

Measuring Lay Theories of Parenting and Child Development

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Abstract

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Measuring Lay Theories of Parenting and Child Development

Survey Construction

Generation of items

Revised questionnaire norming

Survey Validation

External Validity Study 1: Demographic Factors

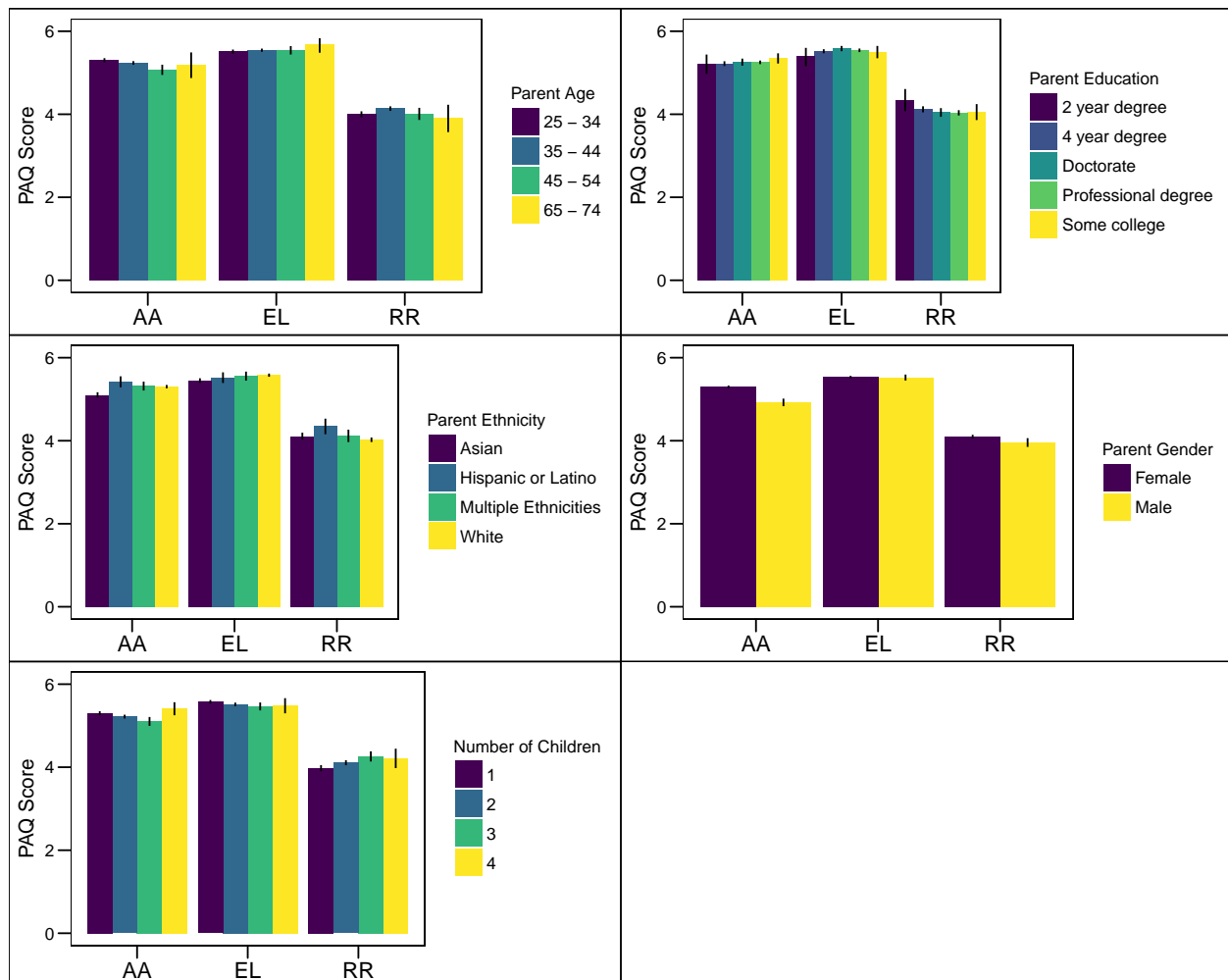


Figure 1. Demographic variability in PAQ scores. Error bars represent +/-95% CI computed by non-parametric bootstrap.

Approaches to parenting are known to differ across cultures and groups. To better understand whether the parenting attitudes captured by our survey reflect group differences, we examined average scores on the PAQ subscales based on demographic factors. We administered the PAQ to 680 parents who were members of a local children’s museum and subsequently asked them to provide information about their gender, level of education, age, ethnicity, and the number of children they have. Figure 1 displays the distributions of demographic factors. To quantify any possible group differences, we fit Bayesian mixed effects ordinal regression models for each subscale (AA, EL, RR) with the following structure:

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agreement rating ~ age + education + ethnicity + gender + number of
children + (1 | subject) + (1| item)
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Study 2: Relation to parenting behaviors

One way of assessing the ecological validity of the PAQ is to ask whether the parenting attitudes assessed by the current measure are related to actual parenting behaviors. For example, do parents who strongly agree with items on the Early Learning subscale read to their children more often? Do parents who strongly endorse items on the Rules and Respect subscale give more time-outs? To assess this, we asked parents on mturk to rate the frequency with which they engaged in a number of parenting behaviors after having filled out the PAQ.

