

WHY DO RICH CHILDREN HAVE BETTER OUTCOMES? AN ANALYSIS OF THE LSAC 'K' COHORT



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Why Do Rich Children Have Better Outcomes?

- ◆ Purpose: to investigate the relationship between household income, parenting and developmental outcomes for children at age 4

- ◆ Rationale:

Relationship between **economic adversity** and child outcomes is widely acknowledged

BUT

little discussion of why outcomes vary across the whole SES (income) spectrum.

Recent research by Sanson & Misson et al suggests that the **richest** 4 year olds in the LSAC have **better outcomes** than those who are just **a little less rich**.

Questions:

- ✈️✉️ Is there a continuous positive relationship between income and child outcomes in LSAC?
- ✈️✉️ Is this relationship
 - statistically significant?
 - robust when socio-economic factors are controlled for?
- 📞📞 To what extent does parenting mediate the relationship between SES and child outcomes?
- 📞📞 How can such a relationship be explained with reference to literature on socio-economic environment and child development?

- ◆ The relationship between income and outcomes
 - statistical robustness
 - intervening variables
- ◆ Influences of income and parenting on child development
- ◆ Explaining the results
- ◆ Conclusion

The LSAC – outcome measures for the 'K' cohort

- ◆ 3 domains
 - ❖ Physical
 - ❖ Social/Emotional
 - ❖ Learning
- ◆ Aggregated into overall Outcome Index
- ◆ **Results do not vary greatly, whether overall index or individual elements are used.**
 - ❖ physical domain least correlated with income
 - ❖ social/emotional domain most correlated with income
- ◆ Much lower correlations with B cohort

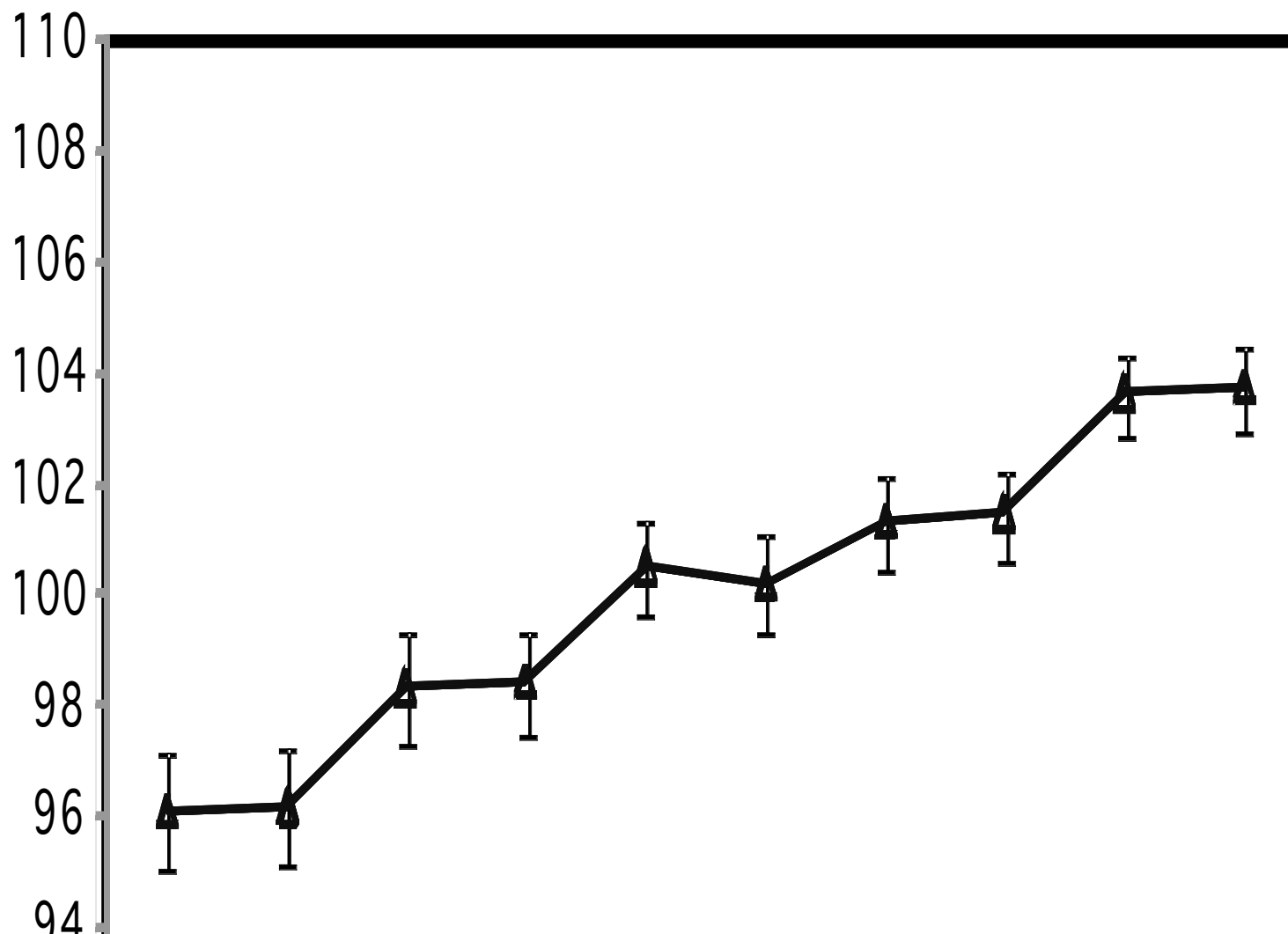
The LSAC – income and other measures of Socio Economic Status

