NCFAS
North Carolina Family Assessment Scale

Research Report

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The NCFAS is a Family Assessment Scale intended for use by programs providing intensive family preservation services to high-risk families.

The National Family Preservation Network (NFPN) is the sole distributor of the NCFAS training package. All inquiries should be directed to NFPN.

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Introduction
This guide provides a brief history of the development and use of the North Carolina Family Assessment Scale (NCFAS). The NCFAS is a practice-based instrument designed to assess five domains of family functioning (Environment, Parental Capabilities, Family Interactions, Family Safety, and Child Well-Being). The instrument is designed to be used in Intensive Family Preservation Services (IFPS program or other time-limited, home-based service programs. The authors discuss the development of the NCFAS, the scale’s reliability and validity, and the use of the scale in social work practice.

History
In 1991, the North Carolina legislature passed the state’s Family Preservation Act establishing a state-wide intensive family preservation services (IFPS) program. At the time there were a number of service providers throughout North Carolina delivering in-home services under the “banner” of family preservation, and the new law enabled those programs that were willing to follow the state’s policies and standards to be eligible for state funding. The legislation included several mandates. Among them:

- The Homebuilders Model of IFPS (Haapla, Kinney, & Booth, 1991) was to be used as the state’s model (creating a statutory service period of 4 to 6 weeks, a caseload of 2 to 4 families, etc.).
- A state-wide evaluation of the programs was required, including a client tracking component that followed families for up to three years after service.
- Prevention of out-of-home placement was to be used as the outcome evaluation statistic.

The authors were awarded the state contract to conduct the evaluation. The NCFAS was developed as part of the multi-year evaluation initiative. During the first two years of the evaluation time was devoted to the construction of a uniform case record system that could be used by each of the three child serving systems involved in IFPS in North Carolina (social services, mental health, and juvenile services). During this period, a cooperative working relationship was established between the IFPS providers, the state administrators, and the evaluators. A longitudinal evaluation plan was adopted in which the IFPS programs provide case-level data on all cases receiving IFPS services. These data are acquired from the automated case record system implemented in 1994 (and subsequent revisions).
The NCFAS was developed collaboratively to assist both caseworkers and program evaluators. The development of the NCFAS was inspired, in part, by a desire to evaluate aspects of IFPS intervention other than the social policy goal of “placement prevention,” which at that time had been the ubiquitous outcome measure employed in IFPS evaluations.

By 1994 there had been a number of evaluations of IFPS and related programs that employed experimental designs, and that resulted in mixed findings regarding the effectiveness of IFPS in preventing out-of-home placements (Borduin, Mann, Cone, Henggeler, Fucci, Blaske, & William, 1995; Borduin, Henggeler, Melton, & Smith, 1992; Brunk, Henggeler, & Wheeler, 1987; Feldman, 1991; Fraser, Walton, Lewis, Pecora, & Walton, 1996; Schuerman, Rzepnicki, Littell, & Chak, 1993; Yuan, McDonald, Wheeler, Struckman-Johnson, & Rivest, 1990). Reviewing the findings, some researchers noted methodological concerns evident in the evaluations (Blythe, Salley & Jayaratne, 1994; Heneghan, Horwitz, & Leventhal, 1996; Rossi, 1992). Other researchers reported that end-of-service placements were affected by a number of things outside the control of the IFPS programs, such as judicial behavior, media pressure, and unused available placements (Fraser, Pecora and Haapala, 1991). More recently, Fraser, Nelson and Rivard (1997) noted that in some studies, combining data from differing programs may have masked the detection of positive treatment outcomes by pooling error variance such that there was a net loss of statistical power, even with very large sample sizes. In addition to these shortcomings addressed in the research literature, experimental approaches do not permit flexibility of program design after study implementation, and are often viewed by practitioners as burdensome, threatening and confining. In their extreme, they are viewed as unethical.

