



Características sócioemocionais e desempenho escolar

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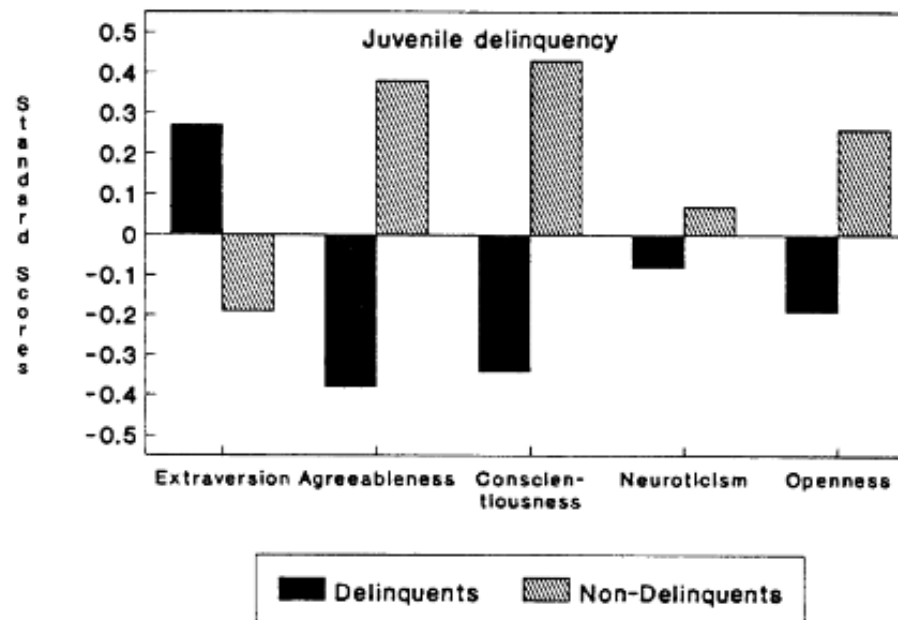
Primórdios: “saber fazer coisas”

- Resultados futuros dependem de habilidades, que podem ser aprendidas. Preferências e atributos socioemocionais tidos como fixos (inatos) e pouco relacionados com resultados.
- Mischel: Capacidade de postergar recompensas prediz resultados importantes.
- XXI: ênfase no desenvolvimento não-cognitivo

**I. Características não-cognitivas são
ao menos tão importantes quanto as
cognitivas em prever sucesso futuro**

Características psicológicas e resultados futuros

Figure 21. Juvenile Delinquency and the Big Five

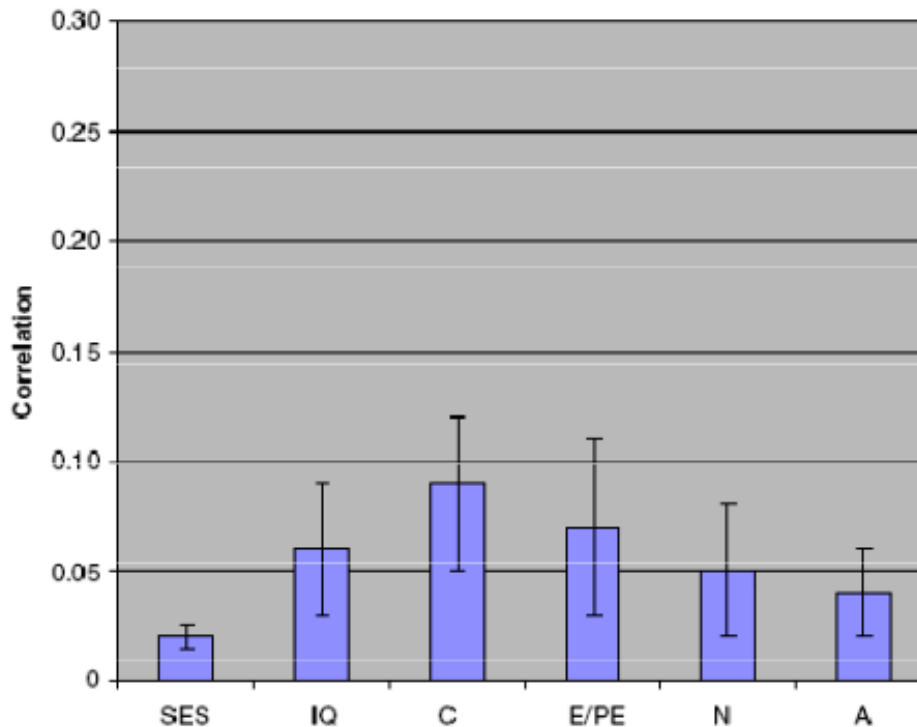


Notes: Delinquents are those who have committed at least one of the following: breaking and entering, strong-arming, or selling drugs. Non-delinquents have committed at most one of the following: stealing at home, vandalism at home, or theft of something less than \$5. The y-axis reports mean differences in standardized scores of the Big Five measures based on mother's reports. The measures were taken at ages 12-13 and reflect cumulative delinquent behavior.

Source: John, Caspi, Robins et al. [1994].

Características psicológicas e resultados futuros

Figure 18. Correlations of Mortality with Personality, IQ, and Socioeconomic Status (SES)



Notes: The figure represents results from a meta-analysis of 34 studies. Average effects (in the correlation metric) of low socioeconomic status (SES), low IQ, low Conscientiousness (C), low Extraversion/Positive Emotion (E/PE), Neuroticism (N), and low Agreeableness (A) on mortality. Error bars represent standard error. The lengths of the studies represented vary from 1 year to 71 years.

Source: Roberts, Kuncel, Shiner et al. [2007]

The Labor Market Returns to Cognitive and Noncognitive Ability: Evidence from the Swedish Enlistment

Article Citation

Lindqvist, Erik, and Roine Vestman. 2011. "The Labor Market Returns to Cognitive and Noncognitive Ability: Evidence from the Swedish Enlistment.

Table B1: Controlling for selection bias in regression of log wages

	(1) OLS	(2) OLS	(3) OLS	(4) OLS	(5) Median	(9) Heckman	(10) Heckman		
Wage measure	W1	W1	W3	W3	W2q	W2	Select	W2	Select
Cognitive skills	0.086*** (0.003)	0.051*** (0.003)	0.084*** (0.003)	0.049*** (0.003)	0.083*** (0.003)	0.088*** (0.006)	0.025 (0.021)	0.050*** (0.003)	-0.018 (0.026)
Noncognitive skills	0.065*** (0.003)	0.057*** (0.003)	0.066*** (0.003)	0.059*** (0.003)	0.059*** (0.003)	0.087*** (0.013)	0.206*** (0.022)	0.062*** (0.006)	0.167*** (0.024)
Constant	10.094*** (0.012)	9.669*** (0.027)	10.051*** (0.012)	9.744*** (0.029)	9.976*** (0.013)	9.943*** (0.050)	1.659*** (0.086)	10.140*** (0.042)	1.387*** (0.237)
Covariate set	Small	Large	Small	Large	Small	Small	Small	Small	Small
Observations	12545	11036	14150	12384	14626	14629	14629	12729	12729
R-squared	0.298	0.346	0.290	0.339					

*** p<0.01, ** p<0.05, * p<0.1 Robust standard errors in parentheses. Coefficients not adjusted for measurement error. Standard ability measures in all regressions.

