



# Summary of Methods Used in Waves 1 and 2

## Adoptive Families: Longitudinal Outcomes for Adolescents

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## Minnesota / Texas Adoption Research Project

### Summary of Methods Used in Waves 1 and 2

This document summarizes the methods and procedures used in Waves 1 and 2 of the Minnesota Texas Adoption Research Project. We first describe the sample and discuss reasons for nonparticipation in Wave 2 and results of the attrition analysis. Next, the procedures and measures are described, including the various coding schemes used with the interview and interaction data. Finally, we present a comparison between mean scores from this sample on MTARP questionnaire measures and normative data available for the measures.

#### Participants

##### Wave 1: 1986 – 1992

Adoptive families and birthmothers were recruited for the study through 35 adoption agencies located across the United States. We sought families in which there was at least one adopted child (the "target child") between the ages of 4 and 12 at the time of the interview, who was adopted through an agency before his or her first birthday; in which the adoption was not transracial, international, or "special needs"; and in which both adoptive parents were married to the partner they had at the time of the adoption. We simultaneously sought birthmothers who made adoption plans for children placed with these families. Participants in the study were located in 23 different states from all regions of the U.S., making this study the only nationwide one of its kind.

In 1986, we contacted approximately 40 adoption agencies across the United States to assess the range of openness arrangements they offered and their interest in participating in the study. Among our primary considerations in selecting agencies for participation was that we preferred that the agency be offering a range of openness options to families and that the staff would be willing to follow a random sample process to select participants for the study. We also asked the initial agencies we contacted to nominate other agencies for involvement. After the initial contact, we sent agencies a research prospectus outlining the research design and asked their willingness to participate. The qualifying agencies which originally agreed to participate offered confidential, mediated and fully disclosed adoptions, or believed that some of the families for whom they had arranged mediated adoptions had subsequently fully disclosed to each other. As recruitment of participants progressed, agencies found that families and birthmothers with confidential adoptions were the most difficult to locate, since they generally had not kept in touch with the agency. Therefore, in order to have a larger number of participants with confidential arrangements, we recruited several agencies specializing in confidential adoptions.

We asked each participating agency to select all children who met the criteria outlined above, then to sample randomly among them within levels of openness until they located a set number of families and birthmothers willing to be interviewed. A few

families (12 of 190, or 6.3%) and birthmothers (20 of 169, or 11.8%) were recruited through advertisements in newspapers and periodicals. Data were collected between 1987 and 1992. Although this sample is not a fully random one, participants were specifically *not* recruited on the basis of their success with adoption or their having an interesting story to tell, which is often a problem in volunteer samples.

At Wave 1, the study's participants included 720 individuals: both parents in 190 adoptive families, at least one adopted child in 171 of the families, and 169 birthmothers. Demographic data are included in the attached table. The vast majority of adoptive parents were Caucasian, Protestant and middle to upper-middle class. Of the 190 adoptive couples interviewed, 177 identified themselves as Caucasian, 3 as Latino, 1 as African American, and 1 as Latino and Caucasian. Eight couples gave no indication of their race but were identified by interviewers as Caucasian. These couples reflect the population of families who are typically involved in formally adopting unrelated children, and birthmothers who tend to place their children for adoption. Virtually all adoptive parents in the study had adopted because of infertility. The average level of education was 16.2 years for adoptive fathers and 15.1 for adoptive mothers. Adoptive fathers ranged in age from 32 to 53 (mean = 40.7) and adoptive mothers from 31 to 50 (mean = 39.1).

The average number of adopted children in each home was 1.9. Ninety of the target adopted children were male and 81 were female. Their ages ranged from 4 - 12 (mean = 7.8 years). Target children in 19 of the 190 families were not interviewed. In 8 cases, the child was deemed too young to participate in a valid interview; in 9 cases, the adoptive parents requested that the child not participate; in 1 case, the child refused to be interviewed despite parental encouragement, and there was equipment failure in 1 case.

At the time of the birth of their child, the birthmothers ranged in age from 14 to 36 years (mean = 19.1). Almost 2/3 of the birthmothers delivered when they were teenagers. At the time of the study, the birthmothers ranged in age from 21 - 43 (mean = 27.1), and the average number of years of education attained was 13.5. Income ranged from 0 to \$50,000+; the modal income range was between \$20,000 - 29,000. In terms of ethnicity, 157 (92.9%) were Caucasian, 4 (2.4%) were Latino, 2 (1.2%) were Native American, 1 each were African American and Asian American, and 4 did not list their ethnicity. Half of the birthmothers were currently married, and they had from 1 - 5 children.

### Wave 2: 1996 - 2001

At Wave 2, participants included the parents and target adopted adolescent from 177 adoptive families: 173 adoptive mothers, 162 adoptive fathers, and 156 adopted adolescents (75 boys and 81 girls). At Wave 2, data are also available on 88 siblings and 127 birthmothers.

At Wave 2, most adoptive parents were still married. Five adoptive mothers and 3 adoptive fathers who participated were divorced; 1 adoptive mother and 2 adoptive fathers were separated; 1 adoptive father and 1 adoptive mother were widowed. The

average level of education was 16.3 years for adoptive fathers and 15.1 years for adoptive mothers. Adoptive fathers ranged in age from 40 to 60 years (mean = 49.3); adoptive mothers ranged from 40 to 57 years (mean = 47.4 years). The adopted adolescents ranged in age from 11 to 20 (mean = 15.7).

Wave 2 nonparticipants. Nonparticipants at Wave 2 included 13 families of the original 190 (all members) and an additional 4 adoptive mothers, 15 adoptive fathers, and 21 adopted adolescents.