Study 3: Uptake of new information about parenting and child development

Parents’ existing lay theories about parenting and child development may be an important consideration for crafting interventions on parenting behaviors. There have been frequent efforts to intervene on parenting behaviors, for example, public service announcements telling parents to read to their children; courses aimed at helping fathers engage with their children; messages aimed at encouraging parents and teachers to give children opportunities for free play. There is evidence that existing lay theories can interact

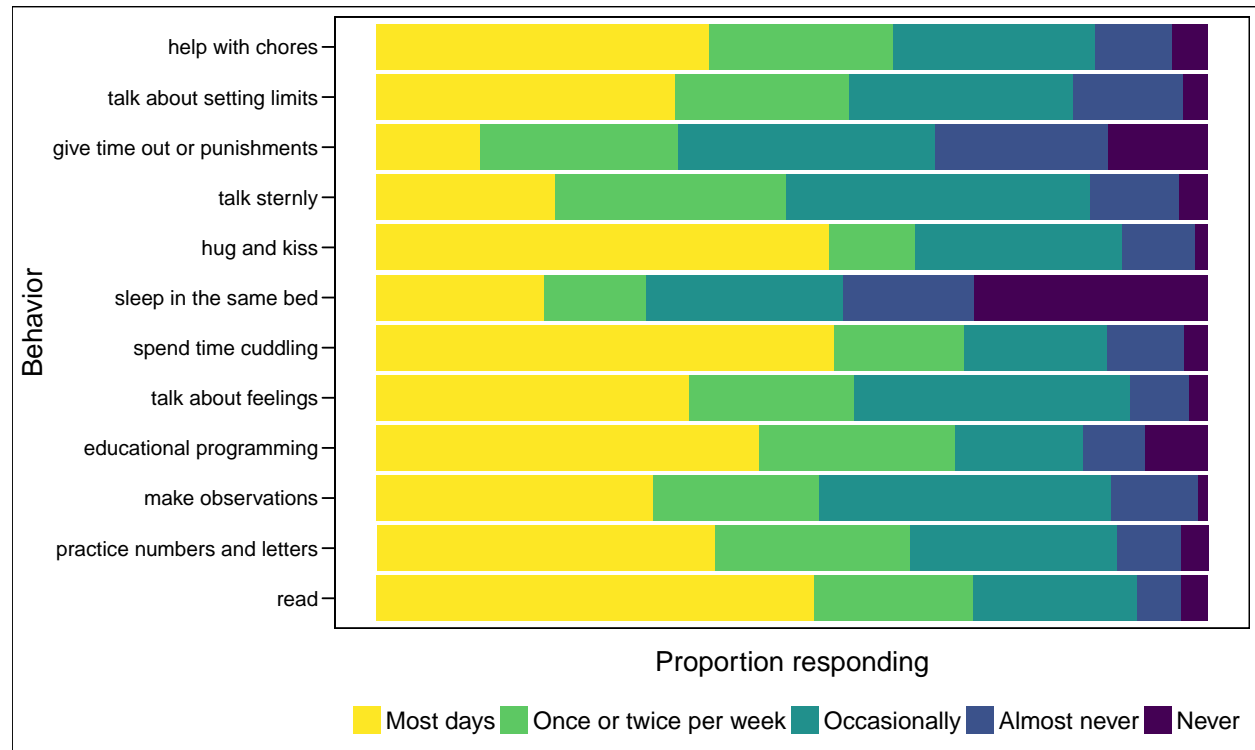


Figure 2. (#fig:behave_freq) Frequencies of different parenting activities reported by parents.

in surprising ways with this type of messaging in other domains. How do parents' lay theories impact how they uptake new information?

7.70% of the data is excluded due to reading time exclusion.

The average accuracy for control questions was 0.76(CI = 0.73 - 0.78) and the average accuracy for experimenter questions was 0.81(CI = 0.73 - 0.83). There was no significant difference in accuracy between conditions, $t = -4.83$, $p = 0.00$.