- ◆ Income in Wave 1
 - respondent (usually the mother) asked about her own income, and about spouse's income, and about yearly income for herself and partner combined
 - may lead to underestimation of income
- ◆ SEIFA code
 - statistical local areas, based on Census data
- ◆ Educational attainment of mother
 - five category scale
- ◆ Socio-Economic Position (Blakemore, Gibbings & Strazdins, 2007)

All give (more or less) the same results

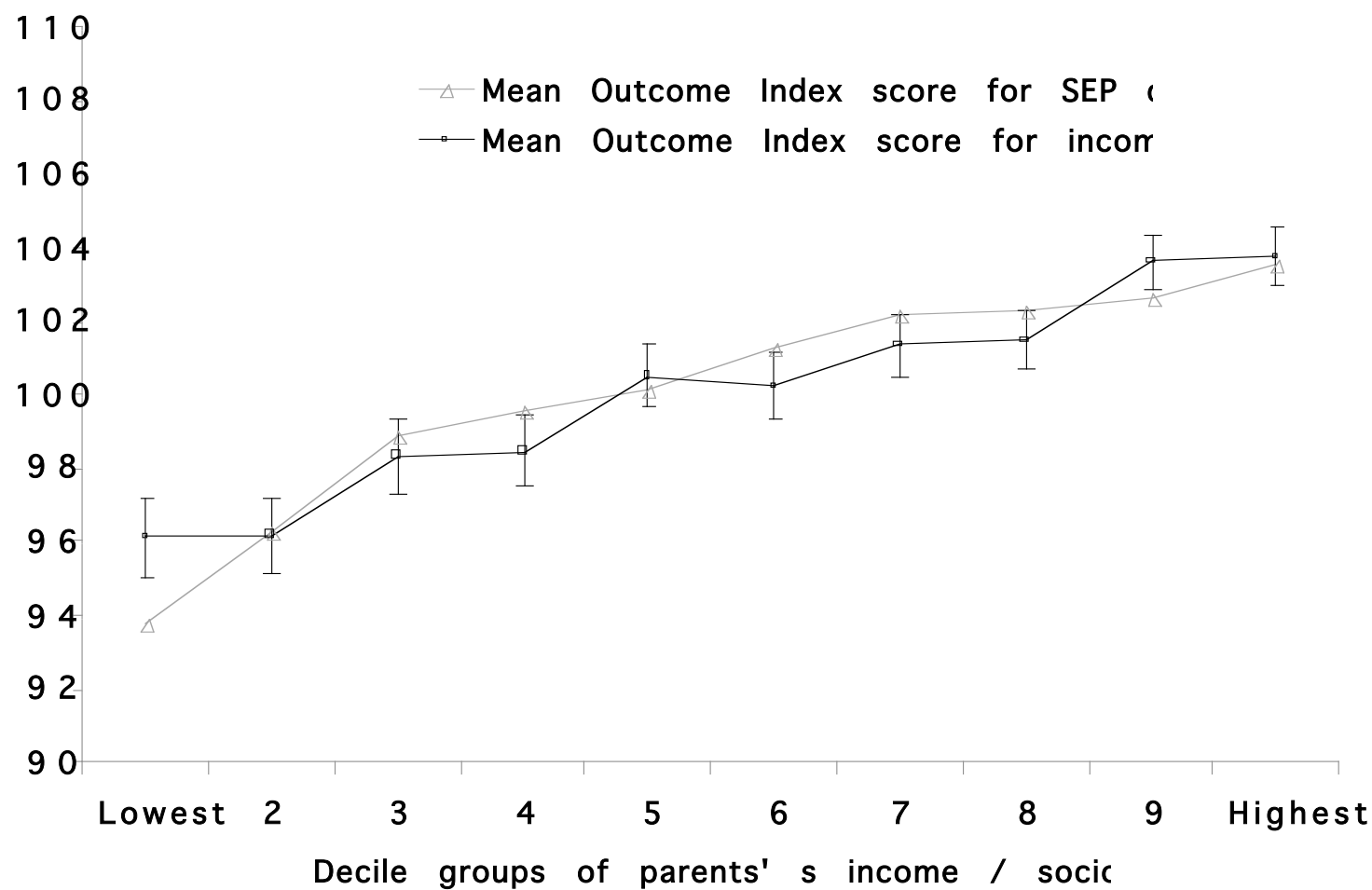
Analysis Results 1 – average outcome index scores by income group