Table 5: Unemployment duration

	Exponential		Weibull		OLS		OLS	
Cognitive skill	1.012 (0.038)	0.928 (0.043)	1.012 (0.038)	0.928 (0.043)	-0.003 (0.012)	0.017 (0.014)	0.005 (0.017)	0.030* (0.018)
Noncognitive skill	1.139*** (0.043)	1.173*** (0.049)	1.137*** (0.043)	1.173*** (0.049)	-0.037*** (0.012)	-0.045*** (0.013)	-0.063*** (0.023)	-0.077*** (0.021)
Covariate set	Small	Large	Small	Large	Small	Large	Small	Large
Reliability ratio <i>c</i>	-	-	-	-	1.00	1.00	.8675	.8675
Reliability ratio <i>n</i>	-	-	-	-	1.00	1.00	.70267	.70267
Observations	1173	926	1173	926	1173	926	1173	926
R-squared	-	-	-	-	0.023	0.040	0.028	0.049

*** p<0.01, ** p<0.05, * p<0.1. Standard errors in parentheses. Heteroskedasticity-robust standard errors in OLS without adjustment for measurement error. Standard errors in OLS with measurement error adjustment computed with nonparametric bootstrap. Standard ability measures in all regressions.

Table 10. The Predictive Power of Conscientiousness Relative and SAT Scores for College GPA

Source	Sample	Timing of Measurement and Outcome	Controls	Metric	Results	
Conard [2005]	University students in the US (N=186)	College GPA and SAT were both self-reported during college. Personality was measured in college.	Class Attendance	Standardized Regression Coefficient (β)	SAT Total Conscientiousness	0.27** 0.30**
Noftle and Robins [2007]	University students in the US (N=10,472)	College GPA and SAT were both self-reported during college. Personality was measured in college.	Gender, Other Big Five Traits	Standardized Regression Coefficient (β)	SAT Verbal SAT Math Conscientiousness	0.19*** 0.16*** 0.24***
Noftle and Robins [2007]	University students in the US (N=465)	College GPA and SAT were both self-reported during college. ¹ Personality was measured in college.	Gender, Other Big Five Traits	Standardized Regression Coefficient (β)	SAT Verbal SAT Math Conscientiousness	0.28*** 0.28*** 0.18***
Noftle and Robins [2007]	University students in the US (N=444)	College GPA and SAT were both self-reported during college. Personality was measured in college.	Gender, Other Big Five Traits	Standardized Regression Coefficient (β)	SAT Verbal SAT Math Conscientiousness	0.18*** 0.25*** 0.22***
Wolfe and Johnson [1995]	University students in the US (N=201)	GPA and SAT were provided by the Colleges's Record Office. Personality was measured in college.	High School GPA	Standardized Regression Coefficient (β)	SAT Total Conscientiousness	0.23*** 0.31***

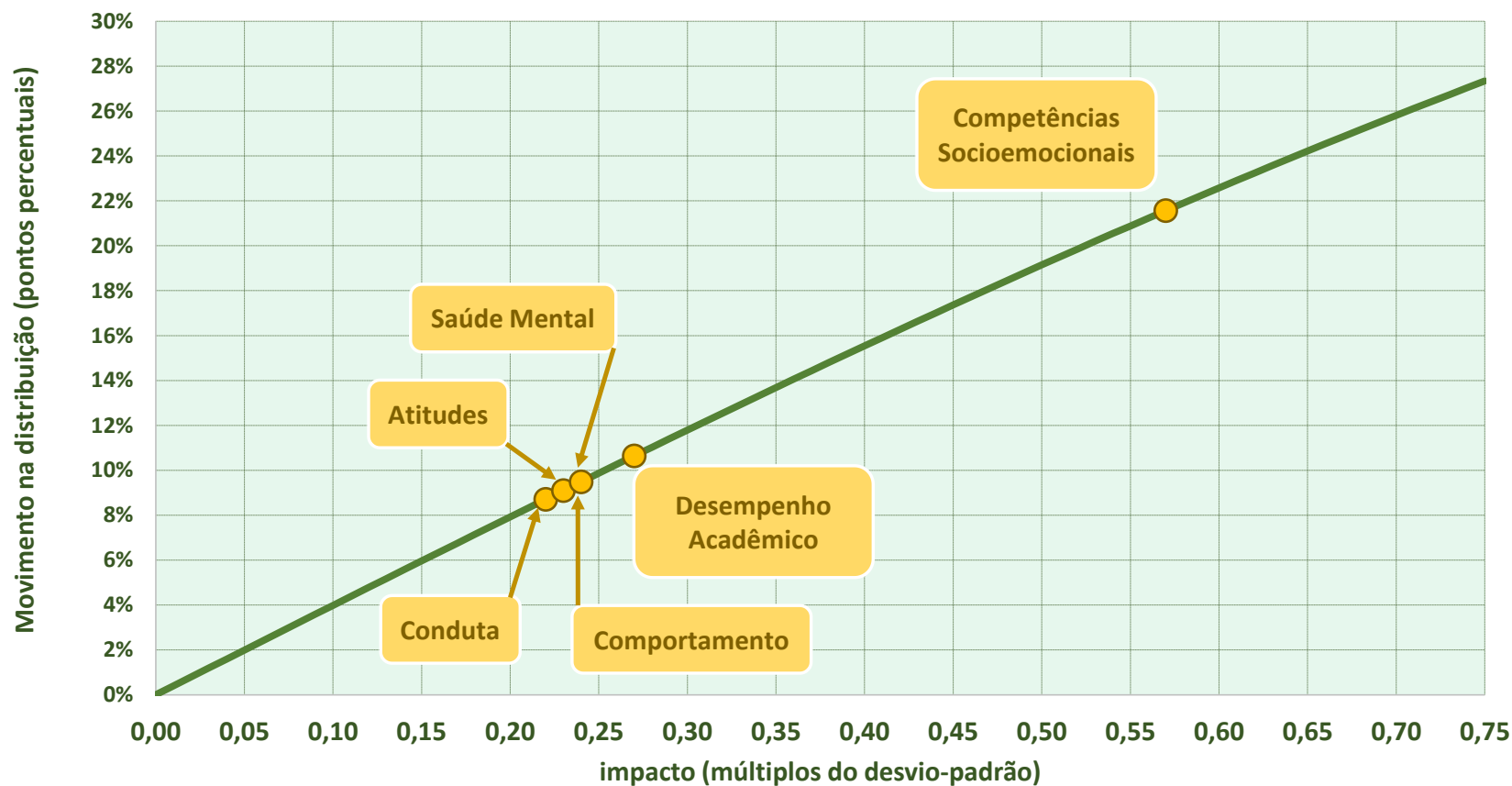
Notes: (1) Self-reported SAT scores and those obtained from college records were highly correlated ($r = 0.92$). Self-reported GPA and that obtained from college records were highly correlated ($r = 0.89$).

*statistically significant at the 10 percent level; **statistically significant at the 5 percent level; ***statistically significant at the 1 percent level