Given these problems, a longitudinal evaluation model was selected for use in North Carolina. The evaluation included information about family functioning in addition to placements, and the practice community welcomed this model as an alternative to previously employed experimental designs. However, conducting such an evaluation required that certain data be available for which there was no readily apparent instrumentation. A uniform case record system was necessary, as well as a method for assessing family functioning. The latter of these led to the development of the NCFAS.
Development of the NCFAS

In North Carolina, the search for outcome measures other than end-of-service placement began with the formulation of a work group comprising IFPS providers, state administrators and evaluators. The group’s discussion of measurement focused on family functioning. Workers wanted to know if and how aspects of family functioning changed following IFPS. The evaluators reviewed the family assessment literature relating to a number of existing scales, their use with different populations, and their modes of application (e.g. self report vs. worker assessment). Several North Carolina IFPS programs had used some of standardized assessment tools and found them to be cumbersome and difficult to use in the practice setting. The group decided to develop a new family assessment instrument. In order to satisfy the varied interests of the group, the new instrument needed to:

- capture the ecological structure of family functioning;
- address the safety concerns of child welfare, mental health and juvenile justice;
- require minimum training to administer;
- take a limited amount of time to complete (30 minutes or less);
- allow for the assessment of strengths as well as deficits;
- be capable of detecting small changes in family functioning during brief interventions; and
- meet the information and data needs and goals of both practitioners and researchers.

The evaluators, state administrators, and practitioners were interested in developing a scale based on the practice environment, and then “matching” the scale to existing theory. The North Carolina IFPS providers liked the idea of an inductive approach, and provided examples of assessment instruments that had been developed in their own agencies. The evaluators then requested other practice-based assessment scales from IFPS programs outside of North Carolina. The intention was to select and review assessment tools that were ecological in orientation, congruent with the multiple theories of IFPS, and that had been used in practice with IFPS or similar populations.

Six tools were identified, including the Family Assessment Form (developed by the Children’s Bureau of Southern California and researchers William Meezan and Jacquelyn McCroskey at the University of Southern California), the Family Functioning Scale (developed by
Haven House, Raleigh, NC), the Family Assessment of Needs (developed for use in the Families First IFPS program in Michigan), the assessment form used by the Bringing It All Back Home Study Center (Morganton, NC), Methodist Home for Children’s Crisis Counselors Intake and Assessment Form (Methodist Home for Children, Raleigh, NC), and the North Carolina Division of Mental Health, Developmental Disabilities and Substance Abuse Services’ assessment form. Of the six scales compared, only the Family Assessment Form (FAF, from southern California) had been researched and analyzed with regard to reliability and validity. As a result, the FAF was used as the anchor scale for a comparison matrix of the instruments, and the factor analytic work of Meezan and McCroskey (1991) provided the structure for the comparison.

Figure 1, below, presents a small section of the comparison matrix. In Figure 1, the Living Conditions and Financial Conditions factors derived from the FAF, and the items that comprise these factors are listed in the first row. Items in the other rows represent the comparable items found on the other five assessment scales. While the number of items per scale varied, there were very few “empty cells” in the matrix. The congruency among these locally developed scales gave strong support to the notion that IFPS workers and administrators had a common set of practice-based concerns relating to the families they served. The congruency also suggested that there was an emerging practice wisdom about factors that should be the foci of IFPS assessments and interventions.
As a result, the comparison matrix provided a basis for the development of the North Carolina Family Assessment Scale. Discussions with the work group in North Carolina resulted in modifications to the factors and the sub-scales comprising them. The group decided on five assessment “domains” or factors: environment, social support, family/caregiver characteristics, family interactions, and child well-being. There were 39 original sub-scales and domains: ten sub-scales related to environment, five related to social support, six related to family/caregiver characteristics, six related to family interactions, and 12 related to child well-being.

The NCFAS was developed over a year-long period that involved the processes of scale construction, field testing and revision prior to statewide implementation. The tool was field tested by eight IFPS providers from the work group in North Carolina. Field testing included using the NCFAS in actual cases. Workers from each IFPS program filled out the scale.