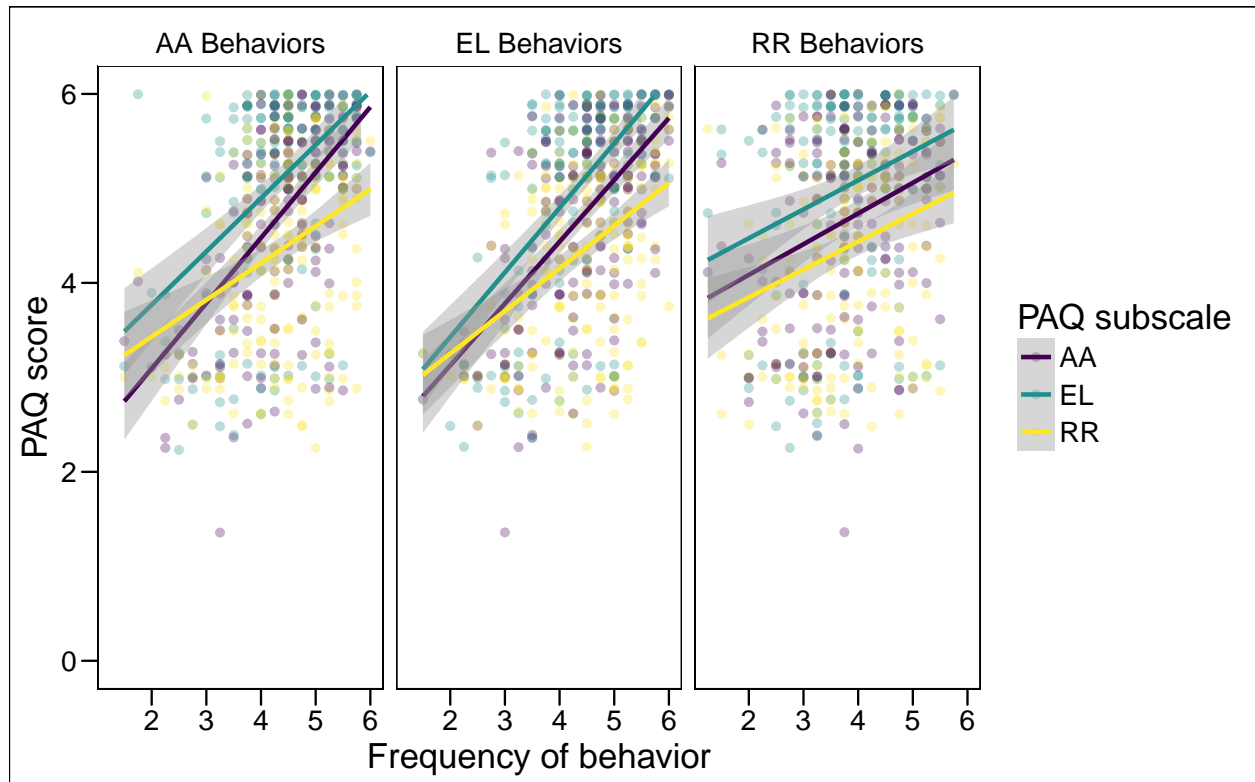


Figure 3. (#fig:behave_paq) Relations between PAQ scores (Affection and Attachment, Early Learning, and Rules and Respect) and the frequency of parenting behaviors divided into the same categories.