II. A escola é capaz de transformar características não-cognitivas

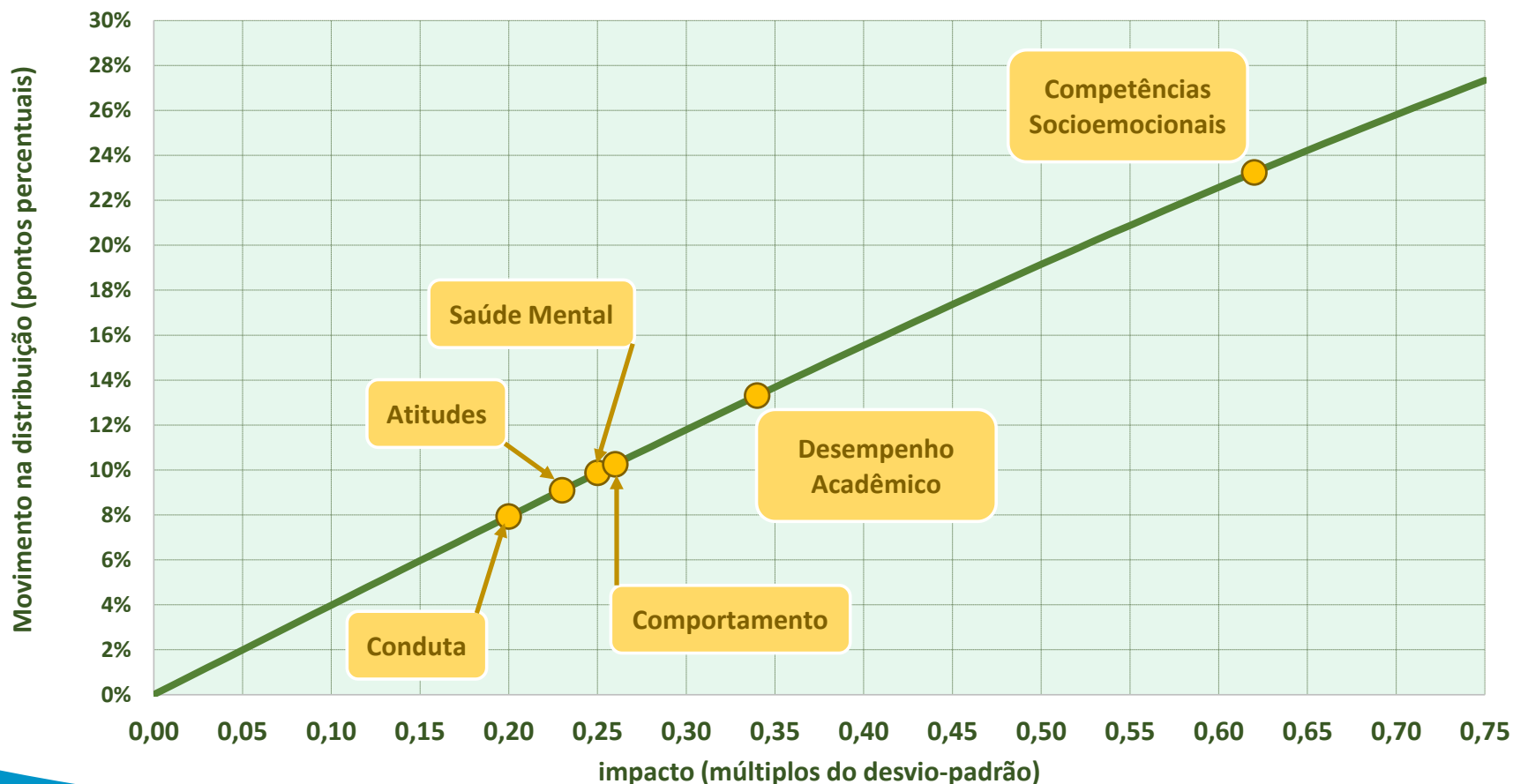
A Evidência

Impacto de programas universais voltados ao desenvolvimento de habilidades socioemocionais



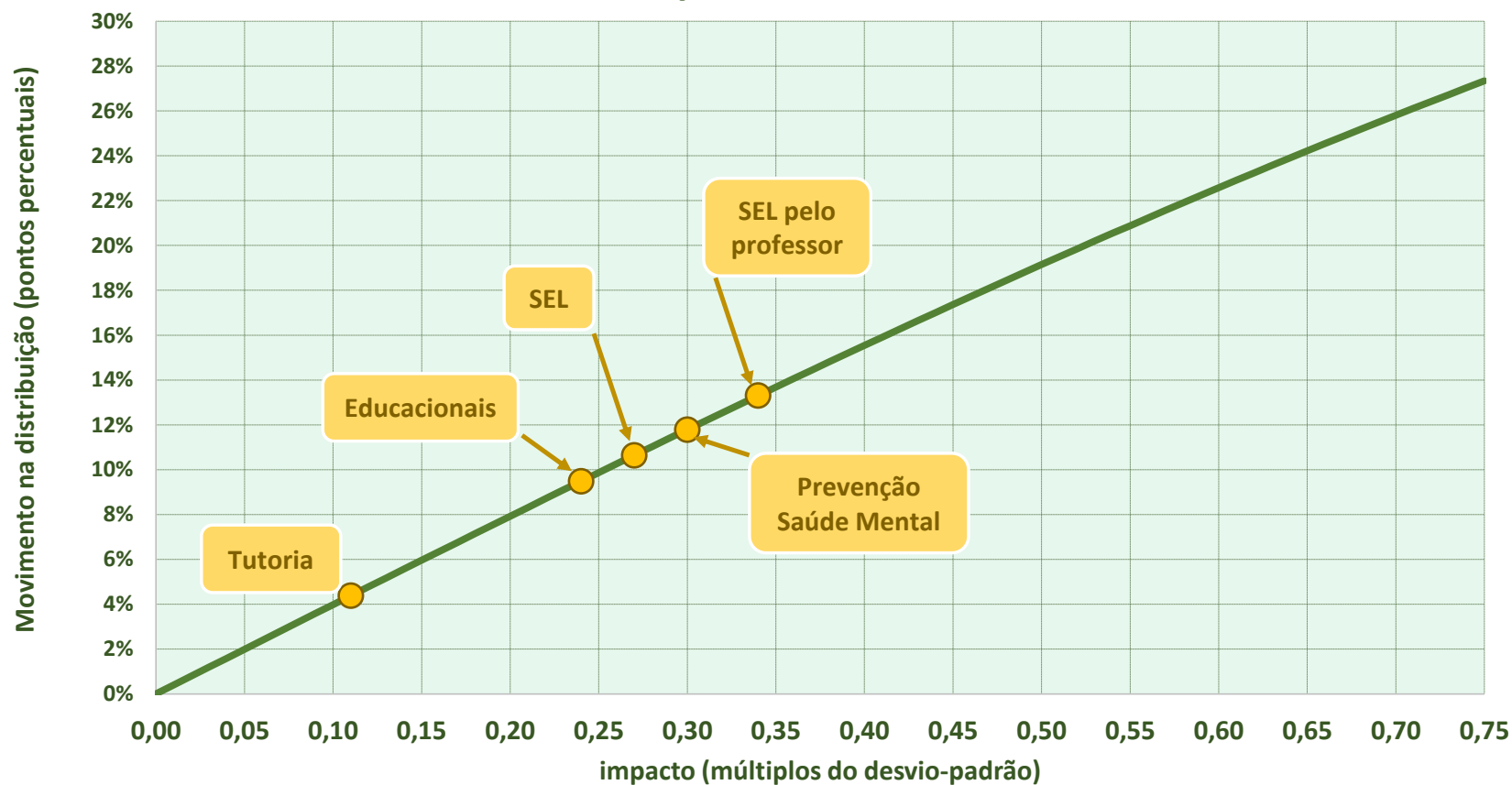
A Evidência

**Impacto de programas universais, na escola ministrado pelo professor,
voltados ao desenvolvimento de habilidades socioemocionais**