Average overall outcome index scores by decile groups of household



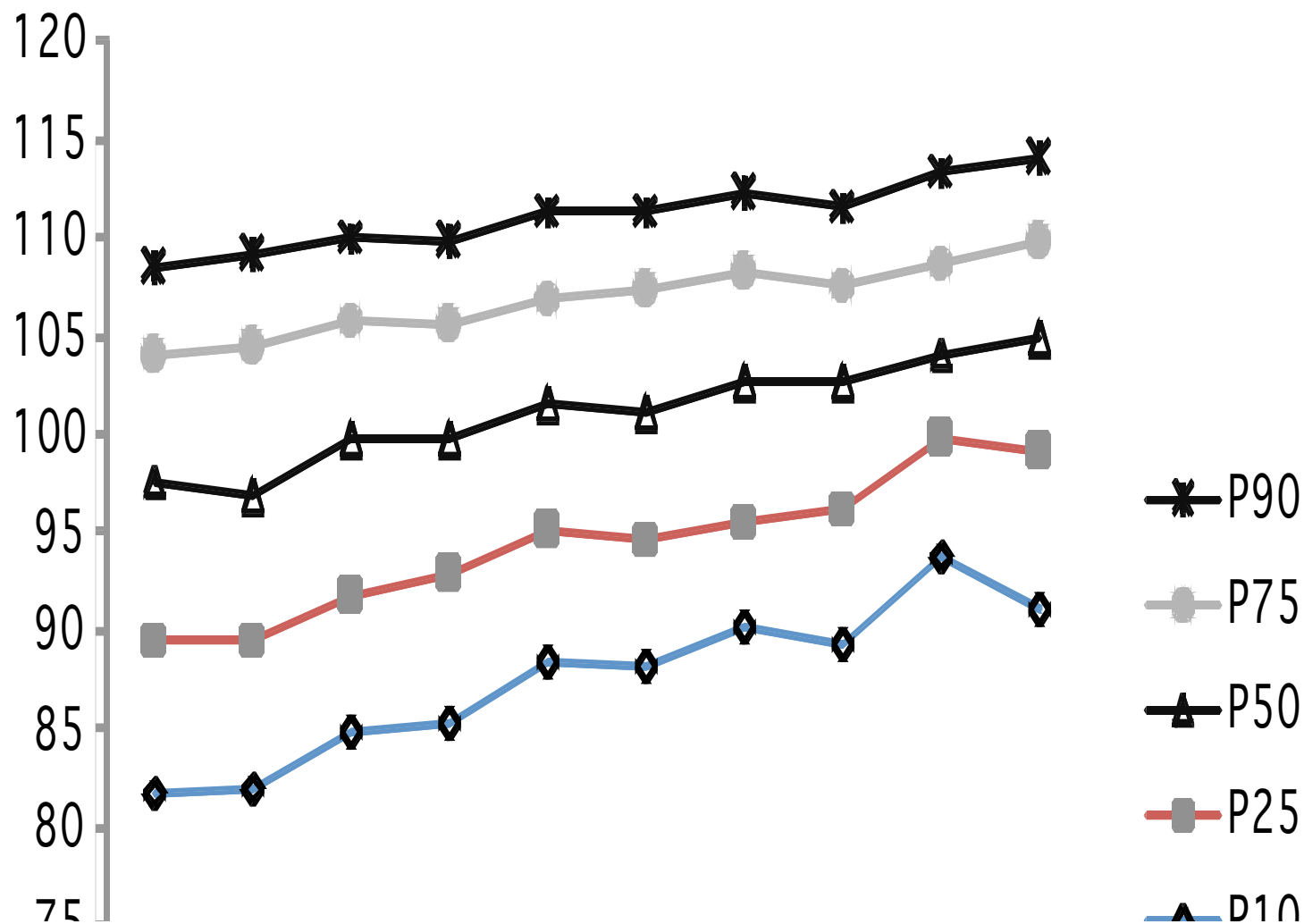
Analysis Results 1 – average outcome index scores by income and socio-economic position group