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#### Figure 1. Sample of a Comparison of Six Practice-Based Family Functioning Tools

<table>
<thead>
<tr>
<th>Scale</th>
<th>Living Conditions</th>
<th>Financial Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAF*</td>
<td>Clean Outside</td>
<td>Stress due to Welfare</td>
</tr>
<tr>
<td></td>
<td>Clean Inside</td>
<td>Inside Furniture</td>
</tr>
<tr>
<td></td>
<td>Safe Outside</td>
<td>Financial Stress</td>
</tr>
<tr>
<td></td>
<td>Safe Inside</td>
<td>Transportation</td>
</tr>
<tr>
<td>FFS</td>
<td>E3 Housing</td>
<td>E1 Income</td>
</tr>
<tr>
<td></td>
<td>E4 Habitability</td>
<td>E1 Income Management</td>
</tr>
<tr>
<td></td>
<td>E5 Suitability</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E6 Home Management</td>
<td></td>
</tr>
<tr>
<td>FAN</td>
<td>S12 Housing</td>
<td>S11 Resource Availability &amp; Management</td>
</tr>
<tr>
<td>BIABH</td>
<td>Housing</td>
<td>Home Management</td>
</tr>
<tr>
<td></td>
<td>Habitability</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Suitability</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Clean</td>
<td></td>
</tr>
<tr>
<td>DMH/DD/SAS</td>
<td>[This scale is more clinically oriented</td>
<td>[This scale is more clinically oriented</td>
</tr>
<tr>
<td></td>
<td>and did not include items on this factor</td>
<td>and did not include items on this factor</td>
</tr>
<tr>
<td></td>
<td>for the FAF.]</td>
<td>for the FAF.]</td>
</tr>
<tr>
<td>MCH</td>
<td>Inadequate Living Conditions</td>
<td>Unemployment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Financial Problems</td>
</tr>
</tbody>
</table>

*FAF: Family Assessment Form  
FFS: Family Functioning Scale  
FAN: Family Assessment of Needs  
BIABH: Bringing It All Back Home Study Center  
DMH/DD/SAS: Div. of Mental Health, Developmental Disabilities, Subst. Abuse  
MCH: Methodist Home for Children/Crisis Counselors Intake and Assessment Form

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1 – Mountain Youth Resources, Cullowhee, N.C.; Bringing It All Back Home Study Center, Morganton, N.C.; Foothills Youth Services, Lenoir, N.C.; Cleveland County DSS, Shelby, N.C.; Forsyth/Stokes Area Mental Health, Winston-Salem N.C.; Piedmont Area Mental Health, Concord, N.C.; Youth Focus, Greensboro, N.C.; and Methodist Home for Children, Raleigh, N.C.
the scales and reported their experiences, ideas and suggestions back to the evaluators. Two major revisions involving scaling techniques, and numerous minor revisions relating to scale content were made to the NCFAS before its state-wide implementation in April, 1994. The NCFAS was revised again (resulting in the NCFAS, Version 1.4) after a full year’s experience in state-wide use. The NCFAS, Version 1.4 was used for three more years in North Carolina, and is the version of the scale that was the subject of the reliability and validity study discussed later in this report.

Format of the NCFAS

Each of the five domains and associated sub-scales utilize a six-point rating scale, ranging from -3 (serious problem) to +2 (clear strength), through a “0” point labeled Baseline/Adequate. There are two opportunities to rate each sub-scale and each domain; once at intake (labeled “I” on the form), and once at closure (labeled “C” on the form). This format provides an immediate visual picture of any changes that occurred during the intervention between intake and case closure.

At first inspection, this scale may appear “lopsided,” since there are three possible ratings for problems and only two for strengths. However, the work group suggested that if a family is functioning at the “baseline/adequate” level, there would be no legal, ethical or moral reason for child welfare, juvenile justice or mental health to be involved with the family. Thus, they conceptualize the scale as having three “mild to serious” problem rating possibilities, and three “adequate/baseline to strength” rating possibilities, with no ambiguous mid-point on the scale.

Most previous instruments had been constructed using a “deficit model” of family functioning, not permitting the rating of “strengths” on the form. The NCFAS permits the rating of strengths as well as problems on all domains and subscales. Identifying strengths on the scale permits workers to include in the intervention those things that the family is doing well. This practice enhances the intervention and is affirming for the family; both of which are components of IFPS philosophy.