A Evidência

Impacto de distintos tipos de programas sobre o aprendizado



A Evidência

Impacto de distintos tipos de programas sobre as competências socioemocionais

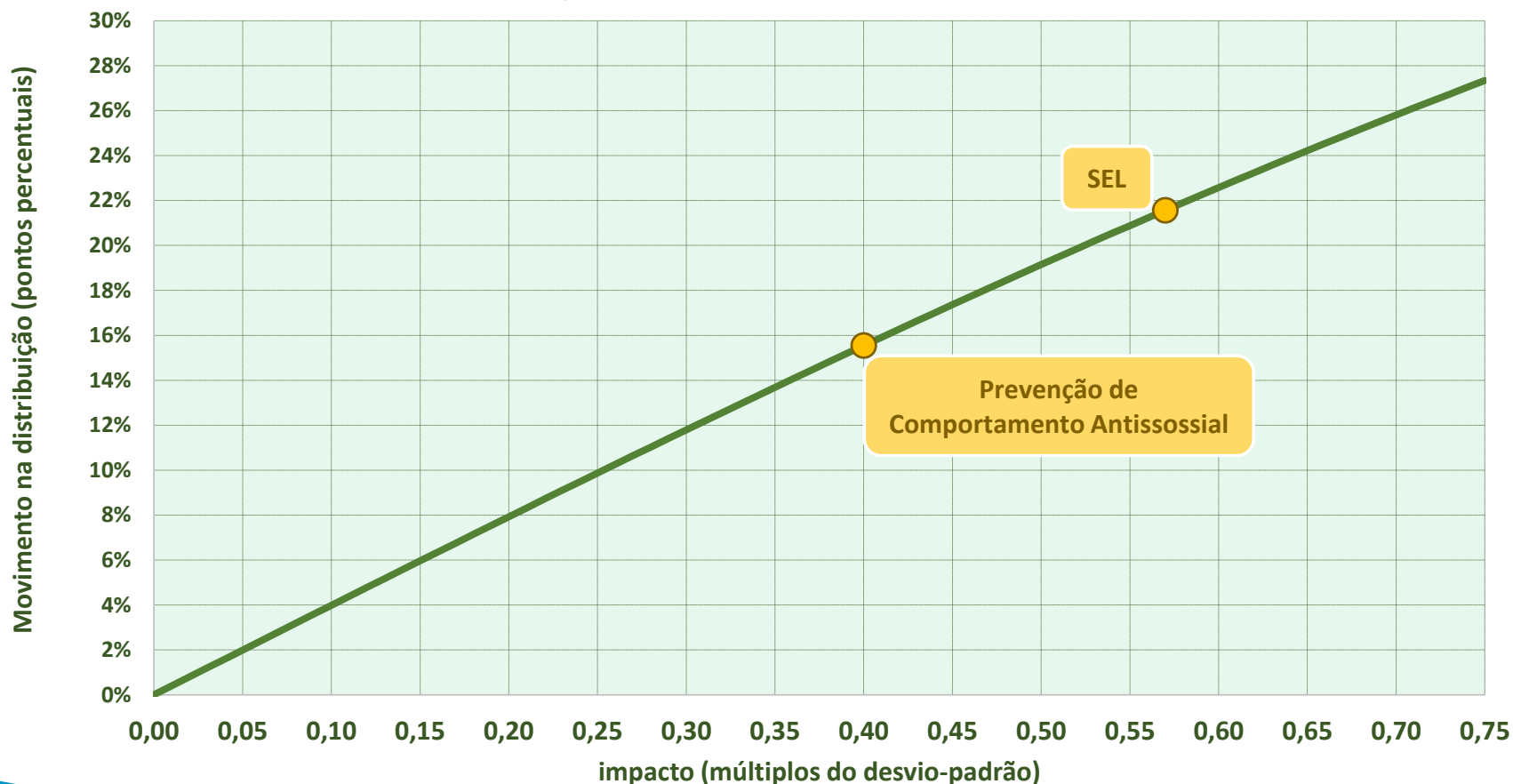
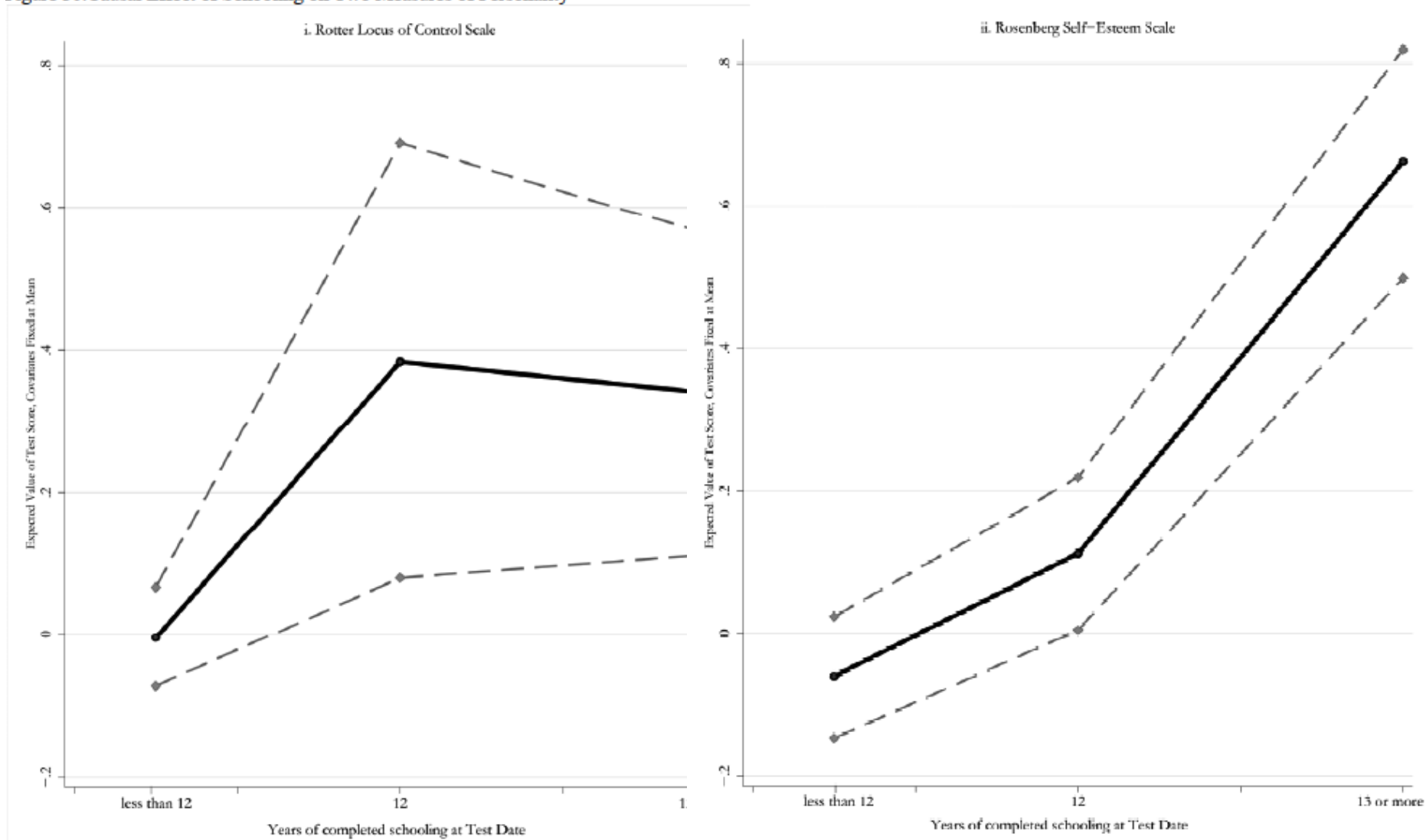


Figure 30. Causal Effect of Schooling on Two Measures of Personality



Fonte: Heckman, Stixrud e Urzua (2006)