Reasons for nonparticipation are as follows:

<b>Primary Reason for Nonparticipation</b>	<b>Whole Families</b>	<b>Mothers</b>	<b>Fathers</b>	<b>Adolescents</b>
divorce	2	2	1	1
death		1	3	
adjustment problems with the adopted adolescent – may or may not be adoption-related	6	0	0	3
did not want to discuss personal, family, or adoption-related matters	3	0	7	15
could never be scheduled / too busy	2	1	4	2
<b>TOTALS</b>	13	4	15	21

Analyses were conducted to examine whether differential attrition had occurred between Waves 1 and 2. Families who did and did not participate at Wave 2 were compared on the following Wave 1 variables: child’s intellectual engagement, child’s poor emotional control, child’s social isolation, child’s symptoms (mother’s and father’s independent perceptions); parenting stress (perception of mother and father); parent education; child age; child gender; family level of adoption openness. No significant differences were found, with the exception of gender. Boys were more likely than girls to be nonparticipants at Wave 2:  $\chi^2(1) = 7.25, p < .01$ . Although chi-square analyses did not reveal significant differences by level of openness, nonparticipants included 24.2% of the adolescents from confidential adoptions at Wave 1, 18.8% of the adolescents from mediated adoptions, and 10.2% of the adolescents from fully disclosed adoptions. Parental reports on adolescent adjustment and family functioning were also compared for adolescents who did not participate at Wave 2 and those who did. Again, no significant differences were found.

### Procedures

#### Wave 1

Adoptive families were interviewed in their homes in one session that lasted 3 - 4 hours. The session included separate interviews with each parent and with the target adopted child; administration of several questionnaires; and a joint couples interview with the adoptive parents. Birthmothers were interviewed in their home, at the agency, or

by telephone. They also completed several questionnaires. Details about measures are provided below.

## Wave 2

At Wave 2, adoptive families were once again seen in their homes during a single session that typically lasted 4 – 5 hours. The session included individual interviews with each parent and the target adopted child, administration of several questionnaires, and administration of a family interaction task. Some family members were interviewed by telephone (16 fathers, 20 mothers, 14 adolescents, 2 siblings) when it was impossible to gather everyone together for the home visit (e.g., living out of the U.S., adolescent away at college, etc.)

## Measures

### Wave 1: Adoptive Parent Measures

The following measures were administered separately to the adoptive father and the adoptive mother:

Demographic Questionnaire. This measure requested basic information about age, education, occupation, income, ethnicity, religion, and family composition.

Adoptive Parent Interview. The interview protocol included numerous questions concerning motivation for adoption, experience with adoptive placement, and experiences and feelings about their level of adoptive openness.

Child Adaptive Behavior Inventory (CABI). The CABI (Miller, 1987) is a 91-item questionnaire that each parent completed about the target child. It is organized in terms of 20 scales. Factor analyses of the 20 scales were conducted, and four summary scales emerged: poor emotional control (alpha=.92; hyperactive, antisocial, negative engagement, hostile, tension, fairness (reverse scored), calm response (reverse scored), and kindness (reverse scored)); social isolation (alpha=.88; apathy, introversion, depression, victim, extraversion (reverse scored)); symptoms (alpha=.74: somatic symptoms, imitates, physical symptoms); and intellectual engagement (alpha=.90; intelligence, creativity, task orientation, distractibility (reverse scored)). Higher scores indicate higher levels of the quality indicated by the scale name.

Kirk Adoption Questionnaire. This measure assessed the amount of acknowledgment of difference, empathy, and communication in the adoptive family. Questions are answered on Likert scales, once pertaining to the period around 6 months after the child's adoption, and once pertaining to the present (Kirk, 1981, as modified by McRoy, Grotevant, & Zurcher, 1988).

Parenting Stress Index (PSI). The PSI (Abidin, 1986) is a self-report questionnaire administered to each parent; scales focus on aspects of the child, the parent, and their

context that might contribute to parenting stress. The measure has been normed on both clinical and non-clinical samples of parents.

Twenty Statements Test (TST). The TST (Kuhn & McPartland, 1954) provides an open-ended and unstructured way for participants to describe themselves. The instrument allows researchers to observe in a systematic fashion aspects of the self based on social relationships (such as those involving adoption).

#### Wave 1: Adopted Child Measures

Child Interview. This interview was designed to elicit open discussion of the child's experiences and feelings about his or her adoptive family situation and knowledge of and attitudes about his or her birthparents; it covered general adoption issues as well as issues specific to the level of openness of the child's adoption. Special training was provided for interviewers who worked with the children, and interviewers spent extra time to develop rapport with the child before the interview.

Understanding of Adoption Scale. This scale was administered as part of the child interview to examine children's understanding of adoption, nature of adoptive family relationships, motives underlying adoption, and adoptive placement; scored in terms of 6 levels of social-cognitive understanding of the adoptive family relationship, ranging from level 0 (no understanding of adoption) to level 5 (adoptive parent-child relationship is seen as permanent and is based on the legal transfer of rights from birth to adoptive parents) (Brodzinsky, Singer & Braff, 1984).

Self-Perception Scale for Children. This measure assessed self-concept in children who were age 7.5 years and older; 36 items scored for 6 subscales: cognitive competence, athletic competence, social acceptance, physical appearance, behavioral conduct, and general self-worth (Harter, 1985). On this measure, a score of 1 represents low self-worth and 4 high self-worth. The measure is based on Harter's theory about the self-system (1983, 1984), which acknowledges the importance of assessing both domain-specific self-perceptions as well as the child's overall sense of self-worth. In this study, the global self-worth ( $\alpha=.78$ ; Harter, 1985) scale is used because of our interest in the link between adoptive relationships and the child's global self-evaluation.

Twenty Statements Test. See above.

#### Wave 1: Birthmother Measures

Demographic Questionnaire. This measure requested basic information about age, education, occupation, income, ethnicity, religion, and family composition.

Birthmother Interview. This protocol included an extensive set of questions dealing with experience in making the adoption plan and the current adoption situation, including relationships with her birthchild, the adoptive family, her family of origin, and the placing agency.