Using the NCFAS in Practice
In practice, the use of the scale is quite simple. In IFPS practice settings a worker fills out the intake ratings during the first week to ten days of involvement with a family. The information needed to make the ratings is typically available within this time frame because of the intensive nature of the worker’s involvement with the family.

The worker does not need to fill out the scales in order, but rather in the order in which he or she obtains information and feels that an accurate picture of the family has emerged. Reviewing the instrument periodically during the first week to 10 days of service reminds the worker of the areas to explore during assessment.

The worker completes the subscales of a domain before rating the overarching domain. He or she then rates the overarching domain based on a subjective assessment of the subscales comprising that domain. Testing of the NCFAS indicates that the most reliable ratings of the overarching domains occur after all of the domain items, or subscales, have been rated. Thus, the domain ratings may be thought of as the gestalt, or overall impression that the subscales yield with respect to the related domains. The domain scores are not simply the arithmetic averages of the related subscales.

It is very important to note that at any time during their involvement with the family the workers are permitted to adjust the intake ratings, if information “comes to light” as the workers become more acquainted with the family. For example, alcohol or drug use may not be apparent right away if the family is in denial or is concealing the behavior, but this information may be disclosed or discovered as the relationship between the IFPS worker and the family develops. The idea behind permitting adjustments in ratings is to have the NCFAS scores be an accurate reflection of the worker’s perception of the family at both intake and closure, rather than to be a test of how much the worker knew or didn’t know in the first week of contact with the family. Case notes may be used to record reasons for these adjustments if they need to be discussed at a later time, or explained during supervisory sessions or case conferences. They also may be important to end-of-service decisions about placement, the need for other services, or for protective supervision.

Where sub-scales pertain to individual caretakers or children (e.g., school performance), or where there are multiple caretakers or children within the family, a worker rates those caretakers or children with the
most difficult problems, since those problems will most likely be a target of the intervention. This approach is consistent with the underlying NCFAS structure: it is a family assessment instrument, and recognizes that the family system may be affected even if all members of the family do not experience problems to the same degree. For example, a family may have three children, only one of whom has a serious mental health problem; but that child’s problem may affect the Child Well-Being domain to a significant degree for the entire family system.

In some cases, particular items or subscales do not apply to specific families. In these situations workers should use the NA (Not Applicable) rating. For example, a family with no children of school age would rate the School Performance item on the Child Well-Being domain as “Not Applicable.” In addition, on the ‘Motivation/Cooperation of the Child’ item, families who have only infant(s) or very young children are instructed to rate this item in the “baseline to strengths” range, since it is implicit that young children are highly dependent on their caregivers and thus are “motivated to stay with them.” Negative ratings (or strength ratings) on this item are more likely to appear when children are older, and have the capability of forming their own opinions about whether or not they want to stay with the family.

The intake ratings provide a snapshot of family functioning at the beginning of the intervention. The domain ratings at intake suggest areas that will be the foci of case planning for interventions, and the subscale ratings suggest more specific target areas for intervention.

Workers complete closure ratings within a few days of case closure, while the memory of the family is still fresh and closure ratings are most likely to be reliable and valid. The closure ratings are treatment outcome measures in their own right, and may be related to other treatment outcomes like placement prevention or protective supervision. Further, the differences between the intake and closure ratings may be thought of as change scores that give an indication of the amount of change experienced by the family during the intervention.

**Reliability and Validity Study of the NCFAS**

A reliability and validity study of the NCFAS, Version 1.4, was conducted in 1996 and 1997 in the IFPS practice setting in North Carolina. Reliability of the NCFAS was tested using methods that measure “internal consistency,” and validity was tested using methods that measure “construct validity.”
All families who were served through North Carolina’s IFPS program and their respective IFPS workers from September 1996 to June, 1997 were eligible to participate in the study. For the reliability (internal consistency) component of the study, a total of 288 families participated; inclusion in this group required that 80% or more of the NCFAS items had been completed (31 of 39 items, or more). Key sample characteristics included: mean age of the primary caretaker-35; ethnicity of the primary caretaker: 69% Caucasian, 27.4% African American, 2.1% American Indian, .3% Hispanic, and .3% Multi-racial; mean age of the target child-10 ½ years; ethnicity of the target child: 65.3% Caucasian, 26.7% African American, 2.1% American Indian, .3% Hispanic, and 4.5% Multi-racial; and mean annual income: $17,784.