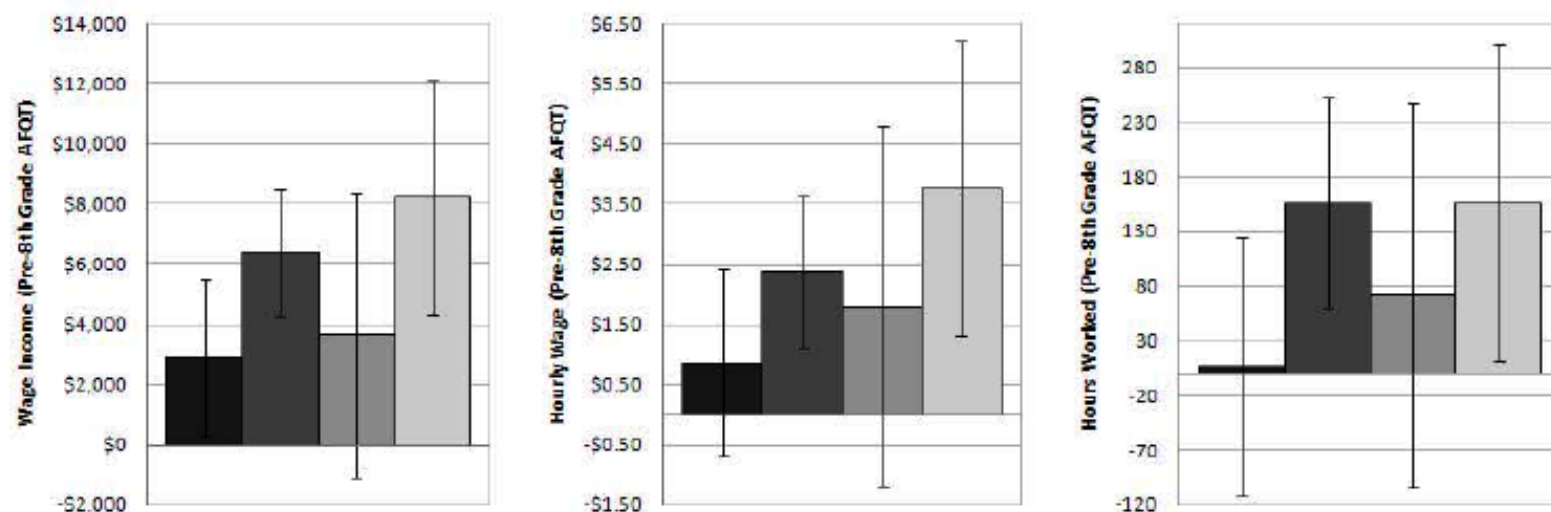
III. Grande parte dos benefícios da escola também passam por canais não-cognitivos

Benefícios da escola também passam por canais não-cognitivos

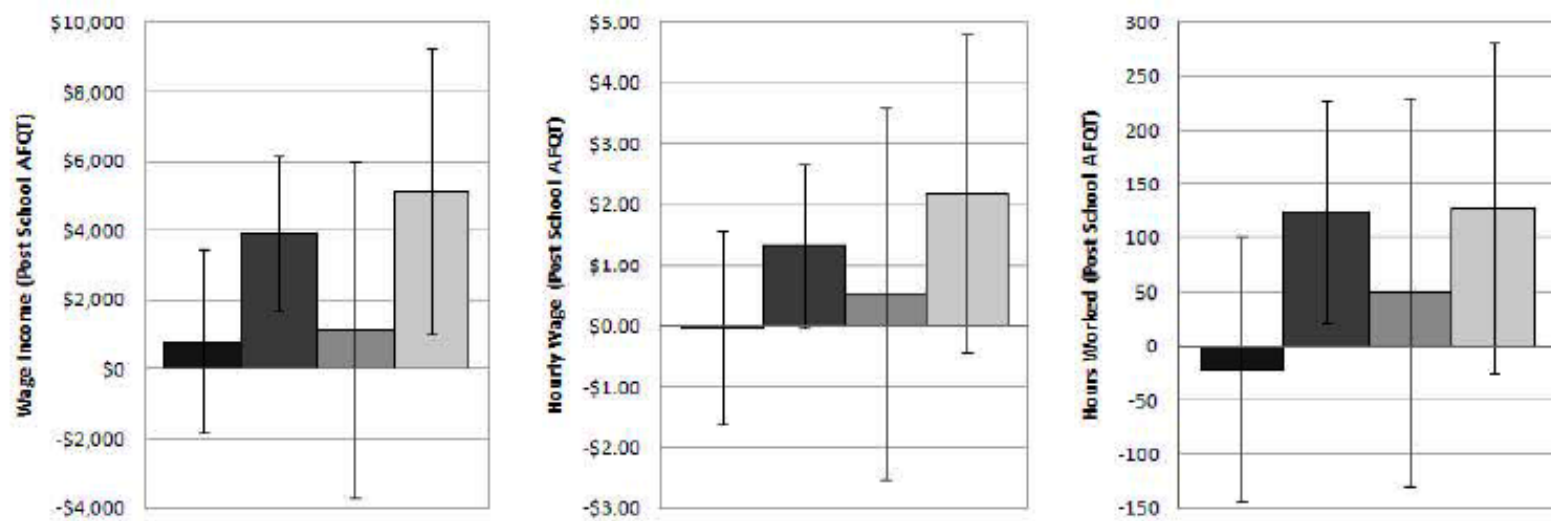
- Motivação: caso do GED. Comparação entre alunos formados no 2º grau, jovens que abandonaram e fizeram exame de equivalência, e jovens que abandonaram e não o fizeram
- Distribuição de QI nos dois primeiros grupos é semelhante, e domina a dos que abandonaram e não fizeram o exame
- Distribuição dos atributos não-cognitivos é semelhante entre os dois tipos de abandono, e é dominada pelos alunos do ensino formal
- Salários são maiores entre os formados no ensino formal do que nos outros 2 grupos
- **Explicação deve passar por atributos não cognitivos**

Figure 9: Economic Gaps Relative to Dropouts Adjusted For Pre-8th Grade AFQT Scores (A) and Post-Schooling AFQT Scores (B)

(A)



(B)

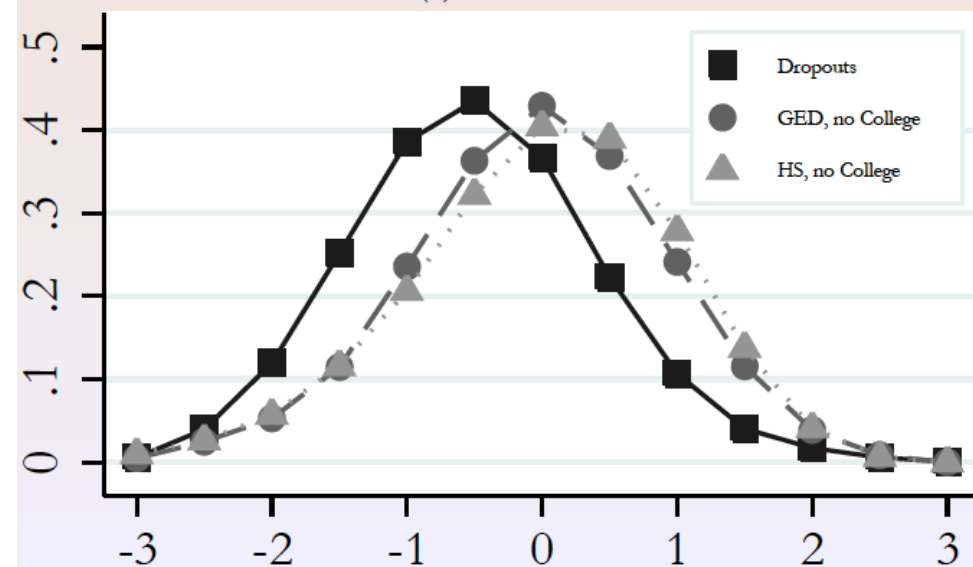


■ GEDs Age 25 ■ High School Graduates Age 25 ■ GEDs Age 35 □ High School Graduates Age 35

Source: National Longitudinal Survey of Youth 1979 (NLSY79). Notes: Regressions control for an urban residence at age

