Family Health Over Time: Risk and Resilience in Family Outcomes

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INTRODUCTION

- **Family health** can be conceptualized as having multiple components that define it as an organism and as part of an ecosystem (Anderson, 2000; Anderson & Tomlinson, 1992; Astedt-Kurki, Hopia, Vuori, 1999; Bomar & McNeely, 1996).
- **Early intervention** programs like Early Head Start contribute to positive outcomes for children and their families identified as at-risk by strengthening parent and family processes (Brofenbrenner, 1979; Woodhead, 1988 *cited in* Brooks-Gunn, Berlin, & Fuligni, 2000).
- Two important elements of **family resilience** in the context of risk factors are family structural and interaction patterns and a parent's sense of mastery in their lives (Walsh, 2002).
- Further, intervention models and their evaluations that examine both **vulnerability and resilience** are often more meaningful than those focusing only on deficits (Fitzgerald, Barnes, & Almerigi, 2007).

METHOD

Purpose

- To explore effects of early intervention programming on longitudinal outcomes for parents and families with regard to family health, in a local site sample of the National Early Head Start Research and Evaluation Study (EHSRE).

Participants

- 189 families, who were randomly assigned either to receive EHS services or participate in a comparison group (who were free to access other available services in the community), were enrolled in the EHSRE project between 1996 and 1998.
- Mean age of children, at enrollment in the study, was 5 months (range from pre-birth to 16 months).
- Mothers' average age at enrollment was 23 years.
- Most families were Caucasian (76%); The median family income was $7,464.
- Completion rates from the first waves of data collection through the PFG wave ranged from 67%-87%.
- Data collection points included children's 14, 24, and 36 month birthday related assessments and transition to kindergarten (part of the national study protocol), and following completion of children's first grade experiences (local protocol).

Measures

- Program Participation, *sample participants were assigned at enrollment to the program or comparison group.*
- Family Functioning, *McMaster Family Assessment Device: Healthy General Functioning Subscale and Unhealthy General Functioning Subscale, (Epstein, Baldwin, & Bishop, 1983)*
- Maternal Mastery, *Pearlin Mastery Scale, (Pearlin, Lieberman, Menaghan, & Mullan, 1981)*
- Maternal Depression, *Center for Epidemiological Studies Depression Scale, (Radloff, 1977)*
- Maternal Risk, *composite variable of maternal education, age, employment, single parenthood, and welfare status*
- Maternal Ethnicity

Data Analyses

Data were analyzed using Multivariate Analysis of Covariance (MANCOVA). Initial program participation (program versus comparison group assignment) served as the predictor variable while family functioning and a parent's sense of mastery at the Post First Grade (PFG) assessment point served as the dependent variables. In our local sample, scores on the Pearlin and the McMaster Healthy subscale (r=.46, p<.01) as well as the Pearlin and McMaster Unhealthy subscale (r=-.42, p<.01) were significantly correlated. The McMaster susbcales were also significanly correlated with each other (r=-.72, p<.01). Maternal risk at enrollment, maternal depression at PFG, and ethnicity were included in the model as covariates. Missing data were imputed using EM methodology..

RESULTS

MANCOVA ANALYSES

Multivariate Analysis of Covariance (MANCOVA) tests show an **overall significant program impact** when comparing sample participants in the program group with sample participants in the comparison group on family health at PFG (F=6.47, p<.001). Between-subjects effects show that program participation had a significant impact on healthy family functioning (F=4.11, p<.01, Adjusted R^2=.08), unhealthy family functioning (F=6.25, p<.001, Adjusted R^2=.10) and mastery (F=25.11, p<.001, Adjusted R^2=.34).

Table 1
Summary of MANCOVA Multivariate Tests for Program Participation Predicting Family Resilience, Controlling for Maternal Risk, Depression, and Ethnicity

Test Statistic	*F*	Partial Eta Squared	Observed Power (a=.05)
Wilks' Lambda	6.47***	.10	.97

***p<.001

Table 2
Summary of MANCOVA Tests of Between-Subject Effects for Program Participation and Covariates Maternal Risk, Depression, and Ethnicity

	Variable	*B*	*F*	*t*	Type III Sum of Squares	Partial Eta Squared	Observed Power (a=.05)
Corrected Model							
	McMaster (Healthy)		4.11**		5.47[a]	.08	.91
	McMaster (Unhealthy)		6.25***		13.21[b]	.12	.99
	Pearlin		25.11***		11.96[c]	.35	1.00
Maternal Risk							
	McMaster (Healthy)	-.03	.71	-.84	.24	.00	.13
	McMaster (Unhealthy)	.05	.87	.93	.46	.00	.15
	Pearlin	.00	.01	.12	.00	.00	.05
Maternal Ethnicity							
	McMaster (Healthy)	-.06	.92	-.96	.31	.01	.16
	McMaster (Unhealthy)	.10	1.68	1.30	.89	.01	.25
	Pearlin	.05	1.84	1.36	.22	.01	.27
Maternal Depression							
	McMaster (Healthy)	-.30	8.70**	-2.95**	2.89	.05	.84
	McMaster (Unhealthy)	.44	11.79**	3.43**	6.23	.06	.93
	Pearlin	-.56	85.93***	-9.27***	10.24	.32	1.00
Program Participation							
	McMaster (Healthy)	.24	7.78*	2.79*	2.59	.04	.79
	McMaster (Unhealthy)	-.39	13.23***	-3.64***	6.99	.07	.95
	Pearlin	.18	13.01***	3.61***	1.55	.07	.95

***p<.001, **p<.01, *p<.05, a: Adjusted R^2=..08, b: Adjusted R^2=.10, c: Adjusted R^2=.34

CONCLUSIONS

- The results demonstrate that **early intervention had a significant longitudinal impact** on the families enrolled in Early Head Start in the local Michigan sample.
- A parent's sense of mastery and overall family functioning were significantly impacted even when controlling for risk factors.
- The significant multivariate model suggests that **early intervention plays a role in supporting families and parents' sense of empowerment, contributing to optimal family functioning**, and that this relationship is maintained over time.

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