Average overall outcome index scores by decile groups of household income and SEP



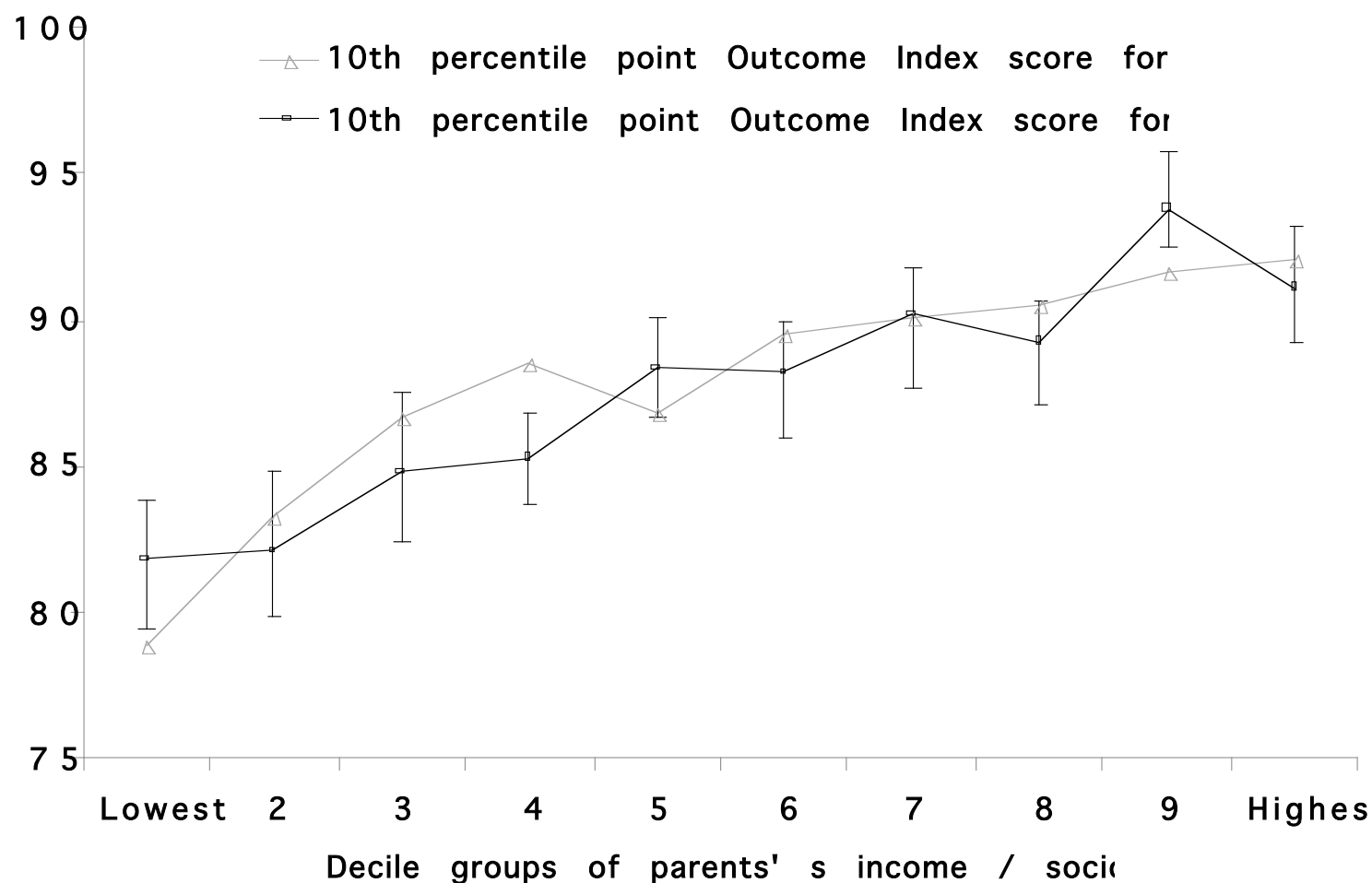
Analysis Results 2 – distribution of outcomes within income groups