Ego Identity Interview. These questions were administered at the beginning of the birthmother interview and examined exploration and commitment in the domain of career identity (Grotevant & Cooper, 1981).

Health Checklist. This measure was a checklist for common stress-related physical symptoms (Pennebaker, 1986).

Intimacy Interview. These questions followed the ego identity interview and assessed levels of relationship maturity, from self-focused, to role-focused, to individuated-connected through questions addressing caring, commitment, and communication in close relationships (White, Speisman, Costos, Kelly, & Bartis, 1984);

Self-Perception Profile for Adults. This questionnaire included 12 subscales in which individuals make self-evaluations regarding competence and adequacy (Messer & Harter, 1986).

Twenty Statements Test. See above.

### Wave 1: Coding Process

In order to gain the most complete picture possible, self-report measures were complemented with ratings of data gathered through interview. Coding schemes were developed to assess several issues of interest, and ratings for variables were based on the entire transcript of the interview of interest. Coders made judgments that required moderate to high levels of inference; therefore, all global coding was performed by graduate students, mature undergraduates in the social sciences, or the co-principal investigators. Our general protocol was to train coders to an initial reliability of at least .80 on the system they were using (percent exact agreement) using appropriate codebooks and criterion interviews. Interrater reliability was monitored throughout the course of coding. Each interview was coded independently by two coders; disagreements were resolved through discussion. Interrater reliabilities were calculated before consensus discussion. Percent exact agreement was used in reliability calculations since it required perfect agreement between coders and was therefore a stringent criterion.

### Wave 2: Adoptive Parent Measures

Adoptive Parent Interview. The interview for adoptive parents included questions that tap a wide range of topics related to adoption. These topics cover the adoptive parent's experiences with being an adoptive family in society; the relationship with the target child; views about the family's specific experiences with contact or no contact with birth family members; views about various openness levels in adoption; and hopes for the future regarding relationships with birth family members.

Interviews were conducted separately with adoptive mothers and fathers and followed a semi-structured format. Coding schemes were developed to assess several

issues of interest, and ratings for variables were based on the entire transcript of the interview. Coders made judgments that required moderate to high levels of inference; therefore, graduate students, mature undergraduates in the social sciences, or the principal investigators, performed all global coding. Our general protocol was to train coders to an initial reliability of at least .80 on the system they were using (percent exact agreement) by using appropriate codebooks and criterion interviews. Interrater reliability was monitored throughout the course of coding. Each interview was coded independently by two coders; disagreements were resolved through discussion. Interrater reliabilities were calculated prior to consensus discussion. Percent exact agreement was used in reliability calculations because it required perfect agreement between coders and was therefore a stringent criterion.

Several areas of interest at Wave 1 were also tapped at Wave 2 in the parent interview. These areas are *acknowledgement of difference* (a parent's acknowledgement of the family's status as an adoptive (rather than a biological) family and the particular issues that might be involved); *empathy for target child's connection to birthfamily* and its importance for the child's self-understanding and identity; *empathy for birth parents* (empathy for difficulty of making the adoption decision, understanding the birthparent's need for information about the child and attempts to look at the adoption from the birthparent's perspective); and the adoptive parents' *sense of permanence* in the parent-child relationships as it is projected into the future. The first three variables were inspired by the work of David Kirk (1964, 1981, 1995).

The Codebook for the Adoptive Parent Interview (available from MTARP Minnesota) contains full documentation of criteria for coding several sets of items: how the family views itself in society, the parent-child relationship, communication about adoption, and openness in the adoption. The openness section contains several sub-categories including description of the openness level; the nature, frequency, and extent of contact within the adoptive family network; relationships with birthfamily; searching; and future desires for contact.

Agency Questionnaire. The Agency Questionnaire was designed to capture the amount and type of contact the adoptive family has had with the agency that facilitated the target child's adoption and services received from that agency or other service providers. Parents were asked to indicate whether or not they had certain types of contact with the agency, (e.g., letter, phone call) any time since the adoption and also in the last year. If so, they were asked to indicate the number of times the type of contact happened. Parents were also asked to indicate the timing and use of different types of services provided by the agency or by other sources (e.g., support groups, social gatherings, search assistance).

Brief Symptom Inventory. The Brief Symptom Inventory (BSI; Derogatis, 1993) is a 53-item self-report measure designed to tap a "snapshot" of current psychological symptoms across clinical and nonclinical populations. Nine primary symptom dimensions are assessed: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. Three

global indices are also incorporated into the measure, including a global severity index, positive symptom total, and positive symptom distress index. The BSI is easy to administer, requires a 6<sup>th</sup> grade reading level, and is appropriate for participants aged 13 and older. It has been employed across a variety of research settings and populations, and has demonstrated good reliability and validity.

Child Behavior Checklist. The Child Behavior Checklist (Achenbach, 1991a) measures adolescent problem behaviors and competence and is administered to parents. The problem scale of the Child Behavior Checklist consists of 113 items such as 'defiant', 'easily frustrated', and 'unhappy, sad or depressed'. The items of the Child Behavior Checklist are scored on a number of subscales (withdrawn, somatic complaints, anxious/depressed, social problems, thought problems, attention problems, delinquent behavior, and aggressive behavior) that make up the total problem scale. The total problem scale consists of two sub-factors, internalizing and externalizing. The internalizing factor consists of the following sub-scales: withdrawn, somatic complaints, and anxious/depressed. The externalizing factor consists of the sub-scales delinquent behavior and aggressive behavior. One week test-retest reliability for the externalizing and internalizing scales ranges from .87 to .95 (Achenbach, 1991a). Research with the CBCL has indicated that this measure is able to distinguish between clinically referred and non-referred children. Furthermore, correlations with other measures of child problem behavior are in the .80s and .90s (Achenbach, 1991a).

