

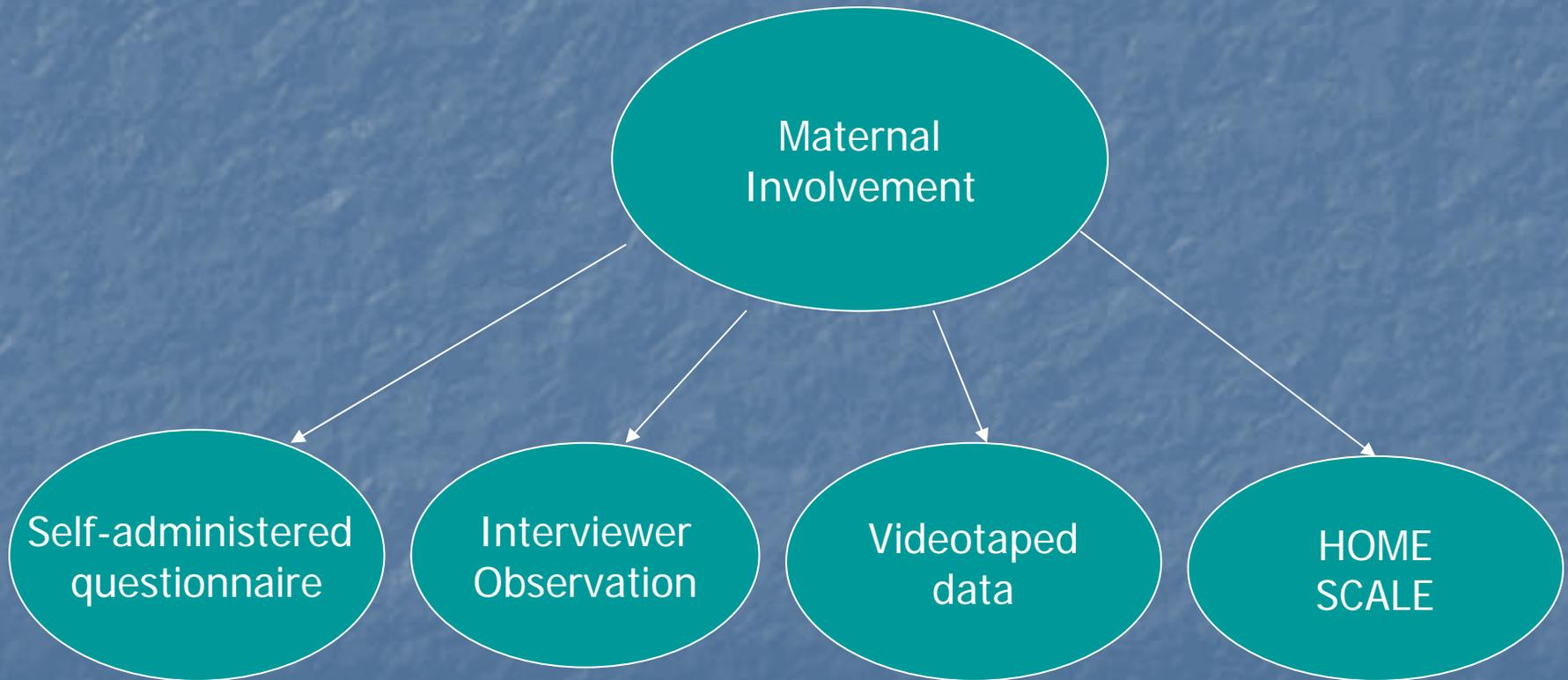
How Mothers Matter: Measurement Challenges

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Previous Literature



Limitations

- Use of self-administered questionnaire in most large-scale surveys.
- Use of interviewer observation and videotaped data in small-scale surveys.
- What we don't know is how BOTH quality and quantity aspect of maternal involvement IMPROVE how we capture maternal involvement with a large scale sample.
- Previous studies mainly cross-sectional or correlational

Goals

- Using 3 different sources to improve the measure of maternal involvement.
- Test predictive validity by the use of gains model; how well does maternal involvement predict child's intellectual growth between 9-24 months.