Overall outcome index (percentile point scores) by decile groups of household income



Analysis Results 2 – distribution of outcomes within income and SEP groups

Overall outcome index (10th percentile point score) by decile groups of household income and Socio-Economic Position



The relationship between income and outcomes

Children in the households with the highest incomes have the best outcomes.

This is true at the mean, but at the 10th percentile, differences between income groups are even more pronounced.

→ Does income make the biggest difference for those children who would otherwise have very low outcome scores, and if so, why?

Relationship between SES, parenting and child outcomes

- ◆ Parental stress
 - ❖ Maternal depression, stress associated with poverty, or adverse events
- ◆ Parental resources
 - ❖ nutrition, child care, stimulating toys, medical care
- ◆ Social/human capital
 - ❖ Parental attributes (eg., education) enable better parenting, and better access to jobs and support
- ◆ “Culture of poverty”
 - ❖ Poor parents learn different parenting styles and attitudes
- ◆ Adaptive Parenting
 - ❖ Parents adapt style to adverse circumstances
- ◆ Genetics
 - ❖ Parental style affected by genetics/genes passed on to children
- ◆ ***Affluenza***

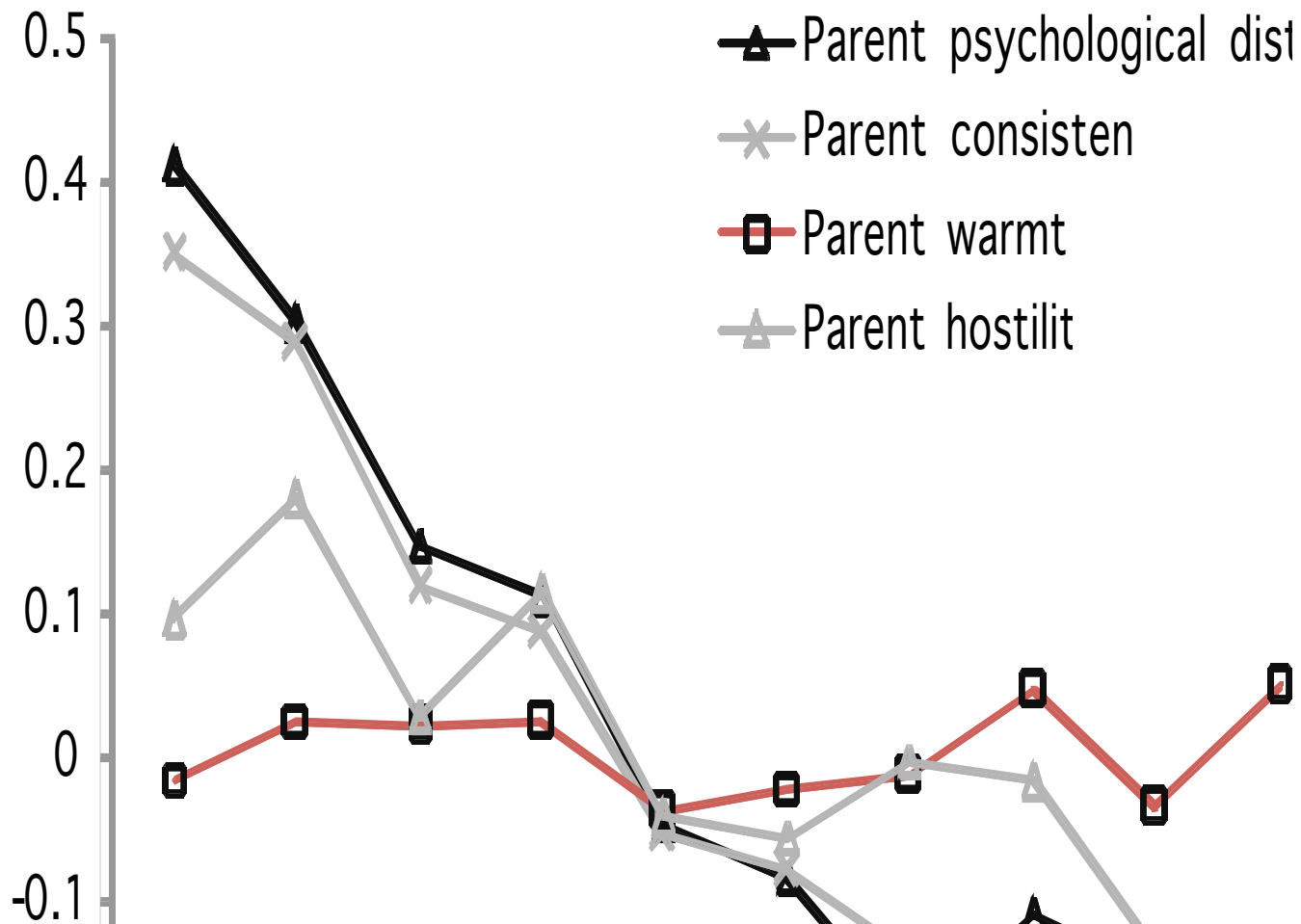
Parenting in LSAC – parental stress and parenting practices

- ◆ Parental stress (see Zubrick et al, 2006)
 - ❖ Life stress events; Subjective stress; Support from family and friends; Community connectedness; Psychological distress
 - ❖ Strongest relationship to outcomes is psychological distress (R-sq=0.10)