The competence items on the CBCL are subdivided into three subdomains: activities, social, and school. The total competence scale is the sum of these three subscales. One-week test-retest reliability for the competence scale is .87 (Achenbach, 1991a). There is no information on content validity for the competence scales on the CBCL.

Demographic Questionnaire. The demographic questionnaire provides information on the following background variables: birthdate, gender, ethnicity, occupation, marital status, educational level, family income, religious affiliation, and religious activity, size of city, whether or not adopted, and information on the children (name, ethnicity, gender, birthdate, relationship (biological, adopted, step), and if adopted age at time placement).

Family Assessment Device. The Family Assessment Device (FAD) developed from the McMaster Model of Family Functioning (Epstein, Baldwin & Bishop, 1985) is a 60-item self-report measure consisting of seven sub-scales. The FAD was designed to be a screening device for the family as a whole. The McMaster Model of family functioning identifies six dimensions of family functioning and includes a measure of general functioning. These dimensions were made into the following subscales: problem solving, communication, roles, affective responsiveness, affective involvement, behavior control, and general functioning. The test-retest reliability on the FAD subscales has been reported to be between .66 to .76 in all studies that have used this assessment. It is regarded as one of the most researched and well-established family assessment tools available. Because the FAD contains seven scales, it is particularly helpful in getting an

overall detailed picture of family functioning. These subscales are not independent of each other, correlating in the .4 to .6 range. When general functioning is held constant, partial correlations between dimensions approach zero. A recent study has concluded that the best use of FAD is to use the general family functioning sub-scale as a summary score since the other sub-scales overlap more than desired (Ridenour, Daley & Reich, 1999).

The internal consistency reliability of the FAD was estimated using Cronbach's alpha. The range was from .72 for roles and behavior control to .92 for general family functioning. A discriminant analysis correctly predicted 67% of nonclinical group and 64% of clinical group membership ( $p < .001$ ) which suggests good, although not excellent, validity.

Epstein also found relatively low correlations between FAD scales and social desirability (Marlowe-Crowne Social Desirability Scale), ranging from -.06 (behavior control) to -.19 (affective involvement). The concurrent validity showed moderate correlations with other self-report measures of family functioning such as FACES II and the Family Unit Inventory.

Family Inventory of Life Events and Changes. The Family Inventory of Life Events and Changes (FILE: McCubbin, Patterson, & Wilson, 1981) assesses changes in family structure, occupational circumstances, economic situation, health, loss, and other important family "events" that are considered to be stressful by family members.

NEO Personality Inventory. The Revised NEO Personality Inventory (NEO PI-R: Costa and McCrae, 1993) is a 181 item measure that assesses five principal dimensions of adult personality: neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. Each of these dimensions contains six facets. We administered the items of the openness to experience scales and the agreeableness scales. The Openness (O) dimension contains the following facets: fantasy, aesthetics, feelings, actions, ideas, and values. Alpha reliabilities for men are .86, and for women are .88. Test-retest reliabilities for men and women are .86. The Agreeableness (A) dimension contains the following facets: trust, straightforwardness, altruism, compliance, modesty, and tender-mindedness. Coefficient alpha estimate for this dimension is .56 for self-ratings and .89 for peer ratings. No test-retest data are available.

The NEO has also demonstrated good validity. Convergent validity has been recognized in that the measure's facet scales correlate well with alternative measures of similar constructs (e.g., the State-Trait Personality Inventory, the Profile of Mood States). Consensual validation has been done by comparing agreement between self-report and observational methods and across multiple informants (e.g., peer ratings, spouse ratings). Construct validity has been established with a number of other measures vis-à-vis NEO dimensions, e.g., Myers-Briggs, Adjective Check List, Affect Balance Scales.

Parenting Stress Inventory. The Parenting Stress Inventory (PSI: Abidin, 1986) was administered to each parent. The questionnaire focuses on aspects of the child, the

parent, and their context that might contribute to parenting stress. Scales are grouped into two main domains—the Child Domain and the Parent Domain. In this study, four subscales from the Child Domain were used—Reinforces Parent; Acceptability; Adaptability; and Demandingness. The four subscales are combined to provide a measurement of incompatibility in the relationship between child and parent. Alpha reliabilities on the four subscales ranged from .71 to .86. The Incompatibility scale was created by summing the four subscales. The alpha reliabilities of the Incompatibility scales were .85 for mothers and .86 for fathers. This scale is also available for parents at Wave 1.

Comparisons with percentile norms were not made at Wave 2 due to the gap in age of the adoptive parents, who now have adolescent children, and those parents upon which the PSI is normed, who have young children.

The four subscales used at Wave 2 were the following (Abidin, 1986):

- Child Adaptability: High scores are associated with characteristics which make the parenting task more difficult due to the child's inability to adjust to changes in his or her physical or social environment.
- Acceptability of Child to Parent: High scores indicate a situation where the child displays physical, intellectual and emotional characteristics which do not match the image that the parent hoped for. The child isn't as attractive, intelligent, or pleasant as the parent hoped.
- Child Demandingness: High scores occur when the parent experiences the child as placing many demands upon him/her. These demands can be related to repeated need for physical attention and interaction or when the child exhibits a high frequency of minor problem behaviors.
- Child Reinforces Parent: High scores indicate lack of positive reinforcement by the child. The interactions between the child and parent do not produce good feelings in the parent about him or herself.

Psychological Parenting Questionnaire. The Psychological Parenting Questionnaire (Henney, 1995) consists of 55 items and is designed to measure parental beliefs, attitudes, emotions, and behaviors that enable a non-biological parent to assume the parenting role with a particular child. As a first step toward validation, the questionnaire was reviewed by three doctoral students to preselect items tapping the factors of claiming, entitlement, and parental acceptance. Items with low variance (90% of response on either end of the response distribution) were not further considered for inclusion. Thirty-one items remained for further consideration. The claiming sub-scale consists of 7 items, entitlement consists of 15 items, and parental acceptance consists of 9 items. Reliability analyses showed alpha reliabilities of .46 (mothers) and .62 (fathers) for claiming, .75 (mothers) and .71 (fathers) for entitlement, and .77 (mothers) and .83 (fathers) for parental acceptance (Phillips, 2000).

