Nonresident-Fathers' Care-Provision Trajectory

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Background (1)

- **Fathers' involvement → children's positive outcomes**
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- **In general, NR-fathers' involvement tends to decline with time**

- **It is Unlikely that all the nonresident fathers' involvement shows the same patterns**
  - → Some fathers may continue to get highly involved as children grow
  - → Some may sharply decrease their involvement

Background (2)

- **The purpose of this study is
  1) to identify groups of fathers with similar involvement patterns with time, and
  2) how those subgroups are different from each other regarding the demographic information and father identity**

- **If there is a group of fathers who shows lower levels of involvement across time and the group is differentiated regarding the study variables, then we may be able to focus on those fathers to facilitate their involvement through education & intervention programs**

Method (1)

- **Fragile Families and Child Wellbeing Study**
- **Sample**
  - the wave 1 (child at birth) to wave 5 (child age of 9)
  - 852 mothers who were unmarried and had not lived with the child's biological father

- **Instruments**
  - <u>father care-provision</u> 4 items (4-Likert scale); using the composite score for each wave (alpha = .77 ~ .88)
  - father identity 3 items (4-Likert scale) at wave1 (alpha = .74)
  - fathers' age, race/ethnicity, education level, house income, & the child's gender

Method (2)

- **Analysis Plan (1) – Growth Mixture Modeling (GMM)**
  - Latent Growth Modeling + Latent Class/Profile Analysis
  - identifying unobserved subgroups and describing longitudinal change within each unobserved subgroups
  - Usually, two growth factors with linear growth model is used for longitudinal studies
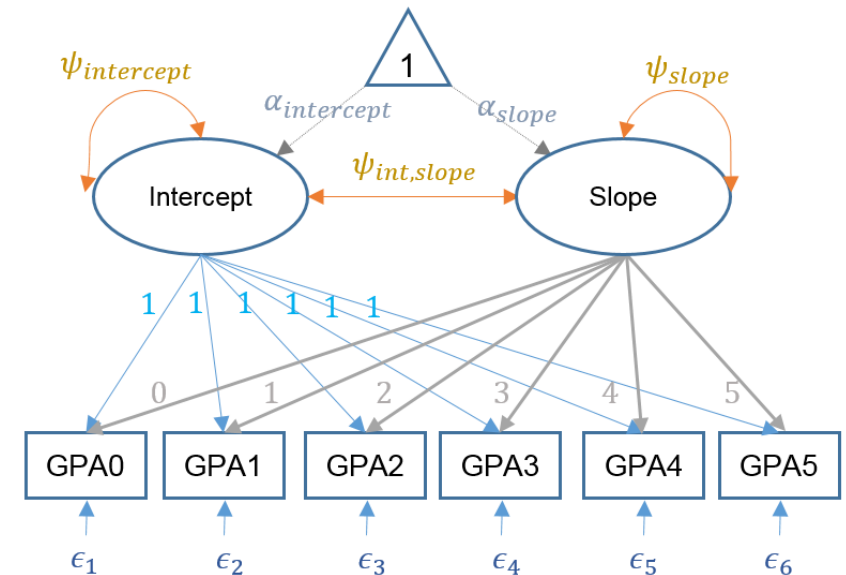
Method (2)

