As the study of fathering has matured in recent years, fathering scholars have recognized the need for richer, broader measures of the construct of father involvement (Hawkins & Palkovitz, 1999). In an effort to create a measure sensitive to affective, cognitive, and direct and indirect behavioral components of involvement, 100 items were initially generated. Of these, 43 were selected for the “Inventory of Father Involvement” (IFI). Fathers (N = 723) reported on “how good a job” they were doing on the 43 indicators of father involvement. Exploratory and confirmatory factor analyses yielded nine relatively distinct first-order factors, indicating a single, global second-order factor of father involvement. The final model confirms a shorter, 26-item version of the IFI that reflects a multi-dimensional concept of father involvement.

Key Words: father involvement, fathering, parenting measures
In the past few years, a number of fathering scholars have sensed the need for improved measurement of the construct of father involvement if empirical work on this topic and its importance to child development, adult development, and family well-being is to continue to progress (Hawkins & Palkovitz, 1999; Lamb, 1999; Marsiglio, Amato, Day, & Lamb, 2000). Although the study of father involvement goes back several generations, only in the last 10-15 years have a large number of scholars come to this area of inquiry. Good measurement work is challenging and takes time. In order to mature, the field needs a focused and sustained effort among family and child development scholars to match their measures of father involvement to the rich and complex concept it seeks to understand. In this paper, we offer an initial attempt to advance the measurement of father involvement.

There are many important methodological critiques of the extant empirical literature on father involvement (e.g., Marsiglio, Amato, Day, & Lamb, 2000), but first among those, we believe, is an accurate conceptualization and operationalization of the meaning of the concept (Sabatelli, 1988). Current scholars understand that father involvement is a much richer and deeper construct than typical operationalizations suggest. Hawkins and Palkovitz (1999) and others argue that the term father involvement, as it has been used over the past 25 years, is conceptualized and operationalized primarily as a temporal and readily observable phenomenon (Lamb, 1997; Lamb, 1999; Lamb, Pleck, Charnov, & Levine, 1985; Palkovitz, 1997; Pleck, 1997). That is, father involvement is portrayed as time that fathers spend with children, or discrete events tallied, usually in direct interaction with children. This portrayal is a result of the pioneering work of developmental psychologists, many of whom emphasize methodologies that lend themselves to quantifiable time and observable interaction (Lamb, 1999). In addition, the emphasis on temporal involvement fits with a broader social agenda: the need for fathers to assume a greater load of direct caregiving because of mothers’ greater involvement in paid labor. Time—or the lack of it—may be a crucial way that parents—men and women—think about their involvement with children (Daly, 2001; Hochschild, 1997). But time is not the only important dimension to father involvement (Palkovitz, 1997). Father involvement is a multidimensional construct that includes affective, cognitive, and ethical components, as well as observable behavioral components, and that includes indirect forms of involvement (e.g., providing, supporting mother), as well (Hawkins & Palkovitz, 1999; Lamb, 1999).

In this paper, we report on an initial effort by a team of scholars to address the need for broader and richer conceptualizations of father involvement that go beyond the narrow interest in the amount of time fathers spend with their children. This empirical work follows earlier conceptual work (Hawkins & Palkovitz, 1999; Palkovitz, 1997) that attempted to broaden and enrich our notion of the meaning of father involvement. (For a more detailed critique of measurement issues regarding father involvement, see Hawkins & Palkovitz, 1999). Our goal was to develop a reliable and valid self-report instrument for fathers that captured the breadth and richness of father involvement, but was short enough for inclusion in large-scale surveys of broader family issues. We readily admit up front that such a task is beyond the scope of just one empirical inquiry. Nevertheless, we share our initial results in the hope of encouraging further and similar efforts.
THE IFI PILOT STUDY

To generate potential items for a self-report measure, we worked with groups of students in graduate seminars to give more breadth to the concept of father involvement (Palkovitz, 1997). In addition, we consulted a handful of recent scholarly works related to father involvement to further enrich the item pool and guide construction of the measure (Doherty, Kouneski, & Erickson, 1998; Dollahite & Hawkins, 1998; Snarey, 1993). From this work we generated more than 100 potential items for the measure, which we eventually reduced to 43 items termed the “Inventory of Father Involvement” (IFI). We sought to include items that tapped behavioral, cognitive, affective, and moral/ethical dimensions of father involvement and that allowed for indirect as well as direct involvement. We also attempted to word items in ways that would be applicable for fathers in both married and unmarried or divorced household structures.