## Wave 2: Adopted Adolescent Measures

Adopted Adolescent Interview. The adolescent interview at Wave 2 was designed to elicit open discussion of the adolescent's experiences, feelings, knowledge and attitudes about his or her adoption, adoptive identity, adoptive family situation, and birth parents. It covered general adoption issues as well as issues specific to the level of openness of the adolescent's adoption. covered the four identity domains of occupation, friendship, religion and adoption. Most interviews lasted between 1 to 2 hours. All interviews were transcribed verbatim from audiotape. Three separate coding processes were applied to this interview: the identity code, the "discrete" code, and the openness code. Each will be discussed in turn. All coding was undertaken by two trained raters who coded the interview independently and then met to resolve disagreements.

Adolescent Interview: Identity Coding. This coding scheme was based on two earlier-developed systems: the coding system for assessing identity exploration, commitment, and status (Grotevant & Cooper, 1981) and the coding system of the Family Narrative Consortium (Fiese, Sameroff, Grotevant, Wamboldt, Dickstein, & Fravel, 1999). Adolescent interviews were coded using an analytic inductive method to assess depth of identity exploration, level of adoptive identity salience, valence of positive and negative affect attached to the adoptive identity, and degree to which adolescents acknowledge differences between adoptive and non adoptive families. Interviews were also rated for four aspects of narrative coherence: internal consistency, organization, flexibility and congruence of affect and content (Fiese et al., 1999). Coding was individually completed by two to five coders. Discrepancies were discussed and consensus achieved for each disagreement (reliability  $M = 74.2\%$ ).

Adolescent identity coding included scales that assessed the depth (occupation, friendship, religion, adoption) and breadth (occupation, religion) of identity, the valence of affect (positive, negative) attached to the adoptive identity, and the salience of the adoptive identity. In addition, the depth and breadth of relationships in which the adolescent could enact an adopted identity were also rated.

*Depth of identity exploration* was coded for the domains of occupation, friendship, religion and adoption. Depth of identity exploration was defined as the degree to which the adolescent investigated or examined an identity with clarity, intensity, reflection or thoughtfulness. Exploration was rated on a scale from 1 (no/minimal depth) to 4 (great depth).

*Breadth of identity exploration* was coded for occupation and religion. Breadth of identity exploration was defined as the degree to which the adolescent explores multiple identity choices or options, or different ways of thinking about occupation or religion. In order to distinguish breadth from depth of exploration, an adolescent was counted as having breadth if exploration of alternatives was considered at least at a superficial level. Breadth was coded on a scale from 1 (no/minimal breadth) to 4 (great breadth).

*Valence of positive and negative affect* attached to the adolescent's adoptive identity were coded separately because high levels of one do not necessarily imply low levels of the other. This category assessed how the adolescent felt about being adopted and/or about having an identity as an adopted person and was coded globally, taking into account the adolescent's expressed emotion throughout the adoption section of the interview. Examples of positive affect included interest, enthusiasm, pride, love, joy and excitement about being adopted, while examples of negative affect included hostility, anger, shame, fear, nervousness, sorrow, sadness, confusion and anxiety about being adopted. Valence of affect was rated on a scale from 1 (no affect) to 5 (strong affect).

*Salience* of adoptive identity was a global rating given toward the end of the coding process, and took into account all the previously assigned codes. Raters considered the following in making a coding decision: a) degree of adoptive identity exploration, b) level of positive and negative affect associated with adoptive identity, c) the number of relationships in which the adolescent interacts about adoption related issues (breadth) and the amount of thought and feeling that occurs in these interactions (depth), d) adolescent's acknowledgement of differences between adoptive and nonadoptive families, e) adolescent's ranking of the adoptive identity in relation to five other identity domains, f) level of importance and prominence of the identity, and g) degree to which the adoptive identity influenced behaviors, thoughts, decisions, and feelings. Salience of adoptive identity was coded on a scale from 1 (no salience) to 5 (high salience).

The *relationship connections scale* assessed the breadth and depth of the adolescent's current and ongoing connections with others about adoption and with whom these connections occur. Breadth was measured as the number of social worlds in which the adolescent has interactions about being adopted or is "out" as an adopted person. Social worlds were defined as relationships in which the adolescent spends significant amounts of time, and that are often characterized by a particular place or space such as family at home, friends at school, or co-workers. For each social world identified the depth of interaction about adoption was rated on a scale from 1 (no depth) to 5 (great depth). No depth (1) was defined as interactions that included disclosure of adoption status, but lacked any discussion about adoption issues. Moderate depth (3) included conversation or interaction about adoption that included little to some emotional or reflective engagement. Great depth (5) was characterized by discussions that included much depth of thought or feeling.

Adolescent *guardedness* during the adoption section of the interview was assessed with four items: acknowledgement of differences, incompleteness of response, resistant affect, and expressed desire to end the interview. *Acknowledgement of differences* assessed the degree to which an adolescent recognized differences between adoptive and non adoptive families. Acknowledgement of differences was coded into five groups, ranging from rejection to insistence of differences. A rating of 1 indicated rejection of differences in which there was an emphasis of similarities and denial of differences between adoptive and non adoptive families; 2 indicated between rejection and acknowledgement of differences; 3 indicated acknowledgement of both similarities and

differences, in which there was a reflective acknowledgement of the ways adoptive and non adoptive families differ; 4 indicated between acknowledgement and insistence; and 5 indicated insistence on differences in which there was an emphasis of differences between adoptive and non adoptive families to a very strong degree. *Incompleteness of response* assessed the degree to which the adolescent's responses were incomplete due to answers that were not the length or content asked for, repetitiveness, or incompleteness. *Resistant affect* assessed the degree to which the adolescent expressed frustration, irritation, or anger at the adoption-related questions or was "closed" to the interview questions. *Expressed desire to end the interview* assessed the degree to which the adolescent displayed a desire to end the interview. Ratings for these scales were made on a three-point scale ranging from 1 (no/low) to 3 (strong).

