first two measures.
   a. These can be completed after being mailed to participants, and picked up by the experimenter at the home/childcare visit.
   b. Attachment Q-sort description/training and completion takes about 1.25 hours for mother in the experimenter's presence.
2. Caregivers at childcare can complete the Brief Infant-Toddler Social-Emotional Assessment for each participant, for a total of approximately 15 minutes per participant. These can be completed during the experimenter's visit to the childcare facility (although this should be discussed in advance in order to schedule free time for the caregiver to do so).
3. TIMING:
   a. Total for parents:
   b. Approximately 2 hours for mothers
   c. Approximately ¾ hour for fathers and ¼ hour for teachers
   d. Recommended timing of testing: 18 and 30 months
4. Other comments/substudies
   a. The Infant Toddler Social Emotional Assessment (full form) has been recommended by another consultant to the Study, for clinical use. If this more optimal course were taken, approximately ¼ hour per reporter would be added.

II. Preschool/Early Childhood (age 3 to 5+ years)

Summary. During this age period, many aspects of social and emotional competence begin to blossom. Regarding social competence, children's interactions with peers increase in frequency and importance, but relationships with adults remain important, as noted in Table 1. At the same time, the elements of emotional competence (i.e., expression, understanding, and regulation) are more easily discerned and assessed.

To obtain information about the important aspects of social competence (e.g., prosocial interaction, aggression, and isolation), the Social Competence Behavior Evaluation (Short Form; SCBE-30) is chosen for the Study, based on its close adherence to developmental milestones of social competence already noted, and, simultaneously, the attention it gives to both expression and regulation of emotions. In short, the SCBE-30 conforms most closely to the construct definitions of social and emotional competence put forward here.

Alternatives noted (i.e., the Devereux Early Childhood Assessment and Penn Interactive Peer Play Scale) also tap important aspects of social and emotional competence. The Penn Interactive Peer Play Scale might be useful in that it was developed to measure very similar dimensions as the SCBE-30, but also to be particularly ecologically valid in its focus on play and its creation in consultation with early childhood educators and care providers. The Devereux Early Childhood Assessment accesses issues pertaining to attachment, initiative, and self control, and is very quick to complete.

At this age, multiple informants—observers, parents, teachers, peers, and self—become not only useful but crucial, in order to triangulate measures for the most complete view of each child's social competence. Thus, the Study can now begin to use the Social Skills Rating System, which allows for multiple informants. It is recommended as an adjunct to the SCBE-30 because of the ability to begin using it at this age through late adolescence. The Minnesota Preschool Affect Checklist allows observers to capture a complete snapshot of children's social and emotional competence in 20 minutes of observation. Further, sociometric ratings can also begin to be used at this age range, when peer views of social competence become useful. Finally, the social scales of the Berkeley Puppet Interview (i.e., Peer Acceptance & Rejection, Bullied by Peers, Asocial with Peers, Social Inhibition, Overt Aggression/Hostility, Relational Aggression, Prosocial Behavior) give the child's own view of social competence; the academic scales can be administered in one more 20-minute interval, to form a complete evaluation of self-perceived competence.

Regarding attachment, one more completion, by mothers, is recommended for the Attachment Q-sort, at age 3 ½ years. Another measure of attachment for this age range, from the child's perspective (e.g., the Narrative Story Stem Test) require extensive coding and training, rendering it most useful for substudies. The Student-Teacher Relationships Scale, while interesting, is deemed ancillary for this study. Finally, the Devereux Early Childhood Assessment included an attachment subscale embedded within it, and at the very least this subscale should be completed by mothers and teachers.

With respect to emotional competence, it is also at this age range that obtaining a differentiated view of emotional competence becomes viable. For emotion knowledge, the Affect Knowledge Test is recommended as direct assessment with the child; this aspect of emotional competence is predictive of many later social outcomes. In terms of emotional expression and regulation, it is recommended that views of multiple informants be obtained. In this case, emotional expression can be tapped via parent report on the Rothbart Child Behavior Questionnaire (with the advantage of parallel measures across ages), direct assessment via the *Emotion Matters* protocol, and observers' completion of the Minnesota Preschool Affect Checklist. For emotion regulation, teachers can complete the Self-Control scale of the Devereux Early Childhood Assessment and the Emotion Regulation Checklist, via parent report on the Rothbart Child Behavior Questionnaire (also important for Temperament assessment), direct assessment via the *Emotion Matters* protocol, and observers' completion of the Minnesota Preschool Affect Checklist. It is notable here that one parental questionnaire, two very short teacher questionnaires, one observer checklist, and one direct assessment period can yield important, detailed information on both aspects of emotional competence.

At this age period, it also becomes important to obtain information on socialization agents' behavior. Specifically regarding their emotion socialization behavior, parent-report questionnaires were chosen about parental reactions to emotions, modeling of emotional expressiveness, and teaching children about emotion. These measures were chosen, in part, because of their established psychometric utility, the dearth of alternatives, and because they are usable across several years of the children's lives. They include the Coping with Children's Negative Emotions Scale, Self Expressiveness in the Family Questionnaire, and Toronto

Alexithymia Scale. Age-specific emotion teaching scales include the Emotion-Related Beliefs and Emotional Styles questionnaires.

In reference to overall parenting behavior, the Parent Practices Questionnaire was chosen for its valid and reliable demonstration of commonly cited dimensions of parenting (i.e., Authoritative, Authoritarian, and Permissive), as well as the ability to use the questionnaire through gradeschool; several potential alternatives are noted. The Parenting Feelings Questionnaire is also recommended at this age period because of the importance of parent affect.

TIMING PER CHILD:

Age Range/ Informant	**Age 3**	**Age 4**	**Age 5**	**Age 6**
Mother/Father	120 minutes	75 minutes	90 minutes	105 minutes
Teacher/Caregiver	85 minutes	30 minutes	85 minutes	30 minutes
Observer	20 minutes	20 minutes	20 minutes	---
Child—Direct Assessment	20 minutes	90 minutes	10 minutes	70 minutes

Details on these measures are as follows for the **PRESCHOOL/EARLY CHILDHOOD AGE RANGE:**

A. Social Competence

1. Social Competence Behavior Evaluation (SCBE -30) (for teacher and parent): Compendium pp. 7–8
   a. Time to administer: about 15 minutes per respondent
   b. Ease of coding/scoring: simple
   c. Alternatives or additions:
      (1) Devereux Early Childhood Assessment (DECA) (Compendium p. 18) for parent and teacher completion
         (a) Time to administer: 5–10 minutes per respondent
         (b) Ease of coding/scoring: simple
         (c) Cost: approximately $200/kit, ~$40 for pack of 40 answer forms.
      (2) Penn Interactive Peer Play Scale (PIPPS, Compendium pp. 9–10) for teacher and parent
         (a) Time to administer: approximately 15 minutes
         (b) Ease of coding/scoring: simple
   d. Substudies needed? Although I would like to see all three measures used because of their different foci, perhaps the DECA and PIPPS could be used in substudies.
2. Social Skills Rating System (SSRS) (for teacher and parent): Compendium pp. 2–3
   a. Time to administer: about 20 minutes per respondent
   b. Ease of coding: scannable
   c. Cost: $160–$185 per kit and ~$40 per set of 25–30 scannable forms
3. Minnesota Preschool Affect Checklist (MPAC, for observers only): Compendium pp. 20–21

a. Time to administer:
   (1) 20 minutes per child for observation
   (2) Training and reliability assessments for coders: at least 12 hours per coder
b. Ease of coding/scoring
   (1) Scoring rapid
   (2) Training obviously takes time; we have created an efficient means of doing so
c. Alternatives if needed—None; this is in my view imperative
d. Substudies needed?—If the Study cannot invest in this important tool for the entire sample, then I would strongly advocate substudies.