Schooling Corrected Test Score Distributions by Race and Gender NLSY79

(a) White Males



(b) White Females

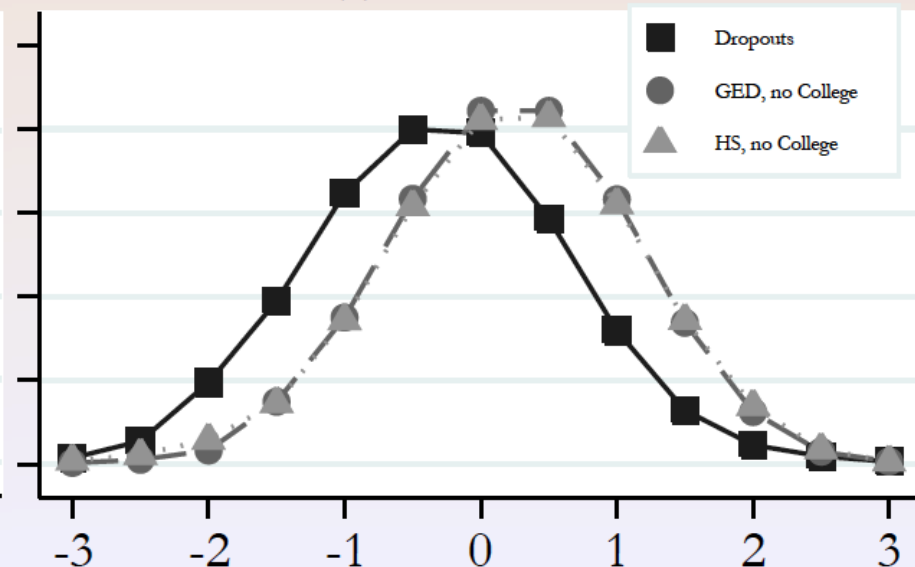
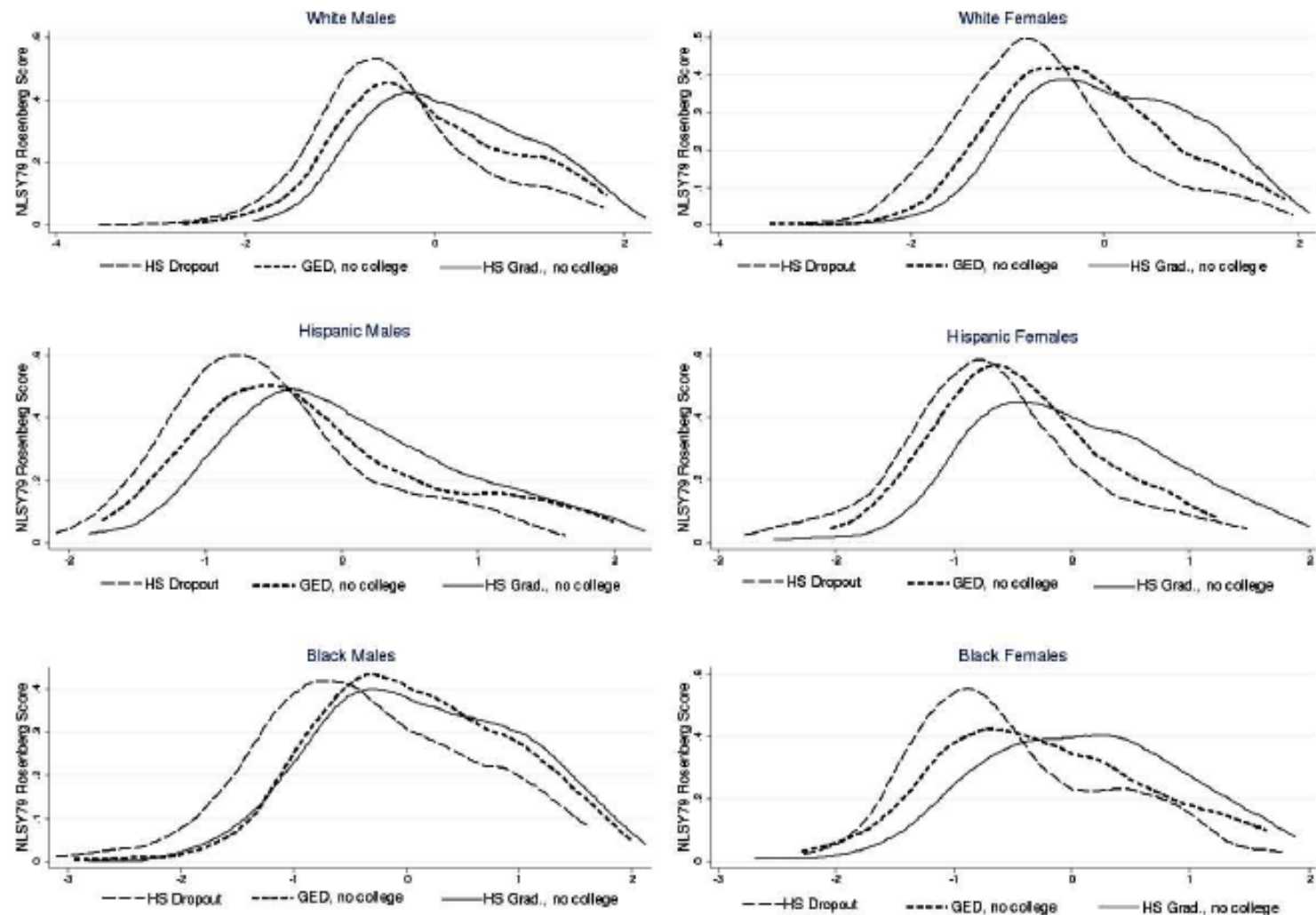


Figure 13: Estimates of Post-Schooling Rosenberg Scores Distributions by Final Education Level



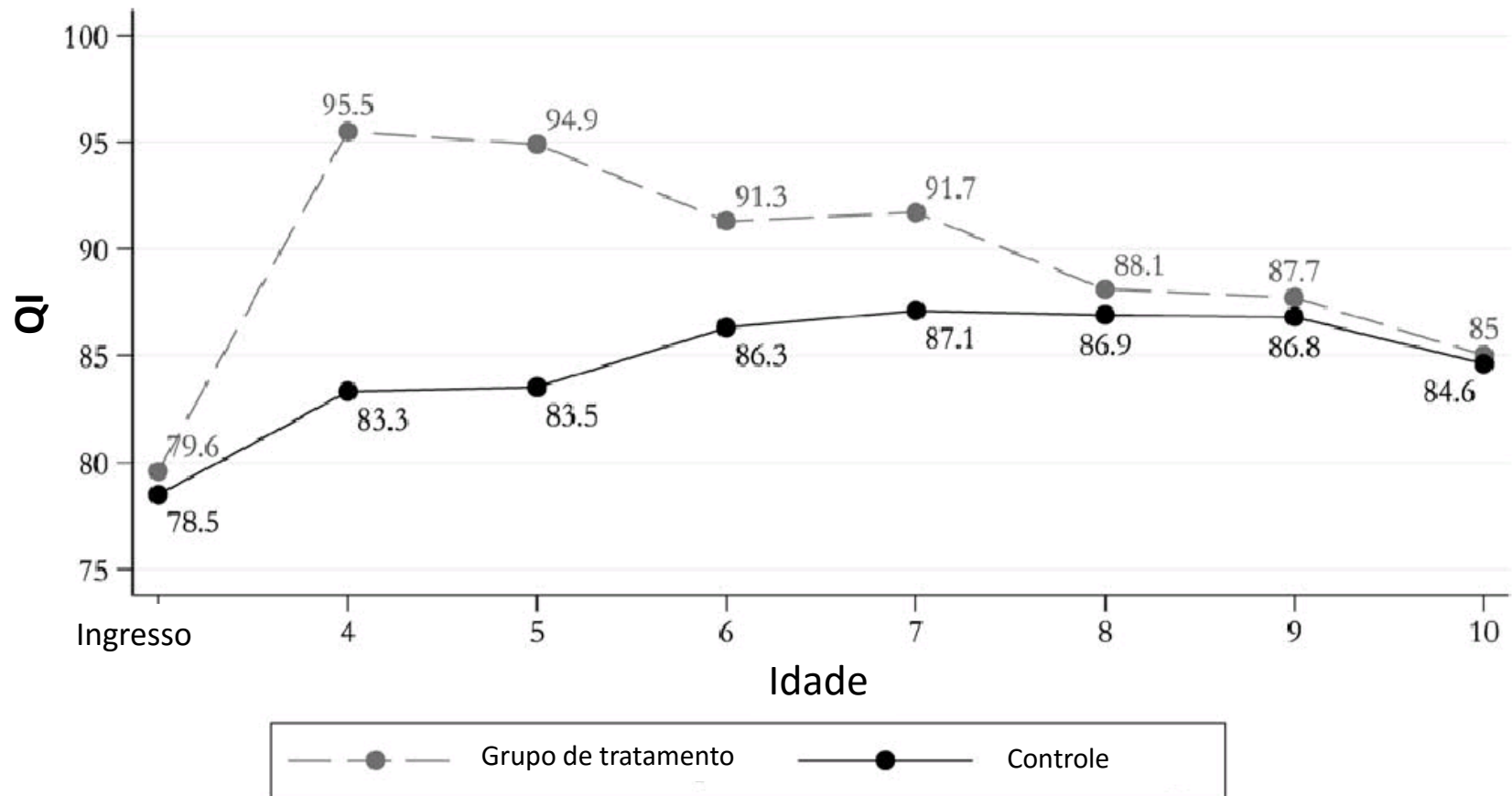
Source: National Longitudinal Survey of Youth 1979. Notes: Distributions are for individuals with no completed college in 2006. Notes: The Rosenberg Self-Esteem Scale is a series of 10 questions to measure self-esteem. Post-School Rosenberg scores are those estimated for individuals at the time that they leave school, or equal their observed Rosenberg score if they were surveyed after they had completed school. The adjustment method is discussed in detail in Section D of the Web Appendix (<http://jenni.uchicago.edu/GEDHandbookChapter/>).

