



# Assessing Resilience using the Protective and Compensatory Experiences Survey (PACES)



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## INTRODUCTION

It is increasingly well documented that adverse childhood experiences (ACEs) have a causal relationship with diminished physical and mental health in adulthood (Felitti, Anda, et al., 1998). Supported by animal and human immunologic research, the ACEs model posits that psychosocial stress is biologically embedded in the child's developing immune, metabolic and neurologic systems, causing impairments in social, emotional and cognitive development with lifelong consequences (Miller, Chen & Parker, 2011; Danese & McEwen, 2012). We contend that there are equally significant childhood experiences that mitigate the effects of ACEs, and have created the PACES survey to test this proposition. Drawn from developmental literature on resilience in at-risk children, the PACES survey parallels the ACEs survey with ten "yes" or "no" items, one for each PACE identified in the literature.

## RESEARCH GOALS

There were two specific goals of the current study.

1. To examine the reliability and validity of the PACES in order to determine its potential usefulness as a complement to the ACEs survey.
2. To examine whether PACES interacted with ACEs (acted as a buffer) and negative parenting attitudes in a diverse sample of parents.

## SAMPLE

- 109 Parents (38 male)
- 42% ethnic minority
- 34% single parents
- Education - 30% high school graduate or less
- Median income - \$25,000 - \$40,000
- 25% of the sample earning less than \$25,000 a year
- Number of children (1-7, mean = 2.33)
- Parent age (25-50, mean = 38.06)

## Protective and Compensatory Experiences (PACES)

Connectedness/Belonging	Structure/Predictability
Have someone who loved you unconditionally (you did not doubt that they cared about you)?	Have an engaging hobby -- an artistic or intellectual pastime either alone or in a group?
Have at least one best friend (someone you could trust, had fun with)?	Have a school that provided the resources and experiences you needed to learn?***
Do anything regularly to help others or do special projects in the community to help others?	Live in a home that was typically clean AND safe with enough food to eat?
Have an adult (not your parent) you trusted and could count on when you needed help or advice?	Were you regularly involved in organized sports groups or other physical activity?***
Were you an active member of at least one civic group or a non-sport social group?	Were there rules in your home that were clear and fairly administered?

\*Could fit in either category.

## MEASURES

- ❖ Parenting Attitudes, Items from the Adult-Adolescent Parenting Inventory (AAPI-2; Bavelok)
  - Empathy
    - Children should keep their needs to themselves. (Reversed)
  - Autonomy
    - Children need to be allowed freedom to explore the world safely.
  - Selected items for a Harsh Parenting scale
    - A certain amount of fear is necessary for children to respect their parents.
    - It's OK to spank as a last resort.
    - Children learn respect through strict discipline.
- ❖ 10-items ACEs (Felitti, Anda et al., 1998) – 5 items measuring abuse and neglect; 5 items measuring family dysfunction
- ❖ 10-item PACES (see table above)

## RESULTS

Research goal #1 – Support for reliability and validity of measure

- Reliability
  - $\alpha = .76$  for whole sample
  - Reliability scores were examined by subgroup:
    - different ethnic groups ( $\alpha$ 's ranged from .70 to .81)
    - levels of education ( $\alpha$ 's ranged from .62 to .78).
- Validity
  - PACES scores were significantly correlated with:
    - ACEs ( $r = -.40, p < .001$ )
    - empathy ( $r = .29, p < .01$ )
    - role reversal ( $r = -.18, p < .06$ )
    - autonomy ( $r = .33, p < .01$ )
    - education level ( $r = .33, p < .001$ )
    - and income ( $r = .32, p < .01$ ).

Table 1: Predicting parenting attitudes from PACES

Variable	Empathy			Autonomy		
	B	SE B	$\beta$	B	SE B	$\beta$
Education	0.50	0.50	.10	0.02	0.05	.04
Gender	0.14	0.12	.01	-0.10	0.12	-.08
PACES	0.07	0.03	.28**	0.11	0.03	.38***
ACEs	0.02	0.03	-.08	0.05	0.03	.18
R <sup>2</sup>	.10			.14		
F	2.74*			4.11**		

Note: \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$ .

Table 2: The buffering effect of PACES on harsh parenting for ACEs.

Variable	Low PACES			High PACES		
	B	SE B	$\beta$	B	SE B	$\beta$
Education	-0.13	0.09	-.19	0.03	0.15	.02
Gender	-0.37	0.27	-.19	-0.32	0.25	-.17
ACEs	0.12	0.05	.42**	0.04	0.07	.09
R <sup>2</sup>	.23			.03		
F	4.26*			0.59		

Note: \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$ .

## Research goal #2

As shown in Table 2, ACEs is significantly positively related to harsh parenting for those parents with low PACE scores, but that link is not significant for those with high PACES.

## CONCLUSIONS

In summary, our preliminary findings indicate that the PACES is internally consistent within a diverse sample. PACE scores are associated with fewer ACEs, higher education and income levels, and with better parenting attitudes (less role reversal, more empathy and autonomy). Higher PACE scores also determined whether parents with higher ACE scores endorsed negative parenting attitudes. As research and interventions continue to focus on the negative effects of toxic stress in childhood (Shonkoff, et al. 2011), we propose that the protective and compensatory effects of early relationships and supportive environments also be assessed.