4. Sociometric ratings: Performed by peers, Compendium pp. 4–6
   a. Time to administer: about 10 minutes per child
   b. Time for training: about 2 hours
   c. Scoring: simple
   d. Substudies: needed if not all sites can obtain permission for this important piece of information
5. Berkeley Puppet Interview (BPI) (Performed with child, direct assessment): Compendium p. 55
   a. Time to administer: 8 social subscales can probably be done in one 20 minute period
   b. Ease of coding/scoring: Coding and administration requires very expensive, time-consuming training
   c. Alternatives if needed: None
   d. Substudies needed? Yes; I realize that this measure is very expensive, but it is state of the art and could be, at the very least, profitably used in a substudy.

B. Attachment:

1. Attachment Q-Sort (AQS), Compendium p 22–24
2. Devereux Early Childhood Assessment (DECA, Compendium p. 18; see above under social competence). The attachment scale could be used, at a minimum.
3. Student Teacher Relationships Scale (STRS, Compendium pp. 24–25)
   a. Time to administer: 10 minutes
   b. Ease of coding/scoring: simple
   c. Alternatives if needed: None are available for this particular construct
   d. Substudies needed? Perhaps use in substudies or not use at all, if construct deemed ancillary
4. Narrative Story Stem Test (NSST; Direct assessment with child): Compendium pp. 26–27
   a. Time to administer: Approximately 30 minutes; can be less
   b. Ease of coding/scoring: Coding is time-consuming (1 hour per child) and needs extensive training and reliability assessment (approximately 15 hours per coder)
   c. Alternatives if needed: None from this perspective; I can’t find any evidence of a shortened version
   d. Substudies needed? Yes, definitely an important perspective if training deemed too labor-intensive

C. Emotional Competence

1. Understanding of Emotions: Affect Knowledge Test (AKT), Compendium pp. 48–49

a. Time to administer: approximately 20 minutes
b. Ease of coding/scoring; Simple hand scoring. Training takes about 4 hours or less.

2. Expression of Emotion and Emotion Regulation
   a. Rothbart Child Behavior Questionnaire (CBQ, Compendium pp. 57–59): Parent report
   b. Minnesota Preschool Affect Checklist (MPAC, Compendium pp. 20–21): Direct Assessment
   c. Devereux Early Childhood Assessment (see above, Preschool Social Competence, Compendium p. 18) Parent and teacher report. For emotional competence, the Self Control scale is germane. Since I am already arguing for use of the Attachment scale, it becomes more obvious that this very quick measure should just be included in its entirety.
   d. Delay of Gratification Task and *Emotion Matters* Protocol (Direct Assessment): Compendium pp. 38–39
      (1) Time to administer: Approximately one hour
      (2) Ease of coding/scoring: Requires coding; training and reliability for coding approximately 10 hours
      (3) Alternatives if needed: None—this is imperative
   e. Emotion Regulation Checklist (ERC; Teacher Report): Compendium p. 40
      (1) Time to administer: 10 minutes per respondent
      (2) Ease of coding/scoring: simple
      (3) Alternatives if needed: The only issue here is whether to include; I would argue yes, in order to obtain specifically emotional information from teachers

D. Self-Perceived Competence

1. Berkeley Puppet Interview (BPI; Performed with child, direct assessment): Compendium p. 55
   a. Time to administer: 4 academic subscales (note: social subscales already discussed under social competence) can probably be done in one 20 minute period
   b. Ease of coding/scoring: Coding and administration requires very expensive, time-consuming training
   c. Alternatives if needed: None
   d. Substudies needed? I realize that this measure is very expensive, but it is state of the art and should be used in a substudy. Note that it could also be used in early elementary grades.

E. Temperament/Personality:

1. Rothbart Scales, already described, Compendium pp. 57–59

F. Socialization Agents' Behavior

1. Reactions to Children's Emotions (parent report): Coping with Children's Negative Emotions Scale (CCNES), Compendium pp. 66–67
   a. Time to administer: 15 minutes
   b. Ease of coding/scoring: simple
2. Modeling of Emotional Expressiveness: (parent report): Self Expressiveness in the Family Questionnaire (SEFQ), Compendium p. 68

   a. Time to administer: 15 minutes
   b. Ease of coding/scoring: simple
3. Teaching Children About Emotions (parent report): Time needed for the group: 30 min.
   a. Toronto Alexithymia Scale (TAS): Compendium p. 69
   b. Emotion-Related Beliefs (ERB): Compendium p. 70
   c. Emotional Styles Questionnaire (ESQ): Compendium p. 71
4. Overall Parenting (parent report)
   a. Parenting Practices Questionnaire: Compendium pp.72–73
      (1) Time to administer: 30 minutes
      (2) Ease of coding/scoring: Simple
      (3) Alternatives if needed: Cornell Parenting Inventory, Compendium pp. 74–75 or Parenting Behavior Inventory, Compendium p. 76
      (4) Substudies needed? No
   b. Parent Feelings Questionnaire: Compendium p. 78
      (1) Time to administer: 15 minutes
      (2) Ease of coding/scoring: Simple
      (3) Substudies needed? Possibly if not deemed sufficiently important

G. Summary of Measurement During Preschool Age Range (e.g., 3 to 6 years)

1. For social competence, the recommended measures include the Social Skills Rating System, the Social-Competence Behavior Evaluation-30 or the Penn Interactive Preschool Play Scales, the Devereux Early Childhood Assessment, and sociometrics.
   a. The mother completes all of the above measures, except sociometrics, for a total of 45 minutes.
   b. The father may complete all of the above measures, except sociometrics, for a total of 45 minutes.
   c. The preschool teacher/childcare provider may complete all of the above measures, except sociometrics, for a total of 45 minutes per participant.
   d. In all cases, questionnaires could be mailed in advance of personal visits.
   e. Children perform direct assessments, sociometrics, with experimenters. This task takes approximately 2 hours for training of each experimenter (who conceivably could test 300 children or more), and 10 minutes per child.
2. For attachment, I recommend one more completion of the Attachment Q-Sort; this would proceed as noted in the summary for the Infancy period.
3. For emotional competence, the measures to use include the Child Behavior Questionnaire (Short Form), the Emotion Regulation Checklist, the Minnesota Preschool Affect Checklist, the Affect Knowledge Test, the Delay of Gratification Task, and the *Emotion Matters* protocol.
   a. The mother and /or father complete only the Child Behavior Questionnaire (Short Form).
   b. The preschool teacher/childcare provider completes the Emotion Regulation Checklist and the Child Behavior Questionnaire (Short Form).
   c. Observers perform the Minnesota Preschool Affect Checklist.
      (1) Training requires 12 hours, but once trained each observer can observe upwards of 200+ children.

d. Children complete direct assessments via the Affect Knowledge Test, the Delay of Gratification Task, and the *Emotion Matters* protocol, for a total of approximately 1 hour 20 minutes per child.

