Protective Factors and the FDM - Draft Summary
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This summary from analysis of the theoretical constructs of the FDM provides results for discussion and responds to some of the issues raised in previous meetings of the Panel of Experts about the hypothesized alignment of the FDM indicators with the Protective Factors Survey (PFS, *Institute for Educational Research & Public Service, University of Kansas; cf. CSSP Protective Factors).* The Protective Factors research has provided the field with a set of internally consistent indicators that measure 5 domains:

- Children's Social and Emotional Development
- Knowledge of Parenting and Child Development
- Concrete Support in Times of Need
- Parental Resilience
- Social Connections

In addition to internal consistency and validity, temporal stability and predictive validity of the Protective Factors has been demonstrated (cf., The Development and Validation of the Protective Factors Survey: A Self-Report Measure of Protective Factors Against Child Maltreatment
Phase IV Report by the Institute for Educational Research & Public Service, University of Kansas). The results reported indicated the measures were significantly correlated with other criterion measures contained in instruments measuring areas such as depression and stress and were stable measures over time.

In previous work the FDM indicators were theoretically aligned with the Pathways and Protective Factors constructs. The figure below illustrates the FDM indicators hypothesized to align with the Protective Factor constructs (i.e., measured by the FDM indicators):

Protective Factors	Indicators
Children's Social and Emotional Development	Child Care Supervision Risk of Emotional & Sexual Abuse Nutrition Appropriate Development
Knowledge of Parenting and Child Development	Nurturing Parenting Skills Family Communication Skills
Concrete Support in Times of Need	Budgeting Clothing Employment Stability of Home and Shelter Home Environment Health Services Community Resources Knowledge Child Health Insurance Transportation
Parental Resilience	Presence of Abuse Emotional Wellbeing/Sense of Life Value
Social Connections	Community Engagement

Until recently data were not available to statistically examine the alignment and consistency of the indicators and constructs. Sufficient FDM data are now available at three points in time to allow for analysis of the temporal stability, predictive validity and internal consistency of the FDM scale scores.

To examine the temporal stability and predictive validity of the PF constructs using the FDM indicators as measures, composite scores were created adding the FDM indicators hypothesized to correspond to the PF for each data point (i.e., initial, second and third collection point).

The table below presents the correlations of the PF constructs as measured by the FDM indicators for the three data points. The correlations indicate stability over time and predictive validity consistent with analyses of other indicators of protective factors (*Institute for Educational Research & Public Service)*. Convergent and discriminant validity are also supported by the pattern of the correlations – the magnitude of the correlations within constructs over time is considerably greater than with other constructs in the set of protective factors. Similar analysis by ethnicity and by DR path was also performed; a correlation matrix for each subgroup is contained in the appendix.

	ChSocEmo2	ParKnow2	Concrete2	ParRes2	SocCon2	ChSocEmo3	ParKnow3	Concrete3	ParRes3	SocCon3
ChSocEmo	0.655	0.420	0.334	0.337	0.297	0.502	0.376	0.252	0.264	0.280
ParKnow	0.400	0.702	0.255	0.398	0.327	0.379	0.595	0.247	0.295	0.268
Concrete	0.397	0.308	0.705	0.293	0.359	0.297	0.273	0.542	0.218	0.285
ParRes	0.321	0.380	0.259	0.633	0.263	0.283	0.316	0.213	0.515	0.262
SocCon	0.337	0.364	0.361	0.313	0.597	0.293	0.311	0.293	0.240	0.419
ChSocEmo2						0.701	0.457	0.438	0.332	0.366
ParKnow2						0.436	0.723	0.319	0.358	0.347
Concrete2						0.404	0.319	0.671	0.255	0.332
ParRes2						0.341	0.416	0.310	0.681	0.311
SocCon2						0.403	0.414	0.399	0.338	0.600

N=4248, 2768, 708

To assess the internal consistency of the indicators, reliability analysis was performed to examine the measures as scales. Cronbach's αlpha reliability was calculated which is a commonly used measure of scale reliability and also provides information about the relationships between individual items in the scale. Cronbach's alpha is a measure of the extent to which the items are related to each other and the overall α score provides an index of the repeatability or internal consistency of the measures as a scale. The alpha for each construct at each data point is presented below:

	1	2	3	$\bar{x}$
ChSocEmo	0.52	0.62	0.58	0.57
ParKnow	0.73	0.74	0.75	0.74
Concrete	0.68	0.71	0.67	0.69
ParRes	0.41	0.41	0.41	0.41
SocCon	1.00	1.00	1.00	1.00