Perry Preschool/ High Scope

- Ypsilanti (MI), 1962 – 1967
- Crianças vulneráveis (negros pobres), 3-4
- Currículo High Scope (Piagetiano), professores especialmente treinados
- Período integral
- Visitas aos pais para aconselhamento e acompanhamento do desenvolvimento

Impactos cognitivos

Perry Preschool (High Scope)



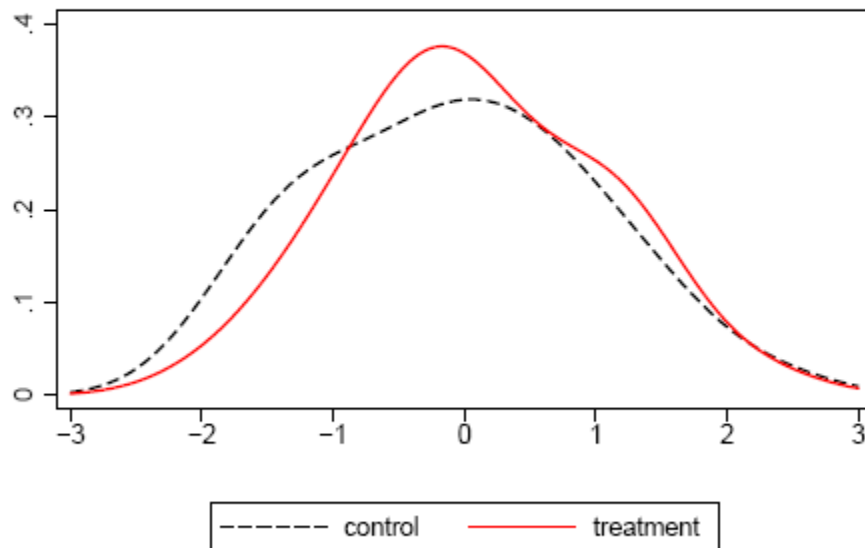
Fonte: Heckman (2008) Schools, skills and synapses. NBER 14064

Impacto cognitivo – Perry School

Perry School/ High Scope

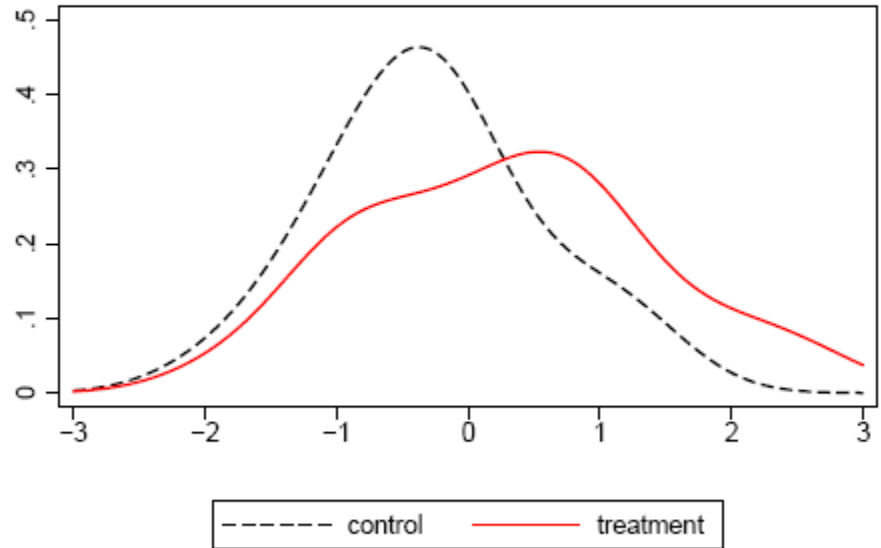
Figure 10: General Intelligence Factor Scores, Kernel Density

$$p_m = .360; p_v = .718$$



(a) Males

$$p_m = .011; p_v = .068$$



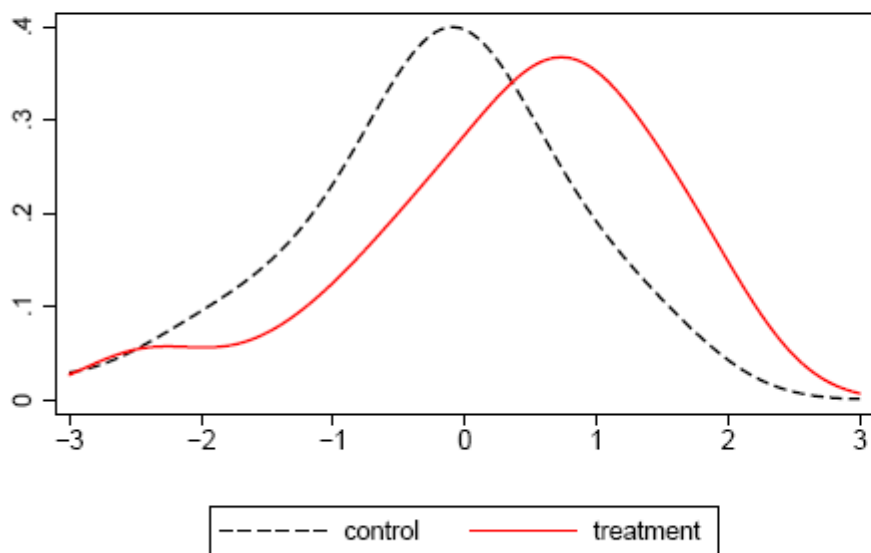
(b) Females

Impacto não-cognitivo – Perry School

Perry School/ High Scope

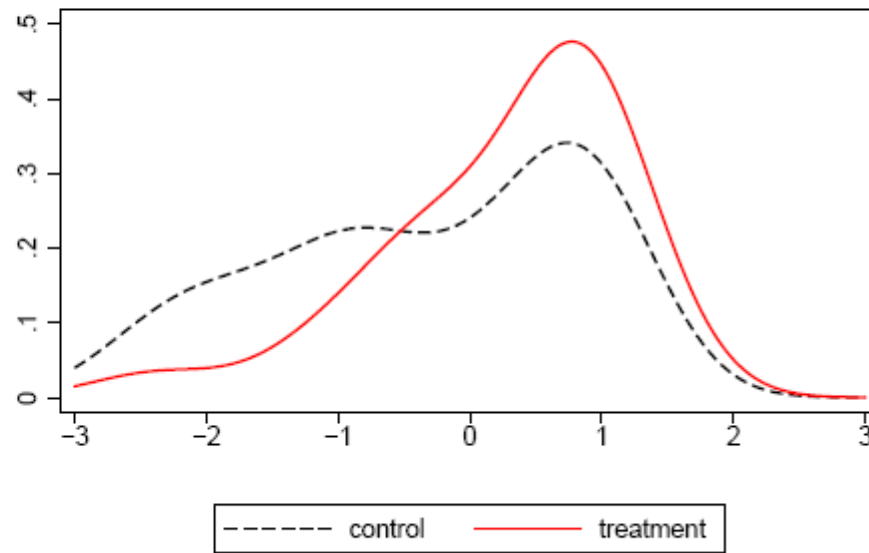
Figure 11: Personal Behavior Factor Scores, Kernel Density