4. For temperament/personality/self matters, temperament scales are already discussed under emotional competence.
5. For parenting and socialization of emotions, the measures to use include the Coping with Children's Negative Emotions Scale, the Toronto Alexithymia Scale, the Emotional Styles Questionnaire, the Emotion-Related Beliefs Scale, the Self Expressiveness in the Family Questionnaire, the Parenting Practices Scale, and the Parenting Feelings Scale
   a. Both mother and father should complete these.
   b. For parenting, questionnaires require approximately 45 minutes.
   c. For socialization of emotions, questionnaires require approximately 65 minutes per parent.
6. Parent questionnaires can be completed after being mailed to participants and picked up by the experimenter at the home visit.
7. Teacher/caregiver questionnaires can be completed during the experimenter's visit to the childcare facility (although this should be discussed in advance in order to schedule free time for the caregiver to do so).
8. TIMING
   a. Mother/father: Age 3 Total: 120 minutes; Age 4 Total: 75 minutes; Age 5 Total: 90 minutes; Age 6 Total: 105 minutes
      (1) Social Competence Age 3 and Age 5: 45 minutes
         (a) Penn Interactive Play Scale: 15 minutes
         (b) Social Skills Rating System (parent version): 20 minutes
         (c) Devereux Early Childhood Assessment: 10 minutes
      (2) Social Competence Age 4 and Age 6: 10 minutes
         (a) Social Competence Behavior Evaluation-30 (parent version)
      (3) Emotional Competence Age 3 and Age 6: 30 minutes
         (a) Early Childhood Behavior Questionnaire (Short Form)—Age 3
         (b) Child Behavior Questionnaire (Short Form)—Age 5
      (4) Parenting Style Age 3 and Age 5: 45 minutes
         (a) Parenting Practices Scale: 30 minutes
         (b) Parenting Feelings Scale: 15 minutes
      (5) Socialization of Emotion: Age 4 and Age 6: 65 minutes
         (a) Coping with Children's Negative Emotions Scale—15 minutes
         (b) Toronto Alexithymia Scale—10 minutes
         (c) Emotional Styles Questionnaire—10 minutes
         (d) Emotion-Related Beliefs Scale—10–15 minutes
         (e) Self Expressiveness in the Family Questionnaire—15 minutes
   b. Teacher/caregiver: Age 3 Total: 85 minutes; Age 4 Total: 30 minutes; Age 5 Total: 85 minutes; Age 6 Total: 30 minutes
      (1) Social Competence Age 3 and Age 5: 45 minutes
         (a) Penn Interactive Play Scale: 15 minutes
         (b) Social Skills Rating System (teacher version): 20 minutes
         (c) Devereux Early Childhood Assessment: 10 minutes
      (2) Social Competence Age 4 and Age 6: 20 minutes

(a) Social Competence Behavior Evaluation-30: 10 minutes
(b) Devereux Early Childhood Assessment: 10 minutes
(3) Emotional Competence Age 3 and Age 5: 40 minutes
(a) Early Childhood Behavior Questionnaire: 30 minutes
(b) Emotion Regulation Checklist: 10 minutes
(4) Emotional Competence Age 4 and 6: 10 minutes
(a) Emotion Regulation Checklist: 10 minutes

c. Observer: total for each year—20 minutes + coding time per observer
(1) Minnesota Preschool Affect Checklist

d. Child: Age 3 Total: 20 minutes; Age 4 Total:90 minutes; Age 5 Total: 10 minutes; Age 6 Total: 70 minutes
(1) Social Competence Age 4, 5, and 6: 10 minutes each
(a) Sociometrics: 10 minutes
(2) Emotional Competence Age 3: 20 minutes
(a) Affect Knowledge Test: 20 minutes
(3) Emotional Competence Age 4: 80 minutes
(a) Affect Knowledge Test: 20 minutes
(b) Delay of Gratification/Emotion Matters Protocol—1 hour
(4) Emotional Competence Age 6, if at all possible: 1 hour
(i) Delay of Gratification/Emotion Matters Protocol—1 hour

III. Gradeschool (6–12 years)

Summary. During this age period, many aspects of social and emotional competence remain important while becoming even more complex. Within social competence, children's interactions with peers, both in terms of dyadic friendships and overall peer likeability, become absolutely crucial, as noted in Table 1. Furthermore, children themselves can now report on important aspects of their own peer experience. Thus it is recommended that usage of the age-appropriate version of the Social Skills Rating System be continued; the Rochester cluster of social skills measures (i.e., the Parent-Child Rating Scale, Teacher-Child Rating Scale and Child Rating Scale) was not chosen only because it is less comprehensive than the Social Skills Rating System and edged out by that measure in terms of psychometric properties.

Sociometric ratings and self-report questionnaires on loneliness, social avoidance and anxiety, social experiences of aggression and prosocial behavior, and friendship quality are also recommended. These self-report measures were chosen as the most concise measures germane to children's view of their own success or failure in the peer world. Such success or failure, as rated by various informants, predicts later wellbeing and success.

At the same time, the elements of emotional competence (i.e., expression, understanding, and regulation) remain important and now accessible by more informants (e.g., parents, teachers, children themselves). Among measures of emotion understanding, the Kusché Affect Interview was chosen as the most comprehensive. In terms of expression/experience and regulation of emotion, reports were recommended to be obtained from parents, teachers, and the children themselves. These included continued usage of the age-appropriate Rothbart scales of

temperament, as well as a battery of well-validated questionnaires, including for the first time several measures of the children's own experiences of various emotions.

Regarding attachment, children can now more easily report on their own security of attachment and their view of different attachment relationships. The Attachment Security Scale and Inventory of Parent and Peer Attachment were chosen for psychometric adequacy and ability to assess attachment to both parents (mothers and fathers), as well as peers.

At this age period, it remains important to obtain information on socialization agents' behavior. The measures already noted for the preschool period remain usable (e.g., Coping with Children's Negative Emotions Scale, the Toronto Alexithymia Scale, the Emotional Styles Questionnaire, the Self Expressiveness in the Family Questionnaire, and the Parenting Practices Scale), except for the now age-inappropriate Emotion-Related Beliefs Scale and Parent Feelings Questionnaire.

Self-perceived competence is to be assessed via the Multidimensional Self Concept Scales. There are many scales that purport to tap important aspects of children's self esteem and self-perceived competence. The Buros Mental Measurement Yearbook notes that the Multidimensional Self Concept Scales are among the very best validated and conceptually substantiated of all the available scales.

Finally, regarding personality, the Big Five Questionnaire for Children was chosen because of its parallel with well-studied dimensions of adult personality, excellent psychometric properties, and its ability to obtain information from parent, teacher, and self report.

TIMING PER CHILD:

Age Range/ Informant	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
Mother/Father	~130 minutes	50 minutes	~105 minutes	80 minutes
Teacher	40 minutes	15 minutes	40 minutes	15 minutes
Child—Direct Assessment or Self Report	30–60 minutes	~120 minutes	~120 minutes	~210 minutes

Details on these measures are as follows for the **GRADESCHOOL AGE RANGE:**

A. Social Competence.

1. Social Skills Rating System (SSRS; elementary version for teacher and parent): Compendium pp. 2–3
   a. Time to administer: about 20 minutes per respondent
   b. Ease of coding: simple
   c. Alternative measure: Parent/Teacher/Child Child Rating Scale (Compendium p. 13). This measure takes about 20 minutes and would be an adequate substitute for the SSRS if for any reason it was disqualified (perhaps because of its cost?).
2. Sociometric ratings and nominations: Performed by peers, Compendium pp. 4–6
   a. Time to administer: about 10 minutes per child

b. Time for training: about 2 hours
c. Scoring: simple
d. Substudies: needed if not all sites can obtain permission for this important piece of information. Also, some sites should assess perceived likeability (i.e., power, etc.) as well as peer acceptance.

3. Self report questionnaires
   a. Loneliness Questionnaire: Compendium p. 11
   b. Social Avoidance and Anxiety Questionnaire: Compendium p. 12
   c. Social Experiences Questionnaire: Compendium p. 14
   d. Friendship Quality Questionnaire: Compendium p. 16

B. Attachment:

1. Attachment Security Scale: (self report): Compendium p. 28
   a. Time to administer: 10 minutes
   b. Ease of coding/scoring: simple
2. Student Teacher Relationship Scale (see above; through 2nd grade; could be used in substudies).
3. Inventory of Parent and Peer Attachment (IPPA, self report from age 10 on): Compendium p. 29
   a. Time to administer: 10–15 minutes
   b. Ease of coding/scoring: simple

C. Emotional Competence

1. Understanding of Emotions (Direct Assessment): Kusché Affect Interview (KAI); Compendium p. 50
   a. Time to administer: approximately 45 minutes
   b. Ease of coding/scoring; training takes about 4 hours or less.
2. Expression/Experience of Emotion and Emotion Regulation
   a. Rothbart Child Behavior Questionnaire (CBQ; in Compendium pp.57–59; see above): Parent report
   b. Emotion Regulation Checklist (Teacher Report, already described as ERC; see Compendium p 40): Only use in primary grades (1–3)
   c. Coping with Emotional Situations (parent and/or teacher report): Compendium p. 41
      (1) Time to administer: <10 minutes
      (2) Ease of coding/scoring: simple
   d. Katz-Gottman Regulation Scale (parent report): Compendium p. 42
      (1) Time to administer: 20 minutes
      (2) Ease of coding/scoring: simple
      (3) Alternatives if needed: none available; other than Coping with Emotional Situation Scales, no other parent report for the age period
      (4) Substudies needed: perhaps only a substudy since not much used yet
   e. Emotion Dysregulation Scales (EDS, self report): Compendium age 43
      (1) Time to administer: <20 minutes
      (2) Ease of coding/scoring: simple
   f. How I Feel (self report): Compendium pp. 44–45
      (1) Time to administer: <10 minutes