A non-probability sample of 126 families and their respective workers agreed to participate in the validation study. For this component of the study, IFPS workers completed the NCFAS and the Child Well-Being Scales (CWBS) (Magura & Moses, 1986), and at the same time families completed the Index of Family Relations (IFR) (WALMYR, 1996) and two subscales from the Family Inventory of Resources for Management (FIRM) (McCubbin, Thompson, & McCubbin, 1996). Key sample characteristics included: mean age of the primary caretaker-35; ethnicity of the primary caretaker: 65.3% Caucasian, 35.7% African American, and .8% American Indian; mean age of the target child-10; ethnicity of the target child: 60.3% Caucasian, 34.9% African American, .8% Amer. Indian, .8% Hispanic, and 3.2% Multi-racial; and mean income: $18,528.

Primary findings from the study are highlighted in this guide.\(^3\) Principal axis factoring (which used the squared multiple correlation method to estimate the communalities) and a Varimax rotation, provided the “best fit” solution. Table 1, below, presents the final factor solution.

Four factors were found in the final factor solution. The first factor, Environment, replicated the original Environment domain with 10 items. The second factor, Child Well-Being replicated the original Child Well-Being domain, but the factor was reduced from 12 to 8 items. The original Family Interactions domain was the third factor and was reduced from six to four items. A final factor, named Family Safety, emerged. Coefficient alpha was estimated for each of the resulting factors. The results are presented in Table 2.

\(^3\) For a complete review of the study, see Reed (1998), or Reed-Ashcraft, Kirk & Fraser (2001).
Table 1. Factor Loadings for the Final Factor Solution

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>.854*</td>
<td>.119</td>
<td>.251</td>
<td>.106</td>
</tr>
<tr>
<td>Personal Hygiene</td>
<td>.780*</td>
<td>.167</td>
<td>.147</td>
<td></td>
</tr>
<tr>
<td>Housing Stability</td>
<td>.774*</td>
<td></td>
<td>.106</td>
<td></td>
</tr>
<tr>
<td>Income/Employment</td>
<td>.763*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food/Nutrition</td>
<td>.758*</td>
<td>146.</td>
<td>.183</td>
<td></td>
</tr>
<tr>
<td>Habitability of Housing</td>
<td>.730*</td>
<td>.139</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety w/in Community</td>
<td>.718*</td>
<td>.184</td>
<td>.112</td>
<td></td>
</tr>
<tr>
<td>Learning Environment</td>
<td>.707*</td>
<td>.237</td>
<td>.282</td>
<td></td>
</tr>
<tr>
<td>Transportation</td>
<td></td>
<td></td>
<td></td>
<td>.700*</td>
</tr>
<tr>
<td>Child's Behavior</td>
<td></td>
<td>.838*</td>
<td>.158</td>
<td></td>
</tr>
<tr>
<td>Relationship w/ Caregiver</td>
<td></td>
<td>.805*</td>
<td>.369</td>
<td></td>
</tr>
<tr>
<td>Mental Health of the Child</td>
<td></td>
<td>.775*</td>
<td>.171</td>
<td>.211</td>
</tr>
<tr>
<td>Child Well-Being</td>
<td>.201</td>
<td>.727*</td>
<td>.261</td>
<td>.118</td>
</tr>
<tr>
<td>School Performance</td>
<td>.136</td>
<td>.717*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship w/ Peers</td>
<td>.165</td>
<td>.706*</td>
<td></td>
<td>.125</td>
</tr>
<tr>
<td>Motivation/Cooperation of the Child</td>
<td>.132</td>
<td>.614*</td>
<td>.199</td>
<td></td>
</tr>
<tr>
<td>Relationship w/ Siblings</td>
<td>.125</td>
<td>.592*</td>
<td>.121</td>
<td>.125</td>
</tr>
<tr>
<td>Family Interactions</td>
<td>.322</td>
<td>.357</td>
<td>.799*</td>
<td>.171</td>
</tr>
<tr>
<td>Bonding w/ the Child</td>
<td>.228</td>
<td>.387</td>
<td>.685*</td>
<td>.193</td>
</tr>
<tr>
<td>Mutual Support</td>
<td>.259</td>
<td>.315</td>
<td>.670*</td>
<td>.171</td>
</tr>
<tr>
<td>Expectations of the Child</td>
<td>.373</td>
<td>.389</td>
<td>.593*</td>
<td>.161</td>
</tr>
<tr>
<td>Sexual Abuse of the Child</td>
<td></td>
<td>.174</td>
<td>.712*</td>
<td></td>
</tr>
<tr>
<td>Emotional Abuse of the Child</td>
<td></td>
<td>.273</td>
<td>.315</td>
<td>.683*</td>
</tr>
<tr>
<td>Domestic Violence</td>
<td>.294</td>
<td></td>
<td>.283</td>
<td>.438*</td>
</tr>
</tbody>
</table>