References

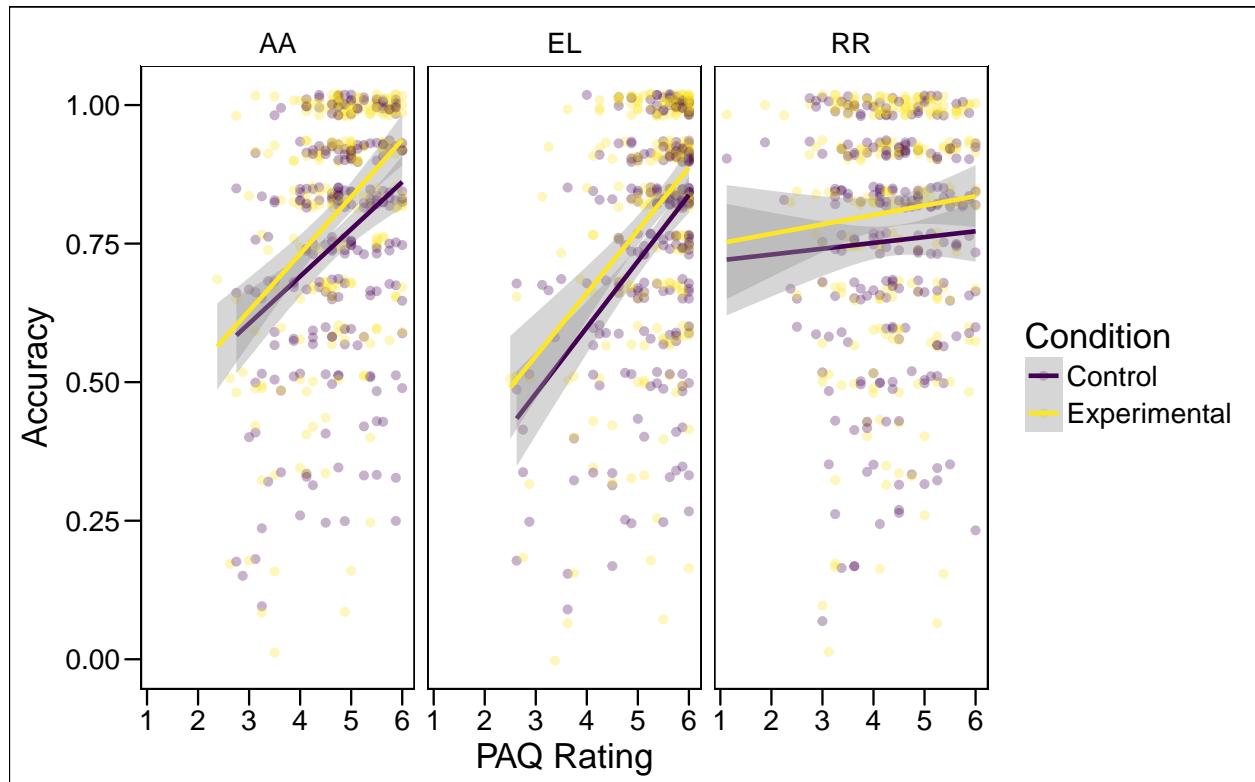


Figure 4. Relations between PAQ scores (Affection and Attachment, Early Learning, and Rules and Respect) and the uptake of information in experimental (child development-related) and control articles.

Subscale	Factor	Estimate	Est. Error	Lower 95% CI	Upper 95% CI
AA	Parent Age	-0.00	0.01	-0.01	0.01
	Hispanic or Latino	0.72	0.20	0.34	1.11
	Multiple Ethnicities	0.50	0.16	0.18	0.82
	White	0.31	0.09	0.12	0.49
	Parent Education	0.02	0.02	-0.01	0.05
	Number of children	-0.14	0.05	-0.24	-0.03
	Male	-0.70	0.11	-0.92	-0.48
EL	Parent Age	0.01	0.01	-0.00	0.02
	Hispanic or Latino	0.26	0.19	-0.12	0.64
	Multiple Ethnicities	0.56	0.17	0.22	0.90
	White	0.44	0.09	0.25	0.62
	Parent Education	0.02	0.02	-0.01	0.05
	Number of children	-0.14	0.05	-0.24	-0.03
	Male	-0.18	0.11	-0.41	0.04
RR	Parent Age	-0.00	0.01	-0.01	0.01
	Hispanic or Latino	0.27	0.20	-0.11	0.67
	Multiple Ethnicities	-0.02	0.17	-0.34	0.31
	White	-0.20	0.10	-0.38	-0.01
	Parent Education	-0.02	0.02	-0.05	0.01
	Number of children	0.15	0.06	0.04	0.25
	Male	-0.17	0.12	-0.39	0.06

Table 1

Results of separate bayesian ordinal logistic regressionsof demographic factors on PAQ scores for each subscale.

Behavior Category	Factor	Estimate	Est.Error	l.95..CI	u.95..CI
AA	AA PAQ score	0.81	0.15	0.53	1.11
	RR PAQ score	-0.02	0.11	-0.24	0.20
	EL PAQ score	-0.01	0.14	-0.30	0.26
	Child Age	0.01	0.01	-0.00	0.02
EL	AA PAQ score	0.36	0.18	0.01	0.73
	RR PAQ score	0.20	0.14	-0.07	0.47
	EL PAQ score	0.52	0.18	0.17	0.88
	Child Age	0.01	0.01	-0.00	0.03
RR	AA PAQ score	0.10	0.20	-0.30	0.50
	RR PAQ score	0.34	0.15	0.04	0.64
	EL PAQ score	0.02	0.20	-0.36	0.41
	Child Age	0.03	0.01	0.01	0.05

Table 2

Results of separate bayesian ordinal logistic regressions of PAQ scores and child age on frequency of parenting behaviors in Affection and Attachment (AA), Early Learning (EL), and Rules and Respect (RR) categories.

Factor	Estimate	Est. Error	Lower 95% CI	Upper 95% CI
Condition	-0.21	0.75	-1.68	1.29
AA PAQ score	0.05	0.15	-0.25	0.35
RR PAQ score	-0.21	0.11	-0.42	0.01
EL PAQ score	0.82	0.16	0.52	1.14
AA PAQ score * Condition	0.42	0.16	0.11	0.73
RR PAQ score * Condition	0.02	0.11	-0.19	0.23
EL PAQ score * Condition	-0.27	0.16	-0.58	0.05

Table 3

Results of a bayesian logistic regression of PAQ scores and experimental condition on accuracy.