A pilot survey was conducted that included a sample of fathers reporting on “how good a job” they were doing on the 43 diverse indicators of The Inventory of Father Involvement. The survey also asked the fathers to rate the importance of each item to being a good father. Finally, the survey asked fathers to “grade themselves” (A, B, C, D, F) on seven global indicators of father involvement.

SAMPLE AND PROCEDURES

The week of Father’s Day, 1998, 2,200 surveys were mailed to a nationally representative sample of fathers. Two follow-up notices were sent inviting fathers to complete and mail back the seven-page survey. We received back 739 completed surveys for a response rate of 34%. This rate is typical of mail-in surveys for men with no incentive provided for completing the task.

Analyses here are limited to 723 fathers who were between the ages of 22-59. (One father was 19 years old, and 15 fathers were older than 60. The surveys for both the young and older fathers contained considerable missing data. Hence, we decided to drop them from the analyses.) Approximately 84% reported having fathered or adopted 1-3 children; the modal number of children was two. The mean age of respondents was 41 (SD = 7.3). Ninety-one percent were married. One percent had never married and 16% had married two or more times. About 91% reported being White, with about two percent each reporting they were African American, Mexican American, Hispanic (other than Mexican American), and Asian. The respondents reported many different religious preferences, with Roman Catholicism being by far the largest group (29%). Nearly half reported attending church services regularly; 15% did not attend services at all. About two percent of the sample had less than a high school education; about a quarter of the sample had only a high school education. Again, about another quarter of the sample completed a four-year college degree, while 29% reported having completing some college. About 20% of the sample reported post-graduate education. Only about 2% of the sample were currently unemployed. Mean work hours for these fathers was 47 (SD = 9.5). About 4% of the sample worked less than 40 hours a week; 47% worked from 40-45 hours a week; another 23% worked from 46-50 hours a week; a quarter of the sample worked more than 50 hours a week.
worked more than 50 hours a week. Most respondents were in dual-earner families; only about 30% of the spouses of the respondents were not in paid employment. Of those employed-for-pay spouses, the mean number of work hours was 34 ($SD = 12.7$). About 36% of employed spouses worked 30 hours or less. Another 59% worked from 31-40 hours a week. Another 4% worked more than 50 hours a week.

Although there was SES variation in our sample, it was clear that those who returned the survey rated themselves as doing a better job of fathering than a truly nationally representative sample. We included in the survey a question taken from a national Gallup Poll survey in 1997 (Newport, 1997): “Using an A, B, C, D, and F grading scale like they do in school, what grade would you give yourself for the job you are doing in bringing up your children?” Comparing the responses of our sample to the responses of the Gallup Poll survey, we found that 11% of fathers in the IFI sample gave themselves a grade of C or D, comparable to the Gallup sample of 13%. (No fathers in either sample gave themselves a grade of F.) However, fathers in the IFI sample were much more likely to give themselves a grade of A (41%) compared to the Gallup Poll fathers (23%). Consequently, fewer fathers in the IFI sample gave themselves a grade of B (49%) compared to the Gallup Poll fathers (62%). Thus, our IFI sample had a much higher proportion of fathers who rated themselves as doing an excellent job as opposed to just a good job compared to a more representative national sample.

EXPLORATORY ANALYSES OF THE IFI STRUCTURE

Although we constructed the IFI with the notion that father involvement was multidimensional, we did not begin our analyses with a precise hypothesis of the number and nature of those dimensions (although we had some expectations). A preliminary, exploratory principle components analysis of the 43 items with a promax rotation (expecting and getting substantial correlations among the interrelated components) yielded nine factors with eigen values greater than one that were relatively distinct and straightforward to interpret. (Four items were dropped because they did not load well on any of these factors.) The IFI distinguishes nine distinct, potentially important dimensions of father involvement, including the more instrumental and traditional dimensions (i.e., providing, support of the mother, disciplining and teaching responsibility, and encouraging success in school), as well as dimensions reflecting some of the additional tasks expected of contemporary fathers (i.e., giving praise and affection, spending time together and talking, being attentive to their children’s daily lives, reading to their children, and encouraging children to develop their talents). A second-order principle components analysis of the nine factors suggested the possibility that two second-order factors might exist, one capturing the more instrumental and “traditional” aspects of father involvement and the other capturing some of the “new father” aspects emphasized in most contemporary investigations of fathering.