*Asterisks accompany items loading significantly on specific factors.

Table 2. Coefficient Alpha Scores for Resulting Factors

<table>
<thead>
<tr>
<th>NCFAS Factor</th>
<th>Coefficient Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>.937</td>
</tr>
<tr>
<td>Child Well-Being</td>
<td>.923</td>
</tr>
<tr>
<td>Family Interactions</td>
<td>.910</td>
</tr>
<tr>
<td>Family Safety</td>
<td>.709</td>
</tr>
</tbody>
</table>

Good support also was provided for the construct validity of the NCFAS, although the study results strongly supported the reliability of the factors. Pearson’s \( r \) correlation was calculated for each original
NCFAS domain and the similar factors from the other assessment instruments. Results are presented in Table 3, below.

Table 3. Summary of Correlations Found Between the NCFAS & Other Scales

<table>
<thead>
<tr>
<th>NCFAS</th>
<th>Other Instruments</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>Housing Adequacy (CWBS)</td>
<td>$r = .708, p = .01$</td>
</tr>
<tr>
<td>Family/Caregiver</td>
<td>Parental Disposition (CWBS)</td>
<td>$r = .626, p = .01$</td>
</tr>
<tr>
<td>Child Well-Being</td>
<td>Child Performance (CWBS)</td>
<td>$r = .433, p = .01$</td>
</tr>
<tr>
<td>Family Interactions</td>
<td>Index of Family Relations (IFR)</td>
<td>$r = .261, p = .01$</td>
</tr>
<tr>
<td>Environment</td>
<td>Financial Well-Being (FIRM)</td>
<td>$r = -.307, p = .01$</td>
</tr>
<tr>
<td>Social Support</td>
<td>Extended Social Support (FIRM)</td>
<td>$r &lt; -.063, p = .241, ns$</td>
</tr>
</tbody>
</table>

Note: $ns = not significant$

Social Support was not supported in either the reliability or validity components of the study. The Parent/Caretaker Characteristics domain was not supported in the reliability component, but was strongly supported in the validity component, and there is empirical support in IFPS outcome research for a Parenting factor (Fraser, Pecora, & Haapala, 1991). As a result, a new factor named Parental Capabilities was added to the NCFAS, Version 2.0.

In addition to not being supported in either component of the study, Social Support has not been supported in IFPS outcome research (Fraser et al., 1991). At this time, use of an existing, validated measure of social support is recommended for those who would like to “capture” social support. The Social Support domain was not included in the NCFAS, Version 2.0.

In addition, a new factor named Family Safety emerged from the analysis. Although an original item known as Incidents of Abuse/Neglect did not “load” onto this factor, the item has been separated into two distinct items with separate definitions, and both have been added to this factor.