- ◆ Parenting practices
 - ❖ Parental Warmth; Hostile parenting; Consistency
 - ❖ Strongest relationship to outcomes is hostile parenting (R-sq=0.12, followed by Consistency (R-sq=0.10), and Parental warmth (R-sq=0.03)

Intervening variables

Parent stress and parenting practice indicators by income decile



Note: parent stress and parenting practice variables denominated in Z-Scores (mean=0, std deviation=1)

Intervening variables

Multivariate Models of Explanatory variables on outcomes (with income entered as a categorical variable)

	OLS	p10	p25	p50	p75	p90
Adjusted Rsq	0.252	0.169	0.164	0.147	0.129	0.105
In 2nd decile of income distribution	---	---	---	---	---	---
In 3rd decile of income distribution	---	---	---	---	---	---
In 4th decile of income distribution	---	---	---	---	---	---
In 5th decile of income distribution	---	---	---	---	---	---
In 6th decile of income distribution	---	---	---	---	---	---
In 7th decile of income distribution	1.725	---	---	1.753	1.987	---
In 8th decile of income distribution	1.564	---	---	---	---	---
In 9th decile of income distribution	2.973	4.329	2.899	2.208	---	---
In top decile of income distribution	2.360	3.379	2.855	2.340	1.952	---
Index of parents' connectedness with community (0=high connectedness)	-0.259	-0.344	-0.343	-0.229	-0.132	---
Index of parents' psychological distress (0=low distress)	-0.438	-0.679	-0.476	-0.372	-0.392	-0.335
Index of parents' hostility (0=low hostility)	-0.896	-1.228	-1.094	-0.874	-0.701	-0.545
Index of parents' consistency (0=high consistency)	-0.436	-0.507	-0.459	-0.403	-0.376	-0.239
<i>constant</i>	116.809	112.924	115.167	116.276	119.471	120.308