*Narrative coherence* refers to how well an individual is able to construct and organize a story. Narrative coherence includes four distinct scales: internal consistency, organization, flexibility, and congruence of affect and content. Narrative coherence scales were coded from 1 to 5, with higher scores reflecting greater coherence (see Fiese et al., 1999 for details). Coders were instructed to code low if deciding between two codes (i.e., to choose 3 if deciding between 3 and 4).

*Internal consistency* of the narrative reflects the completeness of the content of the narrative and includes the consistency of the whole and the consistency evident within a particular point. Highly internally consistent theories do not have unrecognized contradictions and include personalized examples that can be generalized across situations and fit together in a sensible way. A rating of 1 (no theory) indicated no theory could be identified; 2 (unsupported) indicated very little elaboration of examples; 3 (theory with some support) indicated the adolescent provide personal details and made generalizations about her experience when prompted; 4 (theory in process) indicated statements were consistently supported and there was emerging complexity in the theory; and 5 (well documented) indicated the theory had complexity and permitted detailed elaboration.

*Organization* assessed the adolescent's management of the narrative, including provision of a sense of context, orienting statements, clear transitions between thoughts, self-correction, and focus. A rating of 1 (poor organization) indicated the rater could form no clear picture of the story; 2 (moderately poor organization) indicated the rater understood most of the narrative, with effort or assistance from the interviewer's probes for clarification; 3 (moderate organization) indicated the rater understood the story but there were still some markers of disorganization; 4 (moderately good organization) indicated the rater understood the story clearly with rare incidence of disorganization; and 5 (good organization) indicated the rater clearly understood the story which was told in a succinct and direct fashion.

*Flexibility* assessed the adolescent's ability to explore new ideas and alternatives and to perspective-take. A rating of 1 (low flexibility/rigid) indicated a narrative that strongly adhered to one perspective; 2 (moderately low flexibility) indicated a narrative that adhered to one perspective with minimal recognition of alternative views; 3

(moderate flexibility) indicated a narrative that clearly recognized more than one perspective; 4 (moderately high flexibility) indicated a narrative that elaborated two or more perspectives to an issue; and 5 (high flexibility) indicated a narrative that includes integration and resolution of two or more perspectives.

*Congruence of affect and content* assessed the fit between the adolescent's description of actions and thoughts and the emotion expressed with regard to them. A rating of 1 (low congruence) indicated a clear mismatch between expressed affect and content of the narrative; a 2 (moderately low congruence) indicated the expressed affect and content frequently did not match; a 3 (moderate congruence) indicated occasional mismatch between the expressed affect and content of the narrative; a 4 (moderately high congruence) indicated a rare mismatch between the affect and content of the narrative; and 5 (high congruence) indicated the affect and content of the narrative always matched and were well modulated.

*Relationship expectations* measured the degree to which the adolescent viewed relationships and manageable, reliable, and safe. Relationships with adoptive parents, the birthmother, and the birthfather were coded on a scale from 1 to 5. A rating of 1 (very low) indicated an expectation that relationships were dangerous, threatening, or overwhelming; a 2 (low) indicated an expectation that relationships were precarious or unreliable; a 3 (moderate) indicated an expectation that relationships could be met with success although there were still some sense that relationships could be unpredictable or confusing; a 4 (high) indicated an expectation that relationships were relatively understandable, safe, successful, usually rewarding and reliable; a 5 (very high) indicated an expectation that relationships were safe, reliable, rewarding and fulfilling and that opportunities to establish relationships with others should be embraced.

Adolescent Interview: Discrete Coding. The "discrete" code was applied to a series of questions from the interview that are coded item-by-item. Most coding choices are straightforward and do not involve high degrees of inference, in contrast to the identity coding reviewed above. Questions addressing several topics in the interview were coded with this system: knowledge of and feelings about adoption, discussion of adoption within and outside the family, sibling relationships about adoption, how the adolescent's life would be different if not adopted, the level of information and disclosure about birthparents the adolescent had, the extent of information exchange, Interactions with birth parents (for adolescents who have met a birthparent), and searching related behavior (for adolescents who have not met a birthparent).

Adolescent Interview: Openness Coding. The openness coding process was designed to capture adopted children's experiences within adoptive kinship networks. The coding looked at the following issues: the breadth and diversity of persons within the adoptive kinship network with whom the child has or has had contact, changes in level of openness, withholding of information or contact by parents, frequency of contact, and feelings regarding birthfamily members, such as satisfaction with the relationship, satisfaction with openness, curiosity, and desired future level of contact.

Adoption Dynamics Questionnaire. The Adoption Dynamics Questionnaire (ADQ: Benson, Sharma & Roehlkepartain, 1994), used in the Search Institute's large study of adoptive families in the early 1990s, was used at Wave 2. Two slight modifications were made to the original questionnaire: one question was dropped, and another question was split to include answers for both birthmothers and birthfathers. Possible responses include rating answers on a five-point Likert scale from 1 (not true or strongly disagree or never) to 5 (always true or strongly agree or always), choosing between 7 levels of frequency (never to everyday), and marking "no", "not sure" or "yes". The 44 items form three scales that assess positive affect about own adoption (PA,  $\alpha = .89$ , 20 items), preoccupation with own adoption history (PRE,  $\alpha = .89$ , 17 items), and negative experience with own adoption (NE,  $\alpha = .59$ , 7 items). The PA scale included statements such as "I think my parents are happy that they adopted me" and "I'm glad my parents adopted me." The PRE scale included statements such as "It bothers me I may have brothers and sisters I don't know", and "I wish I knew more about my medical history." The NE scale included statements such as "My parents told me I should be thankful that they adopted me", and "My parents tell me they can give me back if they want to."