As a result of the complete findings from this reliability and validity study, and a review of the literature, the NCFAS was revised as Version 2.0. The NCFAS, Version 2.0, retains the scaling techniques of earlier versions (ranging from “+2 = clear strength” to “–3 = serious problem”), and contains the following domain and subscale items:

- Environment
  - Overall environment
  - Housing stability
  - Safety in the community
  - Habitability of housing
  - Income/employment
• Financial management
• Food and nutrition
• Personal hygiene
• Transportation
• Learning environment

Parental Capabilities
• Overall parental capabilities
• Supervision of child(ren)
• Disciplinary practices
• Provision of developmental/enrichment opportunities
• Parent(s’)/caregiver(s’) mental health
• Parent(s’)/caregiver(s’) physical health
• Parent(s’)/caregiver(s’) use of drugs/alcohol

Family Interactions
• Overall family interactions
• Bonding with the child(ren)
• Expectations of child(ren)
• Mutual support within the family
• Relationship between parents/caregivers

Family Safety
• Overall family safety
• Absence/presence of physical abuse of child(ren)
• Absence/presence of sexual abuse of child(ren)
• Absence/presence of emotional abuse of child(ren)
• Absence/presence of neglect of child(ren)
• Domestic violence between parents/caregivers

Child Well-Being
• Overall child well-being
• Child(ren’s) mental health
• Child(ren’s) behavior
• School performance
• Relationship with parent(s)/caregiver(s)
• Relationship with sibling(s)
• Relationship with peers
• Cooperation/motivation to maintain the family

A more comprehensive discussion of the original reliability and validity study of the NCFAS has been published elsewhere. More recently, Version 2.0 of the NCFAS was subjected vicariously to reliability and

validity testing as part of a larger study of the use of IFPS treatment methods with families experiencing reunification. All five domains were found to be highly reliable, as measured by Cronbach’s Alpha. The results of that analysis are presented in Table 4.

Table 3. Reliability of Domains on the NCFAS Version 2.0, when tested as part of the NCFAS-R (for reunification services) with a sample of 63 families experiencing reunification (N = 63)

<table>
<thead>
<tr>
<th>Domain</th>
<th>Time of Rating</th>
<th>Cronbach’s Alpha*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Environment</td>
<td>Intake</td>
<td>.89</td>
</tr>
<tr>
<td></td>
<td>Closure</td>
<td>.90</td>
</tr>
<tr>
<td>Overall Parental Capabilities</td>
<td>Intake</td>
<td>.83</td>
</tr>
<tr>
<td></td>
<td>Closure</td>
<td>.91</td>
</tr>
<tr>
<td>Overall Family Interactions</td>
<td>Intake</td>
<td>.87</td>
</tr>
<tr>
<td></td>
<td>Closure</td>
<td>.92</td>
</tr>
<tr>
<td>Overall Family Safety</td>
<td>Intake</td>
<td>.76</td>
</tr>
<tr>
<td></td>
<td>Closure</td>
<td>.92</td>
</tr>
<tr>
<td>Overall Child Well-Being</td>
<td>Intake</td>
<td>.93</td>
</tr>
<tr>
<td></td>
<td>Closure</td>
<td>.93</td>
</tr>
</tbody>
</table>

Using NCFAS Data for Evaluation and Other Applications

Data obtained from the NCFAS have been very helpful to North Carolina’s IFPS workers, program administrators and evaluators. At the individual worker level, ratings at intake are useful for case planning and resource allocation. Problem areas are addressed during the development of treatment goals. Strength areas are identified for use during the intervention. Workers can document the progress, or lack of progress, made with families on each sub-scale and domain, and this information can be used to support placement decisions or to identify areas where step-down services are needed. In a very real sense, the difference between the intake and closure ratings on all sub-scales and domains are measures of outcomes associated with the intervention.5

Depending on the design of the evaluation, administrators and evaluators can use the aggregated data to help assess program level outcomes and determine program efficacy. The data provide an excellent “picture” of the type of progress that can realistically be expected