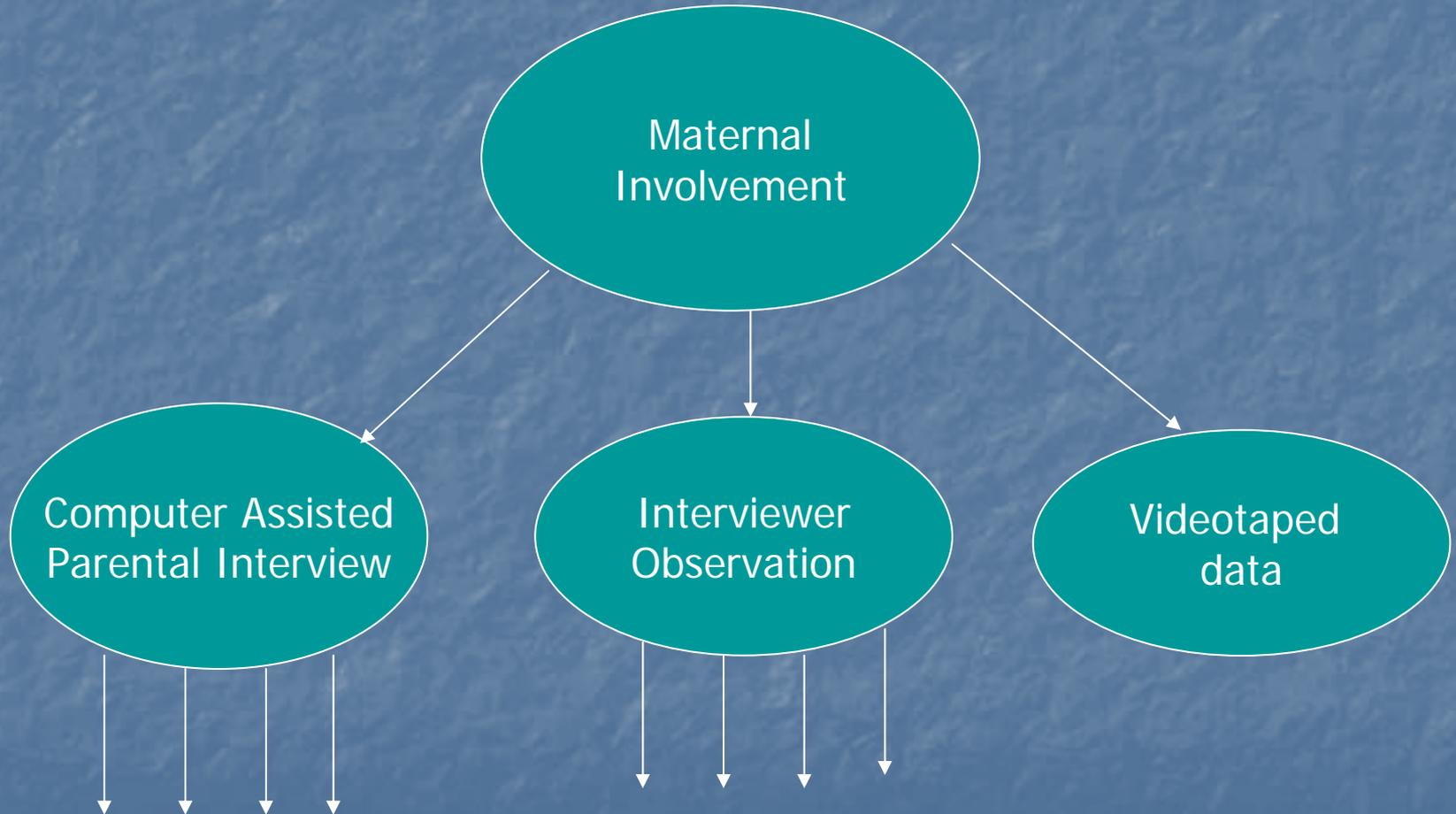
Data

- Early Childhood Longitudinal Study Birth Cohort (ECLS-B), restricted 9 month-2 year data.
- Representative probability sample of over 10,000 children born in 2001.

Variables and Measurement

- Independent variable: Maternal Involvement
- Outcome (dependent) variable: child's mental growth between 9-24 months.
- Control variables: presence of a disability in the child, child's age , SES, number of siblings, race, birth weight, gender, and type of childcare, paternal involvement.

ECLS-B



CAPI indicators

- How often do you do the following,
 - a) read to child?
 - b) tell stories?
 - c) sing songs?
 - d) play peekabo?
 - e) take child on errands?
 - f) tickle child?
 - g) Take child for a walk or play?

Alpha = .60 (errors of reading to child and telling stories are correlated).