(2) Ease of coding/scoring: simple
(3) Alternative: Use this scale if need to economize a lot, down to one scale for experience and regulation of emotion

g. Emotional Expressiveness Scale (EES, self/parent/teacher report): Compendium pp. 31–32
(1) Time to administer: <10 minutes
(2) Ease of coding/scoring: simple

h. Positive And Negative Affect Scale (PANAS, self report from age 10 on; modifiable for parent report)
(1) Time to administer: <10 minutes
(2) Ease of coding/scoring: simple

i. Affect Intensity (AI, self report, modifiable for parent/teacher)
(1) Time to administer: <10 minutes
(2) Ease of coding/scoring: simple

j. Test Of Self Conscious Affect-Children (TOSCA-C, self-report): Compendium p. 36
(1) Time to administer: ~20 minutes
(2) Ease of coding/scoring: simple
(3) Alternative: possibly not use but I would argue for it

k. Bryant Empathy (self-report): Compendium p. 37
(1) Time to administer: <10 minutes
(2) Ease of coding/scoring: simple
(3) Alternative: possibly not use but I would argue for it

D. Self-perceived competence: (self report): Multidimensional Self Concept Scales (MSCS), Compendium p. 56

1. Time to administer: 30 minutes
2. Ease of coding/scoring: simple
3. Cost: Approximately $150 for kit and 100 forms
4. Alternatives if needed: None
5. Substudies needed? I realize that this measure is somewhat expensive, but it is state of the art and should be used at the very least in a substudy.

E. Temperament/Personality:

1. Rothbart Scales, already described, Child Behavior Questionnaire (CBQ)
2. Big Five Questionnaire for Children (BFQC, parent, teacher, self report): Compendium pp.64–65
   a. Time to administer: 15 minutes
   b. Ease of coding/scoring: simple

F. Socialization Agents' Behavior: same as for preschool, with the omission of the Emotion-Related Beliefs Scale and Parent Feelings Questionnaire

G. Summary of Measurement During Gradeschool

1. For social competence, the measures to use include the Social Skills Rating System, sociometrics, Loneliness, Social Avoidance and Anxiety, Social Experiences, and Friendship Quality Questionnaires.

   a. The mother and father complete the Social Skills Rating System, for a total of 20 minutes each.
   b. The teacher may complete the Social Skills Rating System, for a total of 20 minutes per participant.
   c. In all cases, questionnaires could be mailed in advance of personal visits.
   d. Children perform direct assessments, sociometrics, with experimenters. This task takes approximately 2 hours for training of each experimenter (who conceivably could test 300 children or more, and who could have already trained when performing sociometrics for preschool assessment), and 10–20 minutes per child.
   e. Child also completes Loneliness, Social Avoidance and Anxiety, Social Experiences, and Friendship Quality Questionnaires, for a total of 45 minutes.
2. For attachment, measures to use include the Kerns Security Scale until the 6th grade, whereupon they complete the Inventory of Parent and Peer Attachment.
   a. Children complete the Kerns Security Scale until the 6th grade, whereupon they complete the Inventory of Parent and Peer Attachment. Either takes approximately 10–15 minutes.
3. For emotional competence, the measures to use include the Child Behavior Questionnaire (Short Form), Coping with Emotional Situations, the Katz-Gottman Regulation Scale, the Emotional Expressiveness Scale, the Positive and Negative Affect Scale, the Affect Intensity Scale, and the Emotion Regulation Checklist (through 3rd grade).
   a. The mother and /or father complete the Child Behavior Questionnaire (Short Form), Coping with Emotional Situations scale, the Katz-Gottman Regulation Scale, the Emotional Expressiveness Scale, the Positive and Negative Affect Scale, and the Affect Intensity Scale, for a total of 1 hour
   b. The teacher completes the Emotion Regulation Checklist (through 3rd grade) and the Child Behavior Questionnaire (Short Form), for a total of 45 minutes.
   c. Children complete direct assessments the Kusché Affect Interview, for a total of approximately 30 minutes per child.
   d. Children also complete Emotional Dysregulation Scales, the How I Feel questionnaire, the Bryant Empathy Scale, the Test of Self-Conscious Affect-Children, and Emotional Expressiveness Scale, the Positive and Negative Affect Scale, the Affect Intensity Scale (beginning in 5th grade). Before 5th grade, these questionnaires require approximately 70 minutes per child; after 5th grade, the total is 85 minutes.
4. For temperament/personality/self
   a. Temperament has already been taken care of under emotional competence.
   b. Children complete the Multidimensional Self Concept Scale and the Big Five Questionnaire for children, for a total of 40 minutes.
5. For parenting and socialization of emotions, the measures to use include the Coping with Children's Negative Emotions Scale, the Toronto Alexithymia Scale, the Emotional Styles Questionnaire, the Self Expressiveness in the Family Questionnaire, and the Parenting Practices Scale.
   a. Both mother and father should complete these.
   b. For parenting, questionnaires require approximately 30 minutes.
   c. For socialization of emotions, questionnaires require approximately 1 hour 10 minutes per parent.

6. Parent questionnaires can be completed after being mailed to participants and picked up by the experimenter at the home visit.
7. Teacher questionnaire can be left for teachers during school visit (e.g., when any child measures are administered), and mailed back to experimenter.
8. TIMING
    a. Parents: Grade 2 Total: approximately 2 ½ hours; Grade 3 Total: 50 minutes; Grade 4 Total: approximately 2 hours; Grade 5 Total: 80 minutes
        (1) Social Competence Grades 2 and 4: 20 minutes
            (a) Social Skills Rating System—20 minutes
        (2) Emotional Competence Grade 2: approximately 60 minutes
            (a) Child Behavior Questionnaire—30 minutes
            (b) Coping with Emotional Situations—<10 minutes
            (c) Emotional Expressiveness Scale—<10 minutes
            (d) Positive and Negative Affect Scale—<10 minutes
            (e) Affect Intensity Scale—<10 minutes
        (3) Emotional Competence Grade 3: approximately 50 minutes
            (a) Katz-Gottman Regulation Scale—20 minutes
            (b) Coping with Emotional Situations—<10 minutes
            (c) Emotional Expressiveness Scale—<10 minutes
            (d) Positive and Negative Affect Scale—<10 minutes
            (e) Affect Intensity Scale—<10 minutes
        (4) Emotional Competence Grade 4: approximately 35 minutes
            (a) Coping with Emotional Situations—<10 minutes
            (b) Emotional Expressiveness Scale—<10 minutes
            (c) Positive and Negative Affect Scale—<10 minutes
                (i) Affect Intensity Scale—<10 minutes
        (5) Emotional Competence Grade 5: 50 minutes
            (a) Child Behavior Questionnaire—30 minutes
            (b) Katz-Gottman Regulation Scale—20 minutes
        (6) Parenting Style Grades 3 and 5: 30 minutes
            (a) Parenting Practices Scale: 30 minutes
        (7) Socialization of Emotion: Grades 2 and 4: 50 minutes
            (a) Coping with Children's Negative Emotions Scale—15 minutes
            (b) Toronto Alexithymia Scale—10 minutes
            (c) Emotional Styles Questionnaire—10 minutes
            (d) Self Expressiveness in the Family Questionnaire—15 minutes
    b. Teacher/caregiver: Grade 2 Total: <50 minutes; Grade 3 Total: 15 minutes; Grade 4 Total: <40 minutes; Grade 5 Total: 15 minutes
        (1) Social Competence Grades 2 and 4: 20 minutes
            (a) Social Skills Rating System—20 minutes
        (2) Emotional Competence Grades 2 and 4: approximately 20 minutes
            (a) Emotion Regulation Checklist: 10 minutes
            (b) Coping with Emotional Situations—<10 minutes
            (c) Affect Intensity Scale—<10 minutes
        (3) Personality Grades 3 and 5: 15 minutes
            (a) Big Five Questionnaire for Children—15 minutes