CONFIRMATORY ANALYSES OF THE IFI STRUCTURE

From these exploratory analyses we proceeded with more rigorous confirmatory factor analyses using structural equation modeling (SAS’s proc calis procedure). A
A handful of potential structures were tested, all variations of nine first-order factors. We began with a simple, first-order model allowing for correlations among all nine factors. The numerous high correlations among the factors in this first-order model suggested the possibility of a second-order factor structure that would better model the data. We tested a second-order factor structure with two second-order factors ("traditional" involvement and "new-father" involvement) as well as a more parsimonious second-order model with a single global factor of father involvement. The model with two second-order factors produced highly correlated second-order factors (.87). There was little difference between this model and a third-order factor model. Although there were not large differences in goodness of fit between the various models tested, the most parsimonious as well as the best fitting model was the model depicting nine first-order factors indicating a single, global second-order factor of father involvement. Moreover, this model most closely reflected our initial expectations of the structure of the IFI. This model is depicted in Figure 1. Table 1 provides the items with their respective factors and Cronbach alpha statistics. (Because the content of the specific IFI items is central to this article, we urge the reader to examine them at length. Also, note that four more items were eliminated in these confirmatory analyses because their disturbance terms were highly correlated with numerous other terms and eliminating them did not detract from the conceptual richness of the factors. This left the IFI with 35 items. Some additional correlated disturbance terms were allowed where they made sense conceptually in order to increase the fit of the model.)

**A SHORTER-VERSION IFI**

A goal of our research team was to produce a self-report measure of father involvement that would be brief enough to be used for most survey purposes. Hence, we wanted to shorten the IFI from the 35 items depicted in Figure 1. Because three of the factors had more than three items loading on them, we limited them to three items each, using several criteria for deciding to include them: the items retained had strong factor loadings, greater item variation in the sample, strong correlations with other items in the factor (to maintain high internal consistency reliability), and strong face validity. A shorter version of the IFI with just 26 items (the “Providing” factor only had two items), but still nine first-order factors and a single, global, second-order factor, is depicted in Figure 2. This model has an even better fit than the larger model (due to fewer covariances to account for). The reduction in the number of items on the three shortened factors still left them with strong internal consistency reliability coefficients.

**VALIDITY ANALYSES**

An initial attempt at establishing the validity of the IFI was made in two ways. First, in order to assess face validity, a focus group of fathers provided feedback about the instrument. Second, construct or concurrent validity was examined by correlating each IFI factor with conceptually related items included in other parts of the questionnaire.
Figure 1. Confirmatory Factor Analysis of the Inventory of Father Involvement (longer version).
Table 1

<table>
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<tr>
<th>Inventory of Father Involvement (IFI) Dimensions, Items, and Cronbach Alphas</th>
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**Instructions**: Think of your experience as a father over the past 12 months. Please rate how good a job you think you did as a father on each of the items listed below. If an item is not applicable to your situation, circle “NA” for not applicable.

(Response choices were 0 through 6, with 0 anchored by “Very Poor” and 6 anchored by “Excellent.” “NA” was also a response choice.)

**Note**: The first three items for each dimension were used in the shorter, 26-item version of the IFI. Any additional items, listed below the line, were included in the longer, 35-item version of the IFI.

**Discipline and Teaching Responsibility** (Cronbach’s Alpha = .85)
- Disciplining your children.
- Encouraging your children to do their chores.
- Setting rules and limits for your children’s behavior.
- Teaching your children to be responsible for what they do.
- Paying attention to what your children read, the music they listen to, or TV shows they watch.
- Enforcing family rules.