Interviewer Observation

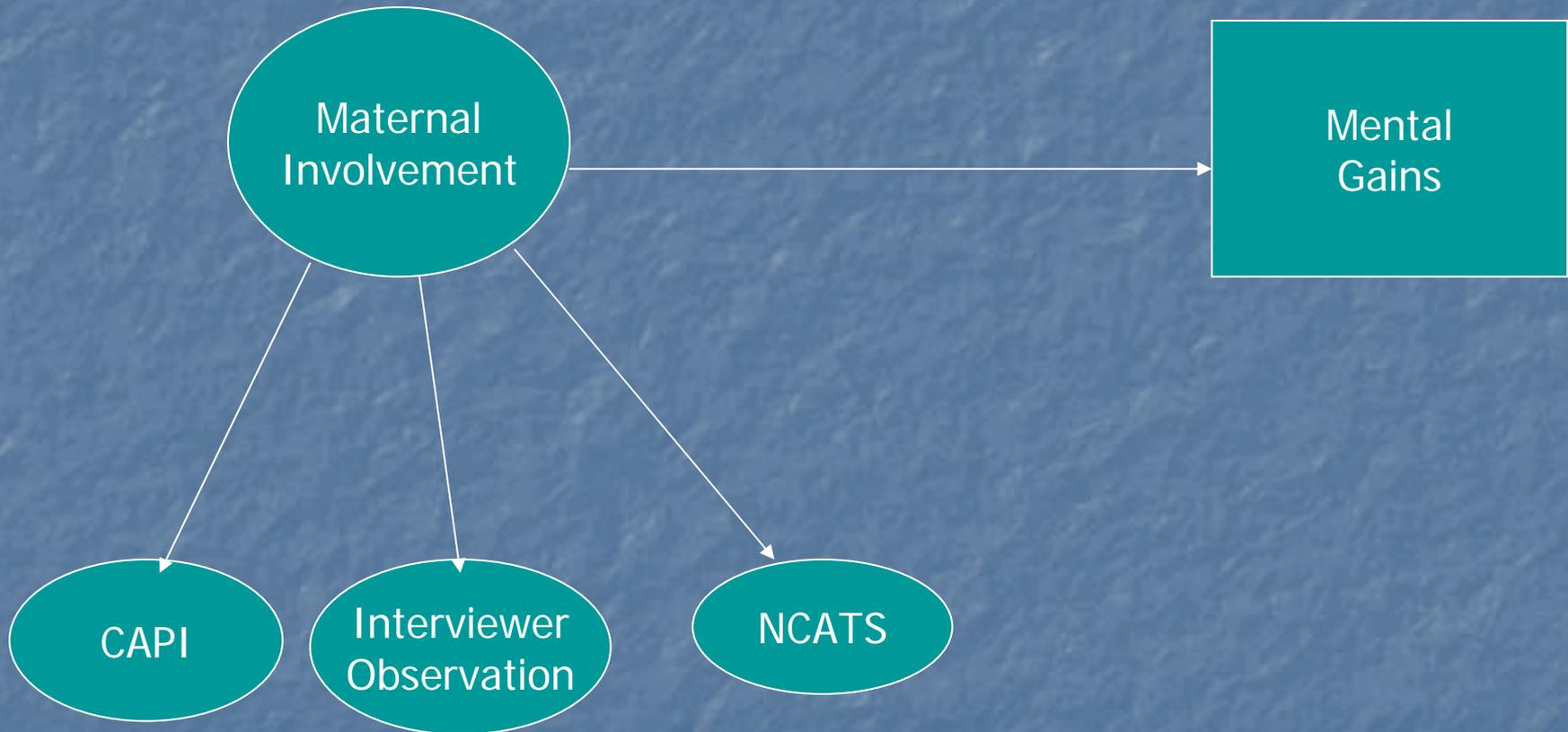
- During the home visit interviewer observes whether the mother
 - Spoke to the child
 - Verbally responded to the child
 - Kissed/caressed the child
 - Provided toys for the child
 - Slapped/spanked the child
 - Interfered with child's actions
 - Kept the child in view AND whether
 - Child's play environment was safe.

(alpha=.55 (errors of speaking to child and verbally responding to child are correlated)).

Continued

- Mental growth: scale score is used. Good for estimating cognitive growth (3-15, ECLS-B manual).
- Mental scale score at 9 months subtracted from mental score at 24 months.