c. Child: Grade 2 Total: 30 minutes Grade 3 ~2 hours Total: Grade 4 ~2 hours Total: ~2 hours Grade 5 Total: ~3 ½ hours
   (1) Social Competence Grade 3: approximately 45 minutes
      (a) Sociometrics: 15 minutes
      (b) Loneliness Questionnaire—<10 minutes
      (c) Social Anxiety and Avoidance Questionnaire—<10 minutes
      (d) Social Experiences Questionnaire—<10 minutes
   (2) Social Competence Grade 4: approximately 50 minutes
      (a) Social Skills Rating System (student form)—20 minutes
      (b) Social Experiences Questionnaire—<10 minutes
      (c) Friendship Quality Questionnaire—20–25 minutes
   (3) Social Competence Grade 5: approximately 70 minutes
      (a) Social Skills Rating System (student form)—20 minutes
      (b) Social Experiences Questionnaire—<10 minutes
      (c) Friendship Quality Questionnaire—20–25 minutes
      (d) Sociometrics—approximately 15–20 minutes
   (4) Attachment Grade 3: 20 minutes
      (a) Attachment Security Scale—20 minutes
   (5) Attachment Grade 5: approximately 60 minutes
      (a) Attachment Security Scale—20 minutes
      (b) Inventory Of Parent and Peer Attachment—10–15 minutes each for mother, father, peer
   (6) Emotional Competence Grades 2 and 4: 30–60 minutes
      (a) Kusché Affective Interview 30–60 minutes
         (i) Training for interviewers who can interview many children <4 hours
         (ii) Training for scorers who can score many interviews: approximately 5 hours
   (7) Emotional Competence Grade 3: approximately 60 minutes
      (a) Emotion Dysregulation Scales—15 minutes
      (b) Test of Self Conscious Affect—Child—20 minutes
      (c) Bryant Empathy Scale—5–10 minutes
      (d) How I Feel Scale—15–20 minutes
   (8) Emotional Competence Grade 5: approximately 90 minutes
      (a) Emotional Expressiveness Scale—<10 minutes
      (b) Positive and Negative Affect Scale—<10 minutes
      (c) Affect Intensity Scale—<10 minutes
      (d) Emotion Dysregulation Scales—15 minutes
      (e) Test of Self Conscious Affect—Child—20 minutes
      (f) Bryant Empathy Scale—5–10 minutes
      (g) How I Feel Scale—15–20 minutes
   (9) Personality Grade 4: 30 minutes
      (a) Multidimensional Self Concept Scale—30 minutes

IV. Adolescence (12–17 years)

Summary. During this age period, many aspects of social and emotional competence remain important and continue to increase in complexity. Within social competence, children's relationships with peers of the same and opposite sex are becoming more intimate; adolescents are balancing relationships with parents and peers, as well as the need for independence, as noted in Table 1. Thus it is recommended that usage of the age-appropriate version of the Social Skills Rating System be continued, as well as sociometric ratings, to the extent that these can be feasibly obtained.

At the same time, the elements of emotional competence (i.e., expression, understanding, and regulation) remain important and are often increasingly subtle and sophisticated. More and more aspects of emotional competence are obtainable via self report, with parent and teacher report becoming far less important (and not assessed in the Study).

Regarding attachment, teenagers can now easily report their views of different attachment relationships. The Inventory of Parent and Peer Attachment was again chosen for psychometric adequacy and ability to assess attachment to both parents (mothers and fathers), as well as peers. The Hazen and Shaver Scale is recommended for later in the adolescent period; it is widely used in research and well validated; other attachment questionnaires are far longer.

At this age period, it remains important to obtain information on socialization agents' behavior. The measures already noted for the gradeschool period remain usable, except for Coping with Children's negative Emotions Scale, Emotional Styles Questionnaire, which are no longer age-appropriate. Finally, the parenting practices scale of Robinson et al. should be substituted with the Steinberg measure, again because of the importance of accessing age-appropriate item content. Furthermore, the Steinberg measure is adolescent report, acknowledging the importance of the adolescents' newly independent views of their social surround.

Self-perceived competence should again be assessed via the Multidimensional Self Concept Scales. Finally, regarding personality, the Big Five Questionnaire should again be used for self report, as well as Rothbart's Early Adolescent Temperament Questionnaire, which marks the adolescent's first self-report in the Rothbart series.

TIMING PER ADOLESCENT:

Age Range/ Informant	**Grade 6**	**Grade 7**	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**
Mother/Father	0 minutes	20 minutes	60 minutes	20 minutes	60 minutes	20 minutes
Teacher	0 minutes	20 minutes	0 minutes	20 minutes	0 minutes	20 minutes
Child – Self Report	50 minutes	100 minutes	80 minutes	120 minutes	90 minutes	90 minutes

Details on these measures are as follows for the **EARLY ADOLESCENT AGE RANGE:**

A. Social Competence

1. Social Skills Rating System (SSRS; teacher, parent, participant, Compendium pp.2–3)
2. Sociometrics until these data are no longer feasible to collect (approximately 9th grade)

3. Summary: 30 minutes, easy

B. Attachment
1. Early in period: Inventory of Parent and Peer Attachment (IPPA, self report, Compendium p. 29)
2. Later in period: Hazan & Shaver, self report, Compendium p. 30
   a. Time to administer: 10 minutes
   b. Ease of coding/scoring: simple
3. Summary: 10–30 minutes, easy questionnaires

C. Emotional Competence
1. Understanding of Emotions (self report): Toronto Alexithymia Scale, Compendium p. 69
2. Expression/Experience of Emotion and Emotion Regulation
   a. Rothbart Early Adolescent Temperament Questionnaire (EATQ; Compendium p. 57): Self report
   b. Emotional Expressiveness Scale (EES, self report, Compendium pp. 31–32):
   c. Positive And Negative Affect Scale (PANAS; self report, Compendium p. 33)
   d. Affect Intensity (AI, self report, Compendium p. 34)
   e. Test Of Self Conscious Affect (TOSCA)– adult version of TOSCA-C, Compendium p. 36
   f. Trait Meta Mood Scale (TMMS, self report): Compendium p. 46
      (1) Time to administer: <10 minutes
      (2) Ease of coding/scoring: simple
   g. Berkeley Emotion Regulation Questionnaire (self report): Compendium p. 47
      (1) Time to administer: ~10 minutes
      (2) Ease of coding/scoring: simple
3. Combination of all aspects of Emotional Competence: Mayer Salovey Caruso Emotional Intelligence Test Youth Version (MSCEIT-YV, self report): Compendium pp. 53–54
   (1) Time to administer: ~40 minutes
   (2) Ease of coding/scoring: done by publisher
   (3) Cost: apparently $50.00/participant including scoring and forms
   (4) Alternative: Youth Version not ready yet, so we could forego, although I'd like to see it when it does become available

D. Self-Perceived Competence
1. Multidimensional Self Concept Scales (MSCS): self report, Compendium p. 56
2. Temperament/Personality
3. Early Adolescent Temperament Questionnaire (EATQ, Compendium p. 57) already mentioned under emotional competence
4. Big Five Questionnaire for Children: (BFQC, Compendium p. 64) self, parent, teacher report (probably for this age, just self), already described

E. Socialization Agents' Behavior: same as for gradeschool, except for deletion of Coping with Children's Negative Emotions Scale, Emotional Styles Questionnaire, and substitution of Steinberg child-report measure instead of Robinson et al. (Compendium p. 79)