**School Encouragement** (Cronbach’s Alpha = .82)
- Encouraging your children to succeed in school.
- Encouraging your children to do their homework.
- Teaching your children to follow rules at school.

**Mother Support** (Cronbach’s Alpha = .87)
- Giving your children’s mother encouragement and emotional support.
- Letting your children know that their mother is an important and special person.
- Cooperating with your children’s mother in the rearing of your children.

**Providing** (Cronbach’s Alpha = .69)
- Providing your children’s basic needs (food, clothing, shelter, and health care).
- Accepting responsibility for the financial support of the children you have fathered.

**Time and Talking Together** (Cronbach’s Alpha = .80)
- Being a pal or a friend to your children.
- Spending time just talking with your children when they want to talk about something.
- Spending time with your children doing things they like to do.
- Working with your children on chores around the house.
- Helping your children find purpose and direction in their lives.
• Taking your children to interesting places (your work, parks, museums, ocean, etc.)
• Talking to your children about what’s going on in their lives.
• Listening to your children’s views or concerns.

Praise and Affection (Cronbach’s Alpha = .79)
• Praising your children for being good or doing the right thing.
• Praising your children for something they have done well.
• Telling your children that you love them.
  • Showing physical affection to your children (touching, hugging, kissing).

Developing Talents and Future Concerns (Cronbach’s Alpha = .75)
• Encouraging your children to develop their talents.
• Encouraging your children to continue their schooling beyond high school.
• Planning for your children’s future (education, training).

Reading and Homework Support (Cronbach’s Alpha = .83)
• Encouraging your children to read.
• Reading to your younger children.
• Helping your older children with their homework.

Attentiveness (Cronbach’s Alpha = .69)
• Attending events your children participate in (sports, school, church events).
• Being involved in the daily or regular routine of taking care of your children’s basic needs or activities (feeding, driving them places, etc.).
• Knowing where your children go and what they do with their friends.

Notes:
a. Cronbach’s alpha for the longer version of the “Discipline and Teaching Responsibility” scale was .88).
b. Cronbach’s alpha for the longer version of the “Time and Talking Together” scale was .90).
c. Cronbach’s alpha for the longer version of the “Praise and Affection” scale was .83). Additional items in the pilot IFI not used: Being a good example to your children. Providing your children moral guidance (teaching them right from wrong). Teaching your children to work. Building or fixing things for your children. Doing things or fixing things to keep your children safe from physical harm or accident. Praying for your children. Teaching your children how to fix things or do things around the house.

Face Validity. In a focus group setting, we asked fathers to give us their feedback on the IFI. Five fathers from Northeast Pennsylvania participated in the focus group session. They reflected the wide diversity of socioeconomic, occupational, ethnic, and religious backgrounds of the area. Two of the fathers were from a local, low-income housing project sponsored by the area housing authority. One of these fathers was Hispanic, and the other was a stepfather with one biological child also. One African-American father attended who had two children and who was cohabiting with his partner. A white police officer also attended, as well as a white business professor who was active in his Jewish temple.
Figure 2. Confirmatory Factor Analysis of the Inventory of Father Involvement (shorter version).
Table 2
IFI Construct Validity Analysis: Zero-Order Correlations of IFI Factors with Conceptually Related Independent Measures

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<tbody>
<tr>
<td>Rear Children</td>
<td>.38***</td>
<td>Rear Children</td>
<td>.09</td>
<td></td>
<td>Rear Children</td>
</tr>
<tr>
<td>Setting Limits</td>
<td>.61***</td>
<td>Verbalize Love</td>
<td>.49***</td>
<td>Rear Children</td>
<td>.46***</td>
</tr>
<tr>
<td>Moral Guide</td>
<td>.48***</td>
<td>Religious Attend.</td>
<td>-.08</td>
<td>Education</td>
<td>.36***</td>
</tr>
<tr>
<td>Monitoring</td>
<td>.43***</td>
<td>Child Problems</td>
<td>-.15**</td>
<td>Child Problems</td>
<td>-.10**</td>
</tr>
<tr>
<td>Religious Attend.</td>
<td>.16***</td>
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<tr>
<td>Child Problems</td>
<td>-.10**</td>
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<td>F7: Developing Talents</td>
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<td>Rear Children</td>
<td>.35***</td>
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<td></td>
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<td>Child Problems</td>
<td>-.10**</td>
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| F8: Reading/Homework Support   |                        | Rear Children           | .36***           |              |                  |
|                               |                        | Education               | -.08             | Rear Children| -.10**           |
|                               |                        | Child Problems          | -.15**           | Education    | -.10**           |