Intervening variables

Bivariate and multivariate models of impact of income, child outcomes and socio-demographic factors on parents' psychological distress

Bivariate	OLS		Quantile Regression				
	Adj. Rsq	Beta	p10	p25	p50	p75	p90
Log equivalised household income	0.0332	-1.014	-	-0.458	-0.682	-1.545	-2.460
Child outcome index	0.1016	-0.121	-	-0.664	-0.111	-0.171	-0.205

Multivariate	OLS		Quantile Regression				
	Adjusted Rsq		p10	p25	p50	p75	p90
Adjusted Rsq	0.2279		0.0283	0.084	0.1125	0.1636	0.1937
Child outcome index	-0.656		-0.01793	-0.04022	-0.06106	-0.06876	-0.10776
Log equivalised household income	-0.343		---	-0.208	---	-0.5018	-0.38601
mother has tertiary education	0.600		0.377264	0.620351	0.506997	0.577624	0.533167
English not spoken at home	0.494		---	---	0.728754	1.320186	1.107262
Lone parent family	0.533		---	---	0.518367	1.008298	0.758451
Step or blended family	0.987		---	0.752446	1.135036	1.948755	---
Four or more threatening events in the past year	2.319		1.002325	1.47363	2.256321	3.17992	3.098357
Index of parents' connectedness with community (C	0.219		0.068047	0.109686	0.180757	0.27159	0.423737
Index of parents' warmth (0=high warmth)	---		---	---	0.046841	---	---
Index of parents' hostility (0=low hostility)	0.251		0.104607	0.182901	0.253291	0.342481	0.301141
Index of parents' consistency (0=high consistency)	0.064		---	0.043984	0.047858	0.090331	0.110041
Constant	12.352		6.536181	9.304242	10.3552	13.46892	18.14853

Models - cautions and warnings:

- ✂✂ We are only testing recursive (unidirectional) models
- ✂✂ We assume that the error in income (the portion of outcomes that income does not explain) is uncorrelated with the error in other explanatory variables (the proportion of outcomes that these other variables do not explain)
- ✂✂ We are not only interested in the relationship between income etc. and MEAN outcomes
→ further computational challenges

- ◆ Confirms that effects of income/SES on child outcomes are mainly mediated by parenting factors
 - ❖ Outcomes and parenting continuous across income - no qualitative difference between poor and non-poor parents
 - ❖ Not consistent with culture of poverty/underclass thesis
 - ❖ Not consistent with Affluenza (at this stage)

- ◆ However income IS a protective factor particularly for children with low outcome index scores in the top deciles
 - ❖ Income (and therefore parenting) has a much greater effect on the most 'vulnerable' children (ie., those with low outcome index scores) but 'resilient' children do well regardless of circumstances

Conclusions

- ◆ No single factor accounts for much difference in outcomes
 - ❖ Parental stress and hostile parenting are the two variables most associated with child outcomes
 - ❖ Income has a greater effect on parents with high stress
 - ❖ There is a two way interaction between parental stress and child outcomes
 - ❖ There may also be other non income related factors (eg genetics and community factors) influencing parental stress.
- ◆ Overall conclusions in line with the literature, but:
 - ❖ In LSAC, income is MORE highly correlated with behavioural and emotional outcomes than cognitive outcomes whereas the literature points in the opposite direction
 - ❖ SEP, maternal education and income are much more highly correlated in LSAC than in the literature
 - ❖ Parental warmth decreases over the SES range

- ◆ We need to develop more sophisticated models of the relationship between socio-economic background, parenting and outcomes, and to understand better the inter-relationships between the different explanatory variables.
- ◆ Are we getting these results simply because the outcome index score is more sensitive at the bottom than at the top?
- ◆ We need to examine consistency of results over time, as children develop and grow older
 - ❖ Feinstein (2004) showed widening gaps with age, even for high scoring children.

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