F. Summary of Measurement During Early Adolescence

1. For social competence, the measures to use include the Social Skills Rating System and sociometrics.
   a. The mother and father complete the Social Skills Rating System, for a total of 20 minutes each.
   b. The teacher may complete the Social Skills Rating System, for a total of 20 minutes per participant.
   c. In all cases, questionnaires could be mailed in advance of personal visits.
   d. Children perform direct assessments, sociometrics, with experimenters. This task takes approximately 2 hours for training of each experimenter (who conceivably could test 300 children or more, and who could have already trained when performing sociometrics for preschool and gradeschool assessment), and 20 minutes per child. Probably the last time this should be performed is 9th grade.
   e. Children also complete the Social Skills Rating System.
2. For attachment, measures to use include the Inventory of Parent and Peer Attachment through approximately 15 years, after which the measure to use is the Hazan-Shaver.
   a. Adolescents complete both scales. Either takes approximately 10–15 minutes.
3. For emotional competence, the measures to use include the Early Adolescent Temperament Questionnaire (Short Form), the Emotional Expressiveness Scale, the Positive and Negative Affect Scale, the Affect Intensity Scale, the Test of Self Conscious Affect, and the Toronto Alexithymia Scale. MSCEIT-YV
   a. Children complete all questionnaires for approximately 1 hour, 20 minutes.
4. For temperament/personality/self
   a. Temperament has already been taken care of under emotional competence.
   b. Children complete the Multidimensional Self Concept Scale and the Big Five Questionnaire for children, for a total of 40 minutes.
5. For parenting, the measure to use includes the Parenting Styles Scale.
   a. Parents no longer complete questionnaires; adolescents complete the questionnaire, requiring approximately 20 minutes
6. TIMING
   a. Parents: Grade 6 Total: 0 minutes; Grade 7, 9, and 11 Total: 20 minutes; Grade 8 and 10 Total: 1 hour
      (1) Social Competence Grades 7, 9, and 11: 20 minutes
         (a) Social Skills Rating System—20 minutes
   b. Teachers: Grades 6, 8, and 10 Total: 0 minutes Grades 7, 9, and 11: 20 minutes
      (1) Social Competence Grades 7, 9, and 11: 20 minutes
         (a) Social Skills Rating System—20 minutes
   c. Child: Grade 6 Total: 50 minutes; Grade 7 Total: <2 hours; Grade 8 Total 80 minutes; Grade 9 Total ~2 hours; Grade 10 Total: 1 ½ hours; Grade 11 Total 1 ½ hours
      (1) Social Competence Grades 8, and 10: 20 minutes
         (a) Social Skills Rating System—20 minutes
      (2) Social Competence Grades 6, 7, and 9
         (a) Sociometrics: up to 30 minutes
         (b) Grade 6 will be added in violation of the apparent “every 2 years” pattern in order to be able to examine the transition to middle school/junior high.

(c) When “perceived popularity” (i.e., issues of power) is added to the questions, sociometrics may take up to 30 minutes

(3) Attachment Grades 7 and 9: 30–45 minutes
   (a) Inventory of Parent and Peer Attachment—10–15 minutes each for mother, father, peer

(4) Attachment Grade 11: 10 minutes
   (a) Hazan-Shaver—up to 10 minutes

(5) Emotional Competence Grade 7: approximate 15–20 minutes
   (a) Emotional Expressiveness Scale—<10 minutes
   (b) Positive and Negative Affect Scale—<10 minutes
   (c) Affect Intensity Scale—<10 minutes

(6) Emotional Competence Grade 8: 30 minutes
   (a) Early Adolescent Temperament Questionnaire (short form): 30 minutes

(7) Emotional Competence Grade 9: approximately 35–40 minutes
   (a) Test of Self-Conscious Affect—20 minutes
   (b) Emotional Expressiveness Scale—<10 minutes
   (c) Positive and Negative Affect Scale—<10 minutes
   (d) Affect Intensity Scale—<10 minutes

(8) Emotional Competence Grade 10: 40 minutes
   (a) Early Adolescent Temperament Questionnaire (short form)—30 minutes
   (b) Toronto Alexithymia Scale—10 minutes

(9) Emotional Competence Grade 11: <70 minutes
   (a) Test of Self-Conscious Affect—20 minutes
   (b) Mayer-Salovey-Caruso Emotional Intelligence Test Youth Version—30 minutes
   (c) Trait Meta-Mood Scale—10 minutes
   (d) Berkeley Emotion Regulation Scale—<10 minutes

(10) Self, Personality and Temperament: Grades 6, 8, and 10
   (a) Multidimensional Self Concept Scale—30 minutes

(11) Parenting Grades 7, 9, and 11: 20 minutes
   (a) Parenting Styles Scale—20 minutes

d. Other comments/substudies

V. Late Adolescence/Early Adulthood (18–21 years)

Summary. During this age period, many aspects of emotional competence, attachment, and personality obviously are still important for concurrent and later outcomes. Although social competence remains important as well, the decision was made to only retain measures of emotional competence, attachment, and personality/self—because of the wealth of data already obtained across numerous years for social competence, as well as the Social Skills Rating System’s “topping out” in secondary school. It is also beneficial to lessen the reporting burden on newly independent young adults, who may have become more elusive as Study participants. As well, parenting measures are no longer included, in recognition of the young adult’s independence.

For emotional competence, the Emotional Expressiveness Scales, the Positive and Negative Affect Scales, and the Affect Intensity Scale, all of which have been obtained from various reporters since gradeschool and remain among the most accessible and well-used measures of emotional expressiveness and experience, will be completed by the young adult only. For emotion regulation, the young adult, like the adolescent, can provide important information via the Trait Meta-Mood Scale and Berkeley Emotion Regulation Scale. These two scales were chosen from among a number of emerging scales because of not only their useful psychometric properties, but also their conceptual clarity. The Toronto Alexithymia Scale will again be used to assess emotion knowledge. At ages 19 and 21, the more comprehensive and increasingly well thought of Mayer-Salovey-Caruso Emotional Intelligence Test will be used as an emerging means of measuring all these aspects of emotional competence.

The use of the Adult Temperament Scale (short form) via self report, for both emotional competence and personality information, completes the Study agespan usage of the theoretically and empirically excellent Rothbart scales. Finally, the Hazan-Shaver measure of attachment retains its usefulness at this age period, as young adults move into relatively stable romantic relationships.

TIMING PER YOUNG ADULT:

Age Range/ Informant	**Age 18**	**Age 19**	**Age 20**	**Age 21**
Young Adult—Self Report	70 minutes	40 minutes	60 minutes	50 minutes

Details on these measures are as follows for the **LATE ADOLESCENT/EARLY ADULT AGE RANGE:**

A. Social Competence
1. Social Skills Rating System is not appropriate after secondary school.

B. Attachment
1. Hazan & Shaver, self report, Compendium p. 30

C. Emotional Competence
1. Understanding of Emotions (self report): Toronto Alexithymia Scale (TAS), Compendium p. 69
2. Expression/Experience of Emotion and Emotion Regulation
   a. Rothbart Adult Temperament Questionnaire (ATQ; Compendium pp. 57–59): Self report
   b. Emotional Expressiveness Scale (EES, self report, Compendium p. 68):
   c. Positive And Negative Affect Scales (PANAS, self report, Compendium p. 33)
   d. Affect Intensity (AI, self report Compendium p. 34)
   e. Trait Meta-Mood Scale (TMMS, self report, Compendium p. 46)
   f. Berkeley Emotion Regulation Questionnaire (self report, Compendium p. 47)

3. Combination of all aspects of Emotional Competence: Mayer Salovey Caruso Emotional Intelligence Test (MSCEIT, self report): Compendium pp. 53–54
    a. Time to administer: ~40 minutes
    b. Ease of coding/scoring: done by publisher
    c. Cost: apparently $50.00/participant including scoring and forms

D. Self-Perceived Competence: none at this age range

E. Temperament/Personality
1. Adult Temperament Questionnaire (ATQ Compendium p. 57) already mentioned under emotional competence

F. Socialization Agents' Behavior: no longer sufficiently relevant to include in the Study

G. Summary of Measurement During Late Adolescence/Early Adulthood
1. For attachment, the measure to use includes the Hazan-Shaver, which requires approximately 10–15 minutes, completed by adolescent-young adults
2. For emotional competence, the measures to use include the Adult Temperament Questionnaire (Short Form), the Emotional Expressiveness Scale, the Positive and Negative Affect Scale, the Affect Intensity Scale, the Test of Self Conscious Affect, and the Toronto Alexithymia Scale. MSCEIT, TMMS, Berkeley
    a. Adolescents/young adults complete all questionnaires for approximately 1 hour, 20 minutes.