| F9: Attentiveness              |                        | Rear Children           | .46***           |              |                  |
|                               |                        | Monitoring              | .52***           |              | Rear Children    |
|                               |                        | Time Together           | .47***           |              | Monitoring       |
|                               |                        |                          |                  |              |                  |
| F10: Developing Talents        |                        |                          |                  |              |                  |
|                               |                        |                          |                  |              |                  |

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<tr>
<th>Measures in italics as follows:</th>
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<tr>
<td>Using an A, B, C, D, and F grading scale like they do in school, what grade would you give yourself for the job you are doing in each of the following areas:</td>
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<tr>
<td>a. Bringing up your children (Rear Children)</td>
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<tr>
<td>b. Providing your children’s basic needs (food, clothing, shelter, &amp; health care) (Basic Needs)</td>
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<tr>
<td>c. Providing your children moral guidance (teaching them right from wrong) (Moral Guide)</td>
</tr>
<tr>
<td>d. Spending time with your children doing things they like to do (Time Together)</td>
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<tr>
<td>e. Telling your children that you love them (Verbalize Love)</td>
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<tr>
<td>f. Knowing where your children go and what they do with their friends (Monitoring)</td>
</tr>
<tr>
<td>g. Setting rules and limits for your children’s behavior (Setting Limits)</td>
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</tbody>
</table>
The fathers reported that the questions on the IFI captured well their ideas of fathering; there were very few suggestions for additional items. They said the questions were straightforward and understandable. We were encouraged by these comments.

One interesting finding that emerged from the focus group that could impact validity was that some fathers rated their involvement in certain areas in the context of other kinds of involvement. That is, for instance, one father mentioned that although he wasn’t able to attend as many of the events his children participated in (e.g., school, sports) as he wanted to, he figured he was doing the best that he possibly could given the long hours he needed to work to provide for his family, and thus, gave himself a 6 (“Excellent”) for that item. It appears that some fathers will rate themselves higher on individual aspects of father involvement because of the limitations that other forms of involvement—especially providing—place on them. This helps to explain the pattern of consistency or the high response “bias” in most fathers’ responses. Perhaps an introduction that explains that few fathers can be excellent in all areas because of conflicts, etc., would allow fathers to rate each involvement item independent of the other items and create more variation in their patterns of response.

Construct Validity. Construct validity was investigated by correlating each of the nine IFI factors with conceptually related items included in other parts of the questionnaire. The results are summarized in Table 2. For example, the scale “Discipline and Responsibility” was significantly correlated with another item in the questionnaire (but not included in the IFI), “What grade would you give yourself for . . . setting rules and limits for your children’s behavior?” (r = .61, p <.001). Similarly, the association between the “Praise and Affection” scale and the item “What grade would you give yourself for . . . telling your children you love them?” was significant (r = .73, p <.001).

Generally, the pattern of correlations for eight of the nine factors, as well as their magnitudes, supports associations that would be expected conceptually. The exception to this rule was the factor, “School Encouragement,” in which the expected pattern of correlations was considerably weaker.

In addition, we conducted a series of independent-group t-tests which compared the means of fathers in intact married families to fathers who were separated or divorced on several of the IFI factors that we hypothesized would be different. Specifically, we hypothesized that non-resident fathers would not rate themselves as highly as fathers residing with their children on spending time with their children, being attentive to daily matters, establishing a good co-parenting relationship with the mother, economic providing, reading to their children, and disciplining and teaching their children. The hypothesized differences were found for attentiveness (t = 2.02, p <.05, ES = .33), providing (t = 3.49, p <.001, ES = .58), co-parenting (t = 8.92, p <.001, ES = 1.50). Surprisingly, the hypothesized differences were not found for disciplining and teaching (t = 1.71, n.s.), spending time (t = 1.04, n.s.), and reading to children (t = 1.16, n.s.). We suspect that fathers in non-intact marriages were responding to these items in the context of their non-residential fatherhood and rated themselves as doing their best given the difficult circumstances. Hence, the differences are minimized.
DISCUSSION AND FUTURE DIRECTIONS