5 – In order for NCFAS data to be maximally useful, an ongoing, rigorous evaluation of the IFPS program should be performed. Evaluations that are the most powerful, statistically, employ experimental designs and randomization. However, the literature has suggested that these designs are very hard to employ on a large scale or across varied practice environments. Alternative models employing quasi-experimental designs and longitudinal methods, while less powerful statistically, may be more useful for program evaluation if they are conducted rigorously, and are accompanied by qualitative data that illuminate the findings.
to occur with a family during a brief (four to six week) intervention. As the volume of data in a state-wide data base grows, large sample analyses can be conducted that demonstrate: the most frequently occurring family problems encountered; the areas most likely to benefit from IFPS interventions; areas most resistant to change; areas where new resources may be needed or new intervention technologies developed, and so forth. Figures 2 and 3, below, illustrate this capability.

Figure 2 presents the aggregate data from 194 families served by the IFPS providers in North Carolina, and whose children were not placed at the end of service. Families whose children are not placed at the end of service represent about 90% of the families served by North Carolina’s IFPS programs. The 194 families in the figure were served in 1995, after the NCFAS was implemented. Data relating to the families that experienced an out-of-home placement at the end of service are not presented here; the number of families experiencing placement was too small to present meaningful domain “profiles.” Figure 2 represents data on environmental items comprising the Environment domain, and Figure 3 represents data on child well-being items comprising the Child Well-Being domain.

Figure 2. Aggregate NCFAS Ratings: ENVIRONMENT (N=194)

In Figure 2, the data indicate that 55% of families were at an “adequate” or “strength” level of functioning at intake. One would not expect large shifts in these ratings at closure, because environmental
factors probably would not be a major focus of interventions, given the ratings at intake. Still, one third (33%) of families were experiencing either moderate or serious problems on environmental factors at intake, and this number was reduced by about half (to 17%) at closure. The fact that 35% of families were still experiencing problems at closure (the sum of the three “problem” categories) indicates that while some progress may be reasonably expected to occur, some environmental factors may be fairly resistant to change during brief interventions, at least when addressed from the resource base of the IFPS program.

Data in Figure 3, below, reveals a larger population “shift” in the direction of “baseline/adequate and strengths” on the Child Well-Being domain.

Comparison of the intake and closure ratings reveals that a combined 64% (nearly 2/3) of families were rated as having a problem (mild, moderate, or serious) at intake, whereas, a nearly identical number (62%) were rated at closure as baseline/adequate or better. This shift indicates that child well-being can be affected and measured during IFPS interventions, and that the changes are detectable using the NCFAS.

It is worth noting in Figure 3, that 10% of the families still were experiencing serious problems relating to child well-being at closure; recall that these are families whose children were not placed at the
end of service. It is likely in these families that improvements were achieved on other domains, enabling the families to cope more effectively with the child(ren)’s problems. For example, the child’s caretakers may have learned how to care more effectively for a developmentally delayed child, or may have accessed respite, enabling the family to stay together. These changes might be noted on the Parental Capabilities, Family Interactions or Family Safety domains, depending upon circumstances.

IFPS interventions are not intended, nor capable, of resolving all the problems of a multi problem family in a very short period of time, but IFPS may be able to resolve, or improve enough issues to allow the family to remain safely together, particularly if connected to “step down” services. Indeed, NCFAS scores may be useful in identifying areas where step down services are needed most, to enable the family to remain together after IFPS concludes.

The more families an agency has served for which that agency has NCFAS data, the more able will that agency be to examine the types of families it serves, the types of problems that it is most/least successful resolving, and so on. As previously mentioned, these types of data and the information that can be derived from them, are helpful for program planning, resource allocation, developing new treatments or treatment technologies, as well as for program evaluation and reporting on family outcomes.

The scale developers have explored a number of ways of analyzing and presenting data from the NCFAS, allowing individual workers, units, or whole programs to be the “unit” for analysis or evaluation. We encourage users to become familiar with techniques to aggregate and display NCFAS data, and to use the information as a powerful adjunct to placement data that has traditionally been the success measure of IFPS.
References