- **Analysis Plan (2) – Right-Sizing Approach**
  - Two growth factors with linear growth model.. Always?
  - For instance, in terms of different types of learners…
    - slow vs. quick
    - smooth trajectories vs. bumpy
    - late-onset vs. early-onset
  - Looking for better model to represent observed data
    → Right-Sizing Approach
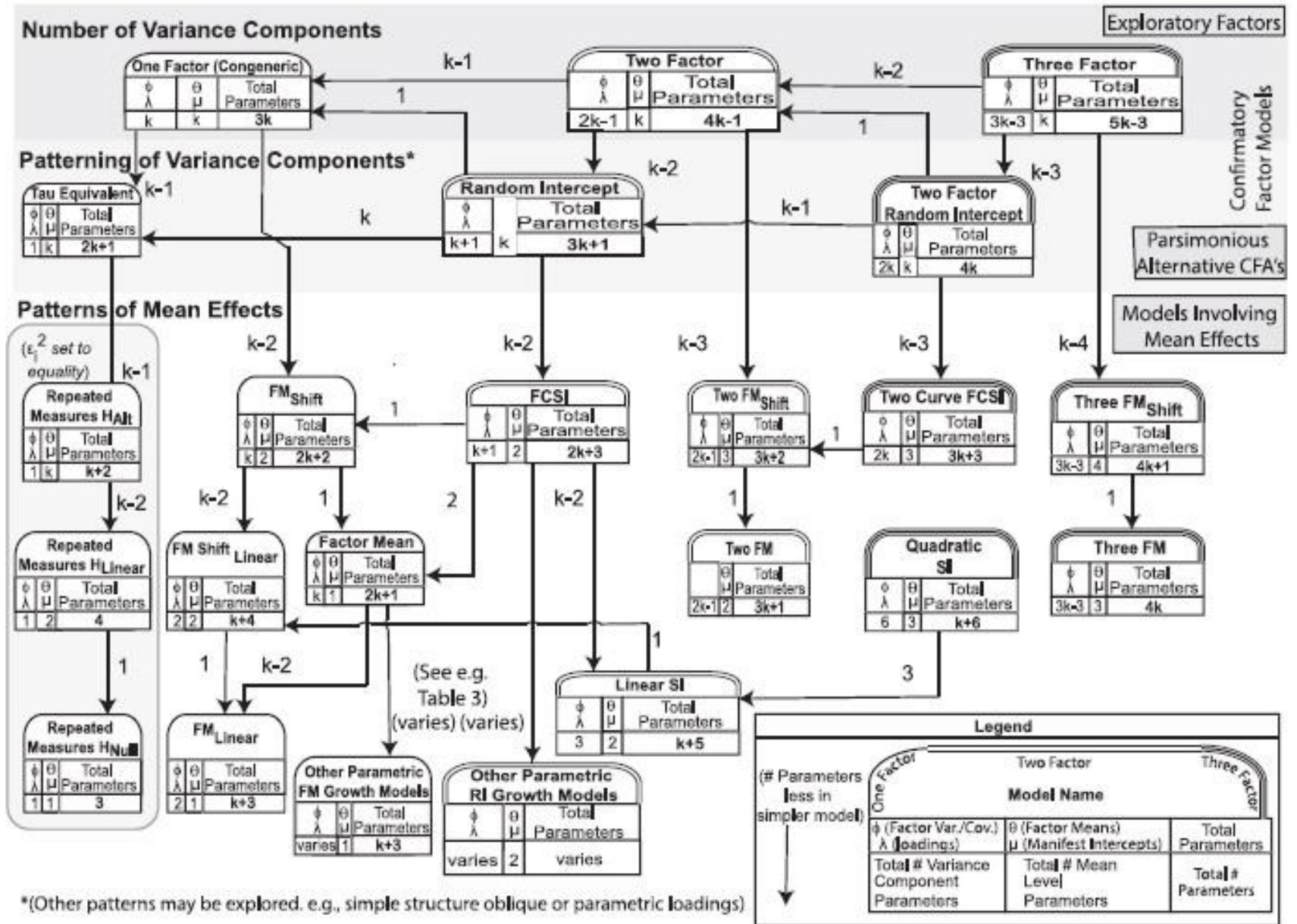
Right-Sizing Approach

Figure 2. Relationships Between Longitudinal Models.

Analysis (1) – Right-sizing approach

- **GMM using Mplus 8.3**

- **Procedure to looking for the best fitted model**
  1. Determine dimensionality
  2. Explore parsimonious factor model
  3. Explore patterns of mean effect