H. TIMING
1. Participant Age 18 Total: 70 minutes; Age 19 Total: 40 minutes; Age 20 Total: 60 minutes; Age 21 Total: 50 minutes
    a. Attachment Age 18 and Age 21: up to 10 minutes
        (1) Hazan-Shaver—~10 minutes
    b. Emotional Competence Age 18 and Age 20: 1 hour
        (1) Trait Meta-Mood Scale—10 minutes
        (2) Berkeley Emotion Regulation Scale—<10 minutes
        (3) Emotional Expressiveness Scale—<10 minutes
        (4) Positive and Negative Affect Scale—<10 minutes
        (5) Affect Intensity Scale—<10 minutes
        (6) Adult Temperament Scale (short form)— 30 minutes
    c. Emotional Competence Age 19 and Age 21: 40 minutes
        (1) Mayer-Salovey-Caruso Emotional Intelligence Test—40 minutes
    d. Temperament/Personality: already mentioned under Emotional Competence

NOTE: The next five tables denote each dimension of social-emotional development for each of the study's age periods and list the final array of measures for multiple informants, where appropriate. Each measure, insofar as is possible, will include the milestones/developmental tasks outlined in Table 1. Further, where "parent report" is listed, both mothers and fathers should complete measures when possible.

TABLE 2
SOCIAL COMPETENCE

Time Period / Reporter	Parent	Teacher	Self	Observer	Peers
Infancy/Toddlerhood	Infant-Toddler Social-Emotional Assessment or Brief Infant-Toddler Social-Emotional Assessment	Infant-Toddler Social-Emotional Assessment or Brief Infant-Toddler Social-Emotional Assessment	---	Minnesota Preschool Affect Checklist (Toddlerhood)	---
Early Childhood	• Social Competence Behavioral Evaluation-30 • Devereux Early Childhood Assessment • Social Skills Rating System	• Social Competence Behavioral Evaluation-30 • Penn Interactive Peer Play Scale (possible) • Devereux Early Childhood Assessment probable • Social Skills Rating System	Berkeley Puppet Interview	Minnesota Preschool Affect Checklist	Sociometric ratings Observers: MPAC
Gradeschool	• Social Skills Rating System	• Social Skills Rating System	• Social Skills Rating System • Loneliness & Social Dissatisfaction • Social Avoidance & Anxiety • Social Experiences Questionnaire • Friendship Quality Questionnaire	---[b]	• Sociometric nominations • Evaluations of others' popularity & power
Early/Middle Adolescence	• Social Skills Rating System	• Social Skills Rating System	• Social Skills Rating System	---	• Sociometric nominations • Evaluations of others' popularity & power

[a] Up to the ending age for the measure
[b] Observational measures are not used after early childhood because of the increasing difficulties of accessing subjects.

TABLE 3
ATTACHMENT

Time Period	STRUCTURED OBSERVATION	OTHER REPORT	SELF REPORT
Infancy/Toddlerhood	"Strange Situation" [a]	Attachment Q-Sort: parent and/or observer	---
Early Childhood	---[b]	• Attachment Q-Sort: parent and/or observer • Devereux Early Childhood Assessment: parent and/or teacher • Student Teacher Relationship Scale (if quantification of relationship with teacher is desired)	Narrative Story Stem Test
Gradeschool	---	Student Teacher Relationship Scale (if quantification of relationship with teacher is desired)	• Kerns Security Scale • Late in Period: Inventory of Parent and Peer Attachment
Early/Middle Adolescence	---	---	• Inventory of Parent and Peer Attachment • Late in Period: Hazan-Shaver
Late Adolescence/ Early Adulthood	---	---	• Hazan-Shaver

[a] Strange Situation not included in Compendium due to training involved, but mentioned here as the nominal "Gold Standard" of attachment assessment in this age range

[b] Although there exist observational measures of attachment for early childhood (in fact, some adaptations of the Strange Situations are possible), it is judged that none at this age or older are well enough tested and accepted.

TABLE 4
EMOTIONAL COMPETENCE

Time Period	Emotion Knowledge	Emotion & Behavior Regulation	Emotional Expressiveness and Experience
Infancy/Toddlerhood	Parent or Caregiver report: • Emotional Awareness Subscale of Infant-Toddler Social-Emotional Assessment • Recognizing Feelings of Others subscale of Battelle Developmental Inventory possible	• Parent report: Rothbart Infant Behavior Questionnaire or Early Childhood Behavior Questionnaire, depending on age	• Parent or Caregiver report: Empathy and/or Emotional Negativity Subscales of Infant-Toddler Social-Emotional Assessment • Parent report: Rothbart IBQ, ECBQ
Preschool/ Early Childhood	• Direct Assessment: Affect Knowledge Test	• Observed: Minnesota Preschool Affect Checklist • Direct Assessment: Delay of Gratification, *Emotion Matters* Protocol • Teacher report: Devereux Early Childhood Assessment or Emotion Regulation Checklist • Parent report: Rothbart Early Childhood Behavior Questionnaire, Child Behavior Questionnaire	• Observed: Minnesota Preschool Affect Checklist • Parent report: Rothbart , Early Childhood Behavior Questionnaire, Childhood Behavior Questionnaire • Teacher report: Emotion Regulation Checklist
Gradeschool	Direct Assessment: Kusche Affect Interview	• Self Report How I Feel, Emotion Dysregulation Scales • Parent report: Rothbart Child Behavior Questionnaire	• Parent and/or teacher report: Emotional Expressiveness Scale, Affect Intensity Scale • Self-report: How I Feel • Can begin self-report via Positive And Negative Affect Scales at end of period • Self-report: Test Of Self Conscious Affect-Child, Bryant Empathy Scale
Adolescence	• Self Report: • Toronto Alexithymia Scale • Mayer Salovey Caruso Emotional Intelligence Test-Youth Version when available	• Self Report: • Berkeley Regulation Measure • Trait Meta-Mood Scales • Mayer Salovey Caruso Emotional Intelligence Test—Youth Version when available	• Self report: Emotional Expressiveness Scale, Affect Intensity Scale, Positive and Negative Affect Scale, Test Of Self Conscious Affect, Rothbart Early Adolescent Temperament Questionnaire-Revised • Early in period: Self Report via Bryant Empathy Scale
Late Adolescence/ Early Adulthood	• Self Report: • Toronto Alexithymia Scale • Mayer Salovey Caruso Emotional Intelligence Test-	• Self Report: • Berkeley Regulation Measure • Trait Meta-Mood Scales • Mayer Salovey Caruso Emotional Intelligence Test	Self report: Emotional Expressiveness Scale, Affect Intensity Scale, Positive and Negative Affect Scale, Test Of Self Conscious Affect, Rothbart Adult Temperament Questionnaire

TABLE 5
SELF COMPETENCE/TEMPERAMENT/PERSONALITY

Time Period	TEMPERAMENT—OTHER REPORT	SELF	a. PERSONALITY b. TEMPERAMENT VIA SELF-REPORT
Infancy/Toddlerhood	Parent report: Rothbart Infant Behavior Questionnaire, Early Childhood Behavior Questionnaire[a]	---	---
Preschool/ Early Childhood	Parent report: Rothbart Early Childhood Behavior Questionnaire, Child Behavior Questionnaire	Direct Assessment: Berkeley Puppet Interview	• Parent and Teacher report: Rothbart questionnaires
Gradeschool	Parent report: Rothbart Child Behavior Questionnaire	Self Report: Multidimensional Self Concept Scales	• Parent, Teacher, and Self report: Big Five Questionnaire for Children
Adolescence	Parent report: Rothbart Early Adolescence Temperament Questionnaire-Revised	Self Report: Multidimensional Self Concept Scales	• Parent, Teacher, and Self report: Big Five Questionnaire for Children • Self-report: Rothbart Early Adolescence Temperament Questionnaire-Revised
Late Adolescence/ Early Adulthood	---	---	Self-report Rothbart Adult Temperament Questionnaire[b]

[a] Theoretically, it may be possible to ask teachers or caregivers to complete Rothbart's temperament measures, but this should be carefully checked as teachers have not often filled this role (see, e.g., Biship, Spence, & Casey, 2003; Pellegrini & Bartini, 2000; Zhou. Eisenberg, Wang, & Reiser, 2004).