Brief Symptom Inventory. (see description above)

Demographic Questionnaire. The demographic questionnaire for adolescents requested the following information: whether adopted (yes/no), gender, birthdate, ethnicity, marital status, religion, employment, and with whom living (and how long).

Family Assessment Device. (see description above)

Personal Experience Screening Questionnaire. The Personal Experience Screening Questionnaire (PESQ: Winters, 1991) is a 40-item measure designed to screen adolescents for substance abuse in an efficient and reliable manner. It is intended for use with 12 to 18 year olds, and can be administered by a paraprofessional. This brief, standardized questionnaire takes about 10 minutes to complete. It identifies teenagers who should be referred for a complete chemical dependency evaluation. The measure requires a fourth grade reading level. Three principal areas are given attention: (1) problem severity measures the extent to which the adolescent is involved with drugs across psychological and behavioral arenas; (2) psychosocial items determine what personal and environmental problems are associated with the adolescent's substance abuse; (3) drug use history taps the adolescent's age of onset wherein drug use began and how often over the last year alcohol, marijuana, and "hard drugs" (e.g., cocaine, heroin, amphetamines, barbiturates) have been used. The PESQ has demonstrated good internal consistency reliability across male ( $\alpha = .91$ ) and female ( $\alpha = .90$ ) populations. It has also done well across younger ( $\alpha = .91$ ) and older ( $\alpha = .90$ ) cohorts. Other tests of internal consistency reliability with clinical and nonclinical populations have yielded similar results ( $\alpha$  varying from .90 to .95). Construct validity has been established whereby the PESQ has correlated highly with other measures purporting to tap similar phenomena. The PESQ correlates highly with the Personal Involvement with Chemicals Scale (PEI) across male (.97), female (.96), younger (.96), and older (.97) adolescents. It has also

been noted that, while effects for gender and age are not statistically significant, there is a trend for males to score higher (i.e., report more drug abuse) than females and for older adolescents to report more use than younger ones.

Inventory of Parent and Peer Attachment. The Inventory of Parent and Peer Attachment (IPPA: Armsden & Greenberg, 1986) was developed to assess adolescents' perceptions of the positive and negative affective/cognitive dimension of relationships with their parents and close friends—in particular, it assesses how well these figures serve as sources of psychological security (Armsden & Greenberg, 1986). The theoretical framework is attachment theory, originally formulated by Bowlby. Three broad dimensions are assessed: (1) degree of mutual trust, (2) quality of communication, and (3) extent of anger and alienation. The development samples were 16 to 20 years of age, however the IPPA has been successfully used in several studies with adolescents as young as 12. The instrument is a self-report questionnaire with a five point Likert-scale response format. The instrument is comprised of 25 items in each mother, father and peer sections, yielding three attachment scores. The IPPA is scored by reverse-scoring the negatively worded items and then summing the response values in each section.

Internal consistency reliabilities (Cronbach's alpha) were mother attachment .87, father attachment, .89 and peer attachment, .92. Among late adolescents, parental attachment scores were moderately to highly related to Family and Social Self scores from the Tennessee Self Concept Scale and to most subscales on the Family Environment Scale (Armsden & Greenberg, 1987). Parent attachment scores of 12-18 year olds were also moderately correlated with scores on Olson's FACES measure, and with the degree of positive family coping (communication among family members and relatives concerning problems) (Lewis, Woods & Ellison, 1987). In a sample of 10-16 year old psychiatric patients, less secure parent attachment was related to clinical diagnosis of depression, parent rating of the adolescent's depressive symptoms, and to patient's self-reported level of depression (Armsden, McCauley, Greenberg, Burke & Mitchell, 1991). Attachment to parents has been found to discriminate delinquents from non-delinquents among 12-17 years olds (Redondo, Martin, Fernandez, & Lopez, 1986). Late adolescents experiencing more secure mother and father attachment report less conflict between their parents and experience less loneliness (Armsden, 1986).

Peer attachment was positively related to social self-concept as assessed by the Tennessee Self Concept Scale and family expressiveness on the Family Environment Scale, and is strongly negatively correlated with loneliness. Peer attachment was modestly correlated with parent attachment as assessed by the IPPA as well as measures of general family functioning and self concept as a family member (Armsden & Greenberg, 1987; Armsden, 1986; Lewis, et al., 1987).

Youth Self Report. The Youth Self Report (Achenbach, 1991b) is the adolescent version of the Child Behavior Checklist. The main difference from the Child Behavior Checklist is that the Youth Self-Report includes a number of positive distracter items within the list of items that measures problem behaviors. As with the Child Behavior Checklist, the Youth Self-Report consists of the same subscales that make up the total

problem scale and the internalizing and externalizing factor. However, there are three items on the externalizing scale (disobedient at home; thinks about sex too much; vandalism) that are asked from the parents (on the CBCL) and not the adolescents (on the YSR). There are two items on the internalizing scale (I deliberately try to hurt or kill myself; I think about killing myself) that are asked from the adolescents and not the parents. Overall, there are 16 problem items that are on the CBCL and not on the YSR. These items are replaced with 16 socially desirable items, focusing on positive behavior.

Just as the CBCL, the YSR also has competence scales. However, there is no school competence scale, but one item (summarizing GPA on main subjects) is added to the activities and social scale to comprise the competence scale. One week test-retest reliability on the competence scale averages .76, and seven-month test-retest reliability averages .50 (Achenbach, 1991b). There is no information on content validity for the competence scales of the YSR. One week test-retest reliability on the YSR ranges from .67 to .91 (Pearson correlation) for the internalizing and externalizing scales (Achenbach, 1991b). Test-retest reliability is lower for younger adolescents (11-14 years of age) than older adolescents (15-18 years of age). As with the CBCL, the YSR has shown to successfully distinguish between clinically referred versus non-referred children (Achenbach, 1991b).