- **Current study**
  1. One factor model with free factor loadings
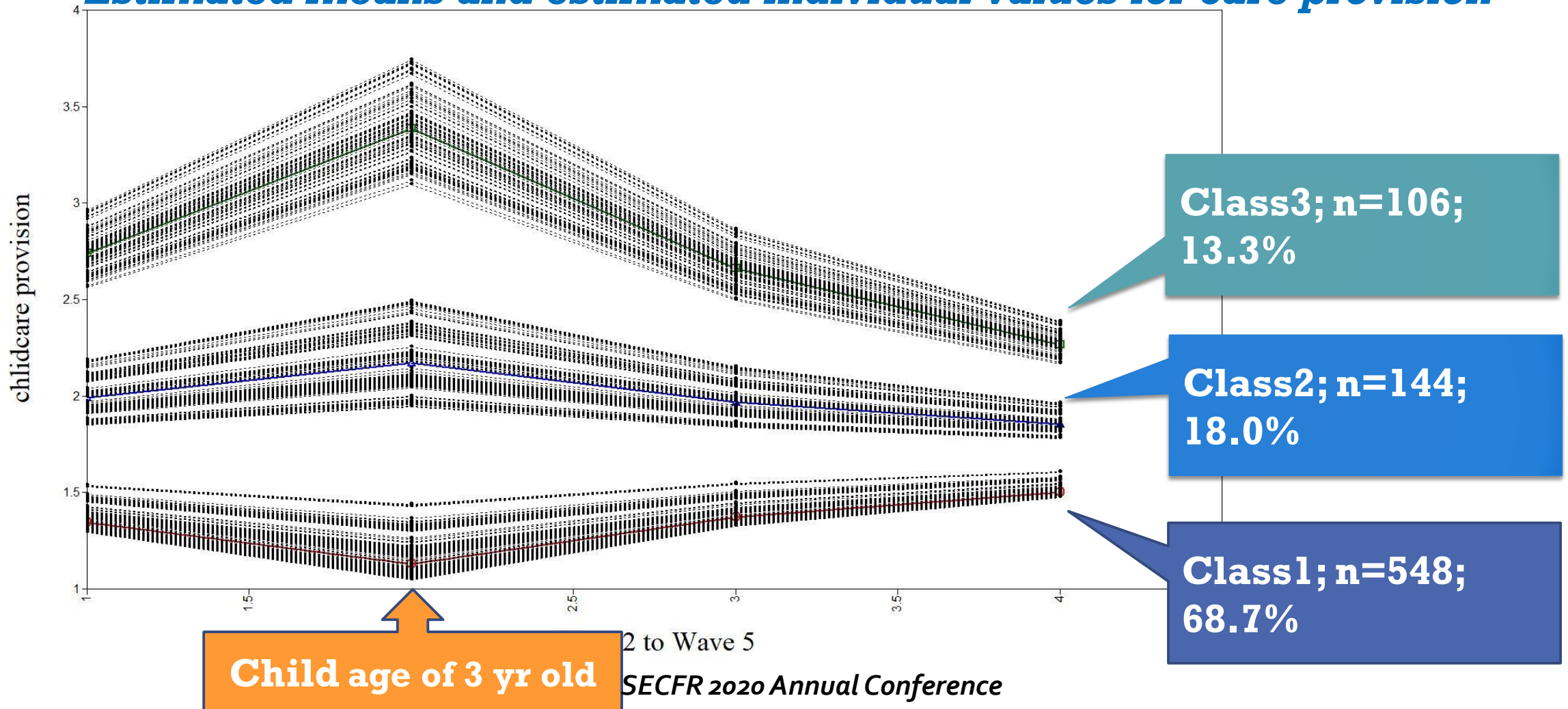 2. Constraining residual variance across groups

Analysis (2) – latent growth profiles

- **How many subgroups?**

Profiles	AIC	BIC	Entropy	LMT-LRT	Average latent profile probabilities			
					1	2	3	4
1	5681.18	5723.32						
2	5398.11	5454.30	0.86	.00***	.93	.97		
3	5238.45	5304.00	0.84	.00***	.94	.87	.93	
4	5160.83	5235.74	0.84	.67	.89	.94	.84	.91

Analysis (3) – estimated trajectory

Estimated means and estimated individual values for care provision

Class3; n=106; 13.3%

Class2; n=144; 18.0%

Class1; n=548; 68.7%

Child age of 3 yr old

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Analysis (4) – group differences

- **Multivariate analysis of variance using SPSS 25.0**

- **Classes significantly differed;** multivariate $F (12, 1060) = 1.93, p < .05$

- **Classes significantly differed on <u>child gender</u> and the fathers' education level</u>**
  – fathers were more likely to be in the class 3 when the child was boy and fathers had higher education achievement

- **Father identity was not a significant predictor**
  – maybe hard to provide direct assistance with nonresidency
  – contact frequency, financial or material support …

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Collins, L. M., & Lanza, S. T. (2010). *Latent class and latent transition analysis: With applications in the social, behavioral, and health sciences*. Hoboken, NJ: Wiley.

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