PREDICTIVE VALIDITY

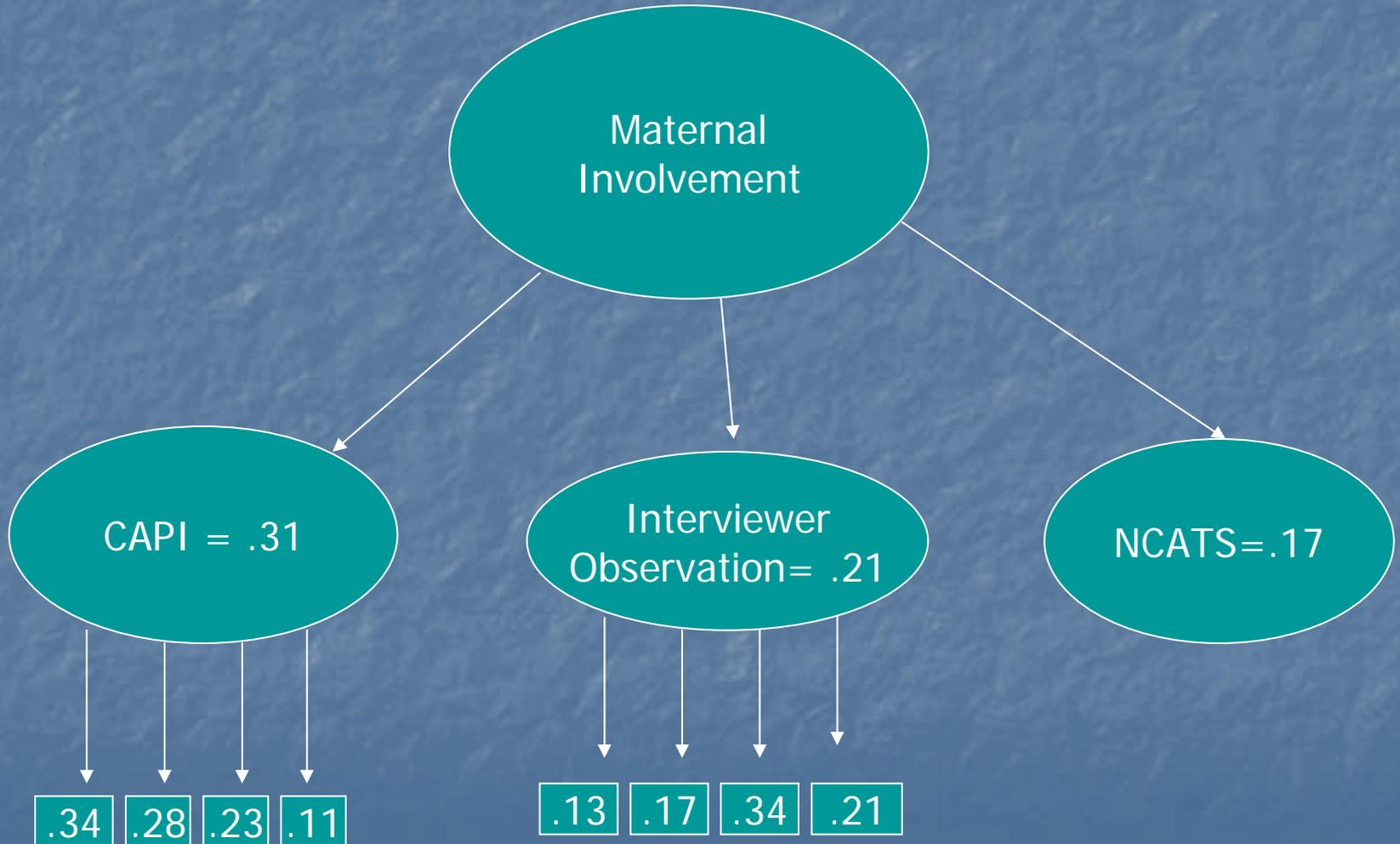


Conclusion



Bad News

BAD NEWS



Result

- Despite a good measurement model (IFI=.99, CFI=.99, RMSEA=.02), we struggle to capture maternal involvement well with 3 sources.
- Low correlation between indicators, low r-squares.

Conclusion



Good
News

GOOD NEWS

- Maternal involvement has a high and significant predictive validity.
- 25 % increase in maternal involvement to more than 2 months of development.
- R-square of mental gains= .52, IFI= .94, CFI=.94, RMSEA=.03
- Each source predicted mental gains significantly.
- NCATS and interviewer observation contribute relatively less to measuring maternal involvement.

Implications

- Measuring social science concepts is a challenge.
- Why can't we measure maternal involvement better?
- Are NCATS and videotaped data worth it?
- Future research should focus on improving the measure.
- Maybe, mother-child interaction concept requires refinement.