[b] A personality measure is not included for late adolescence/early adulthood because of the emphasis of our argument on personality predicting adult outcomes (i.e., the need for tracking personality into the adult years is one place where measurement could be "cut").

TABLE 6
PARENTING: SOCIALIZATION OF EMOTIONAL AND SOCIAL COMPETENCE AND OVERALL CHILDREARING

Time Period	MODELING EMOTIONAL EXPRESSIVENESS	REACTING TO CHILDREN'S EMOTIONS	TEACHING CHILDREN ABOUT EMOTIONS	OVERALL CHILDREARING PRACTICES
Infancy/Toddlerhood[a]	Self Expressiveness within the Family Questionnaire	Coping with Children's Negative Emotions Scale (new form being created)	Toronto Alexithymia Scale	---
Preschool/ Early Childhood	Self Expressiveness within the Family Questionnaire	Coping with Children's Negative Emotions Scale	• Toronto Alexithymia Scale • Emotion-Related Beliefs • Emotional Style Questionnaire	Parenting Practices Questionnaire (Robinson et al.)
Gradeschool	Self Expressiveness within the Family Questionnaire	Coping with Children's Negative Emotions Scale	• Toronto Alexithymia Scale • Emotional Style Questionnaire	Parenting Practices Questionnaire
Adolescence	Self Expressiveness within the Family Questionnaire	---[b]	Toronto Alexithymia Scale	Parenting Style Questionnaire (Steinberg et al.)
Late Adolescence/ Early Adulthood	---[c]	---	---	---

[a] Socialization of emotion data have less frequently been obtained from infants' parents.
[b] No measure was found for this construct at this age range.
[c] No longer developmentally appropriate

References

Allport, G. (1937). Personality; a psychological interpretation. New York: Holt.

Allport, G. (1961). Pattern and growth in personality. New York: Holt.

Biship, G., Spence, S. H., & Casey, M. H. (2003). Can parents and teachers provide a reliable and valid report of behavioral inhibition? *Child Development, 74,* 1899–1917.

Cauce, A. M. (1987). School and peer competence in early adolescence: a test of domain-specific self-perceived competence. *Developmental Psychology, 23,* 287–91.

Cole, D. A. (1991) change in self-perceived competence as a function of peer and teacher evaluation. *Developmental Psychology, 27,* 682–688

Denham, S. A. (1998). Emotional development in young children. New York: Guilford Press.

Derryberry, D., & Rothbart, M.K. (1997). Reactive and effortful processes in the organization of temperament. *Development & Psychopathology, 9,* 633–652.

Dunsmore, J. C., & Karns, M. A. (2001). Mothers' beliefs about feelings and children's emotional understanding. *Early Education & Development, 12,* 117–138.

Fabes, R. A.; Poulin, R. E.., Eisenberg, N., & Madden-Derdich, D. A. (2003). The Coping with Children's Negative Emotions Scale (CCNES): Psychometric properties and relations with children's emotional competence. *Marriage & Family Review, 34,* 285–310.

Halberstadt, A. G., & Eaton, K. L. (2003). A meta-analysis of family expressiveness and children's emotion expressiveness and understanding. *Marriage & Family Review, 34,* 35–62.

Jacobs, J. E., Lanza, S., Osgood, D. W., Eccles, J. S., & Wigfield, A. (2002). Changes in children's self-competence and values: Gender and domain differences across grades one through twelve. *Child Development, 73,* 509–527.

Kurdek, L. A., & Krile, D. (1982). A Developmental Analysis of the Relation between Peer Acceptance and Both Interpersonal Understanding and Perceived Social Self-Competence. *Child Development, 53,* 1485–1491.

Maccoby, E. E., & Martin, J. A. (1983). Socialization in the context of the family: Parent-child interaction. In Mussen, P. H., (Series Ed.) & Hetherington, E. M. (Vol. Ed.), Handbook of child psychology: Socialization, personality and social development, Vol. 4 (pp. 1–102). New York: Wiley.

Pellegrini, A. D., & Bartini, M. (2000). A longitudinal study of bullying, victimization, and peer affiliation during the transition from primary school to middle school. *American Educational Research Journal, 37*, 699–725.

Rose-Krasnor, L. (1997). The nature of social competence: A theoretical review. *Social Development, 6*, 111–135.

Rothbart, M.K., & Ahadi, S.A. (1994). Temperament and the development of personality. *Journal of Abnormal Psychololology, 103*, 55–66.

Rothbart, M.K., Ahadi, S.A., & Evans, D. E. (2000). Temperament and personality: Origins and outcomes. *Journal of Personality & Social Psychology, 78*, 122–135.

Rothbart, M.K. & Bates, J.E. (1998). Temperament. In W. Damon (Ed.), Handbook of child psychology: Vol. 3 Social, emotional, and personality development (5th ed., pp. 105–176). New York: Wiley.

Rothbart, M.K., & Derryberry, D. (1981). Development of individual differences in temperament. In M.E. Lamb & A.L. Brown (Eds.), Advances in developmental psychology, Vol. 1. (pp. 83–116). Hillsdale, NJ: Erlbaum.

Saarni, C. (1990). Emotional competence. In Ross Thompson (Ed.), Nebraska symposium: Socioemotional development (pp. 115–161). Lincoln, NE: University of Nebraska Press.

Shiner, R. L. (1998). How shall we speak of children's personalities in middle childhood? A preliminary taxonomy. *Psychological Bulletin, 124*, 308–332.

Shiner, R. L. (2000). Linking childhood personality with adaptation: Evidence for continuity and change across time into late adolescence. *Journal of Personality & Social Psychology, 78*, 310–325.

Shiner, R. L., & Caspi, A. (2003). Personality differences in childhood and adolescence: Measurement, development, and consequences. *Journal of Child Psychology & Psychiatry, 44*, 2–32.

Shiner, R. L.., Masten, A. S., & Roberts, J. M. (2003). Childhood personality foreshadows adult personality and life outcomes two decades later. *Journal of Personality, 71*, 1145–1170.

Teti, D. M., & McGourty, S. (1996). Using mothers versus trained observers in assessing children's secure base behavior: Theoretical and methodological considerations. Child Development, 67(2), 597–605.

Teti, D. M., Nakagawa, M., Das, R., & Wirth, O. (1991). Security of attachment between preschoolers and their mothers: Relations among social interaction, parenting stress, and mother's sorts of the Attachment Q-Set. Developmental Psychology, 27(3), 440–447.

Weiss, R. S. (1991). The attachment bond in childhood and adulthood. In C. M. Parkes; J. Stevenson-Hinde & P. Morris, Attachment across the lifecycle (pp. 66–76). London: Tavistock/Routledge.

Zhou, Q., Eisenberg, N., Wang, Y., & Reiser, M. (2004). Chinese children's effortful control and dispositional anger/frustration: Relations to parenting styles and children's social functioning. *Developmental Psychology, 40,* 352–366.