Our first efforts to advance the self-report measurement of father involvement based on a broader, richer, and deeper conceptualization seem to have met with some success. The IFI distinguishes nine distinct dimensions of father involvement (i.e., providing, support of the mother, disciplining and teaching responsibility, and encouraging success in school, giving praise and affection, spending time together and talking, being attentive to their children’s daily lives, reading to their children, and encouraging children to develop their talents). The items that constitute these scales tap into cognitive, affective, and ethical aspects of fathering and include both direct and indirect involvement. Furthermore, all nine dimensions can be seen as indicators of a single, global construct of father involvement. The dimensions generally have good internal consistency reliability, although providing and attentiveness could use some improvement (alphas = .69). Validity analyses suggest that the dimensions operate in theoretically expected ways. And the nine dimensions can be captured in an instrument with 26 items, which is short enough for most survey requirements.

This multidimensional operationalization of father involvement should allow researchers to explore more subtle theoretical linkages between aspects of father involvement and children’s development and well-being, men’s adult development and well-being, and family processes and well-being. We hope researchers will undertake such investigations and improve our empirical knowledge in the field of father involvement. We also see potential educational and clinical uses for the IFI. In both settings, fathers may benefit from a personal analysis of their strengths and weaknesses as a father from an instrument that is designed to tap a wide range of cognitive, affective, and behavioral dimensions central to men’s conceptualizations of what it means to be a father.

While we believe the IFI offers researchers a richer and more refined measure of father involvement, we should also point out the continuity of our measure with the three-fold conceptualization of father involvement—engagement, accessibility, and responsibility—suggested by Lamb, Pleck, Charnov, and Levine (1987) and well used in the field for the last 15 years. Most of the IFI subscales can be fit into one or more of those categories of involvement (with the possible exception of mother support). The engagement dimension is well covered by several IFI subscales, particularly discipline and teaching responsibility, school engagement, time and talking together, praise and affection, reading and homework support, and attentiveness. Discipline and teaching responsibility, school engagement, providing, developing talents and future concerns, and attentiveness tap into the responsibility dimension. The accessibility dimension is at least implied in a handful of scales, especially in school encouragement, reading and homework support, and attentiveness dimensions.

While we are encouraged by our initial efforts with the IFI, much remains to be done. Further development plans include at least the following four things. First, some further refinement of the items and the ways questions are asked may help to increase the variation in the measure. In addition, we note there are only three to four items directly tapping into cognitive and affective aspects of father involvement (e.g., planning for the future, monitoring media, telling children you love them). These important dimensions of father involvement are not as prominent in the IFI as
they could be. More could be done to include items that tap these ways of being involved. Second, sampling bias in our pilot work suggests the need to further test the effectiveness of the IFI on a truly representative sample of fathers. A third and related area for investigation is the ability of the IFI to compare effectively across such divergent groups as unmarried fathers, non-custodial fathers, stepfathers, and fathers in intact marriages. Our intention in the wording of most IFI items was to maximize the potential for cross-group comparisons. An equivalence-of-measures study is needed for the IFI across these diverse groups of fathers. Fourth, fathers’ self-reports of their involvement with their children should be compared to reports from their children and their spouses/partners. Each perspective is likely to yield important and somewhat different information that more fully captures (or triangulates) the concept of father involvement. In addition, such triangulation will yield important validity checks for the fathers’ self-report measure and likely attenuate associations between father involvement and child outcomes. Fourth, the validity of the IFI needs further testing against a broader set of outcomes for children, fathers, and families.

Hence, there is still much work to do on this and other measures. But a broader and richer measure of father involvement seems plausible. And more refined measurement work will ultimately yield a more fine-grained understanding of the important social-psychological and developmental linkages between fathers and children.

REFERENCES