#### Wave 2: Family Interaction Task

Both adoptive parents and the adopted target adolescent participated in a 20-minute audiotaped family interaction task, in which the family was told they have unlimited funds and 2 weeks to plan a vacation together. They are asked to decide where they would go and what they would do each day. This task was successfully used in the researcher's earlier work (Family Process Project: Grotevant & Cooper, 1985, 1986) with a demographically-similar sample of non-adoptive families. Interactions were transcribed verbatim and coded for individuality and connectedness, using the Individuality and Connectedness Q-sort (Bengtson & Grotevant, 1999).

#### Wave 2: School Records

Adolescents and their parents were asked permission for us to contact the adolescents' schools for their grades from as many years as possible, standardized test scores, class rank, and records concerning special education and gifted and talented programming. This information forms a unique longitudinal data set based on archival records rather than self report.

#### Wave 2: Birthmother Measures

Birthmother Interview and Demographic Questionnaire: includes demographic questions and an extensive set of questions dealing with the adoption process in general, the birthmother's experience with making an adoption plan for her child, and the birthmother's current experience with her adoption situation, including her relationships with her birthchild, the child's adoptive family, and the placing adoption agency.

Brief Symptom Inventory: (see above)

Ego Identity Interview: The occupation section of the Ego Identity Interview (initially developed by Marcia, 1966 and later modified by Grotevant & Cooper, 1981) operationalizes Erikson's (1968) construct of identity and applies it to the domain of career choice. The interview was rated for evidence of identity exploration, identity commitment, and identity status.

ENRICH Marital Satisfaction Scale: The ENRICH Marital Satisfaction Scale (Fowers & Olson, 1993) is a 15 item measure of marital satisfaction that covers 10 domains of couple relationships and includes a couple conventionalization subscale, which corrects for socially desirable responses.

Family Inventory of Life Events and Changes: (FILE) (McCubbin, Patterson, & Wilson, 1981) (see above)

Grief Experience Inventory-Loss Version: (Sanders, Mauger, & Strong, 1985) is a 135 item questionnaire designed to assess thoughts and feelings by those who are grieving a loss. The research scales include Sleep Disturbance, Appetite, Loss of Vigor, Physical Symptoms, Optimism/Despair, and Dependency; bereavement scales include Despair, Anger/Hostility, Guilt, Social Isolation, Loss of Control, Rumination, Depersonalization, Somatization, and Death Anxiety; validity scales include Denial, Atypical Responses, and Social Desirability.

Harter Self-Perception Profile for Adults: The Self-Perception Profile for Adults (Messer & Harter, 1987), based on Harter's (1983) multi-dimensional model of self-esteem, includes 12 subscales in which individuals make self-evaluations regarding their competence and adequacy.

Health Checklist: The Health Checklist (Pennebaker, 1986) assesses the frequency with which an individual experiences a variety of common stress-related physical symptoms.

Intimacy Interview: The intimacy interview (initially developed by Orlofsky, Marcia, & Lesser, 1973, and later modified by White, Speisman, Costos, Kelly, & Bartis, 1984) assesses the degree to which birthmothers have achieved the developmental task of young adulthood concerning establishment of intimate relationships with others. The interview questions are scored according to the model of three levels of relationship maturity: (1) self-focused relationships; (2) role-focused relationships; and (3) individuated-connected relationships.

Life History Calendar: Sequences of life events are recorded on a grid and facilitate recall of salient life occurrences (Freedman, Thornton, Camburn, Alwin, & Young-Demarco, 1986). The calendar includes events such as years of attendance in

school, marital history, pregnancies and childbearing, contact with or information about the placed child, job history, and separations from subsequent children.

NEO Personality Inventory: (NEO PI-R: Costa & McCrae, 1992) assesses the "Big 5" personality factors (neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness) and six facets under each. The measure has excellent psychometric properties (Hess, 1992; Widiger, 1992) and is appropriate for individuals with a sixth grade reading level or above.

Openness Checklist: assesses the degree to which there has been information sharing and identified or non-identified contact between the birthmother and the adoptive family; based on extensive work conducted at T<sub>1</sub>.

Twenty Statements Test: The Twenty Statements Test (Kuhn & McPartland, 1954) provides an open-ended and unstructured way for participants to describe themselves. The instrument allows researchers to observe in a systematic fashion aspects of the self based on social relationships (such as those involving adoption).

#### Questionnaire Measures: Comparison of MTARP Sample to Normative Samples

##### Adolescent Measures

Means and standard deviations of the MTARP sample of adolescents were compared to those of norm groups provided in manuals for the various questionnaires used in the study. Although normative data are not available for all measures, it is noteworthy that the mean scores of the adolescents in our sample were within the "low risk" group on the Personal Experience Screening Questionnaire, a measure of drug use. On the Brief Symptom Inventory, means of the adopted adolescents were lower on each scale than means provided for the non-clinical norm group. On the problem behavior scales of the Achenbach Youth Self Report, scale and total means were not statistically different from the non-clinical norms provided for the measure.

##### Parent Measures

On the Achenbach Child Behavior Checklist (both mother and father report), parents' means were very close to the norms published for non-clinical adolescents (most problem behavior means for the study adolescents were slightly lower). Likewise, parents' means on the openness and agreeableness scales of the NEO Personality Inventory were close to those in the published norms. Parental reports of stressful life events on the Family Inventory of Life Events and Changes were very similar to the norms provided for non-clinical families. On the Brief Symptom Inventory, means for adoptive mothers were close to norms (generally lower) and means for adoptive fathers were slightly above the norms for men in non-clinical samples.