$$p_m = .034; p_v = .864$$



(a) Males

$$p_m = .064; p_v = .176$$



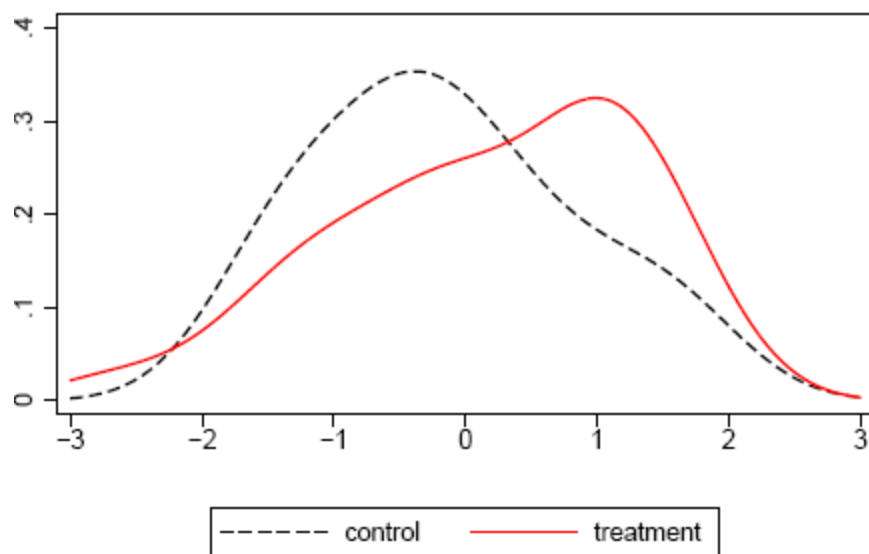
(b) Females

Impacto não-cognitivo – Perry School

Perry School/ High Scope

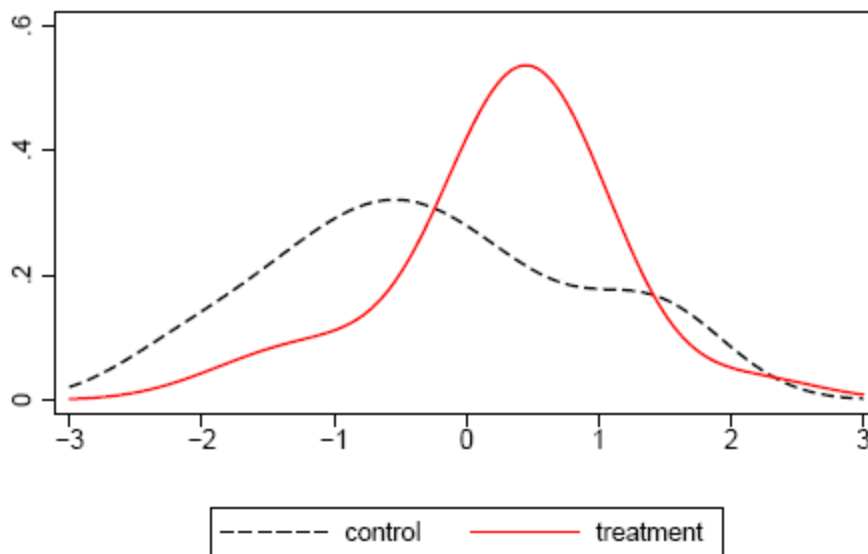
Figure 12: Social Development Factor Scores, Kernel Density

$$p_m = .128; p_v = .366$$



(a) Males

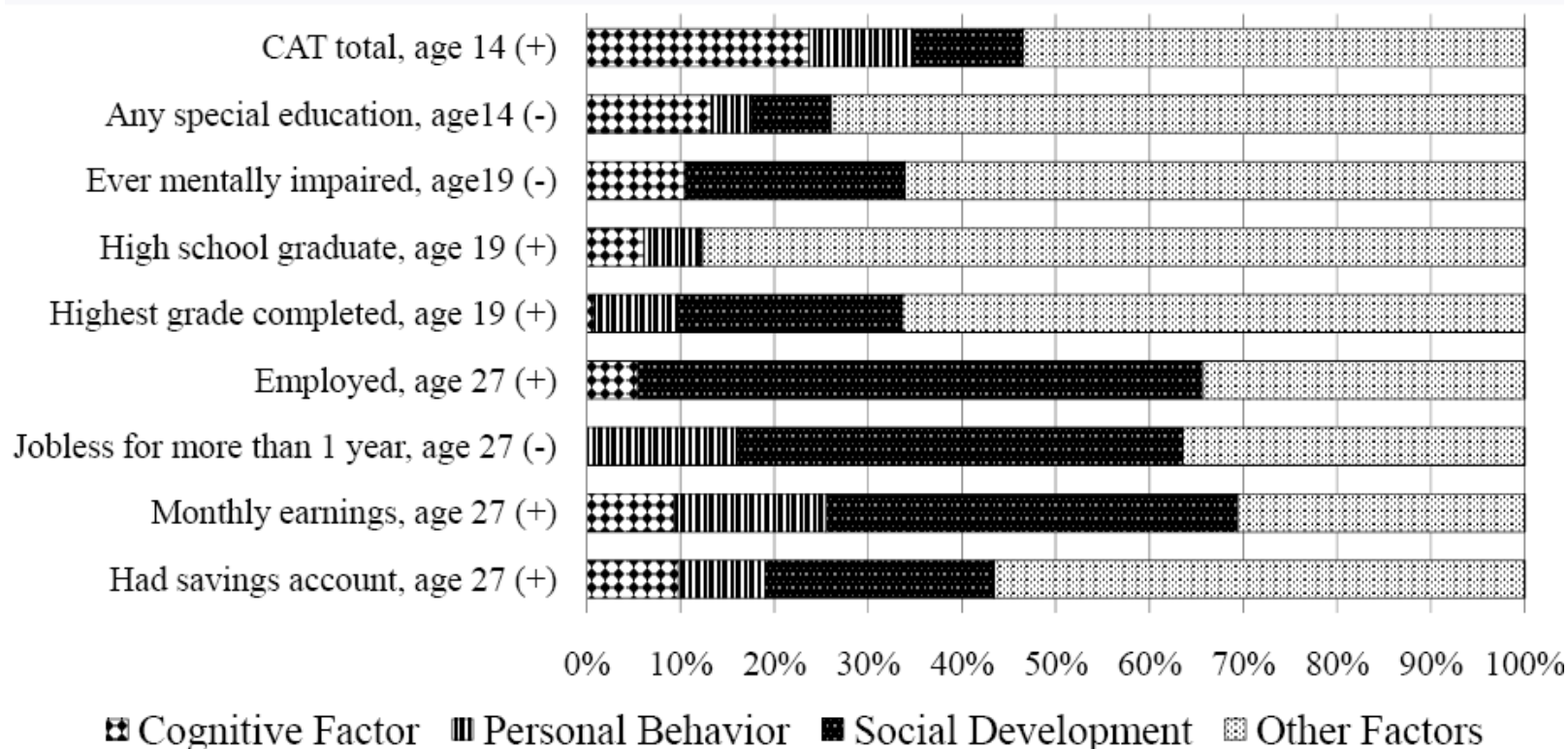
$$p_m = .003; p_v = .068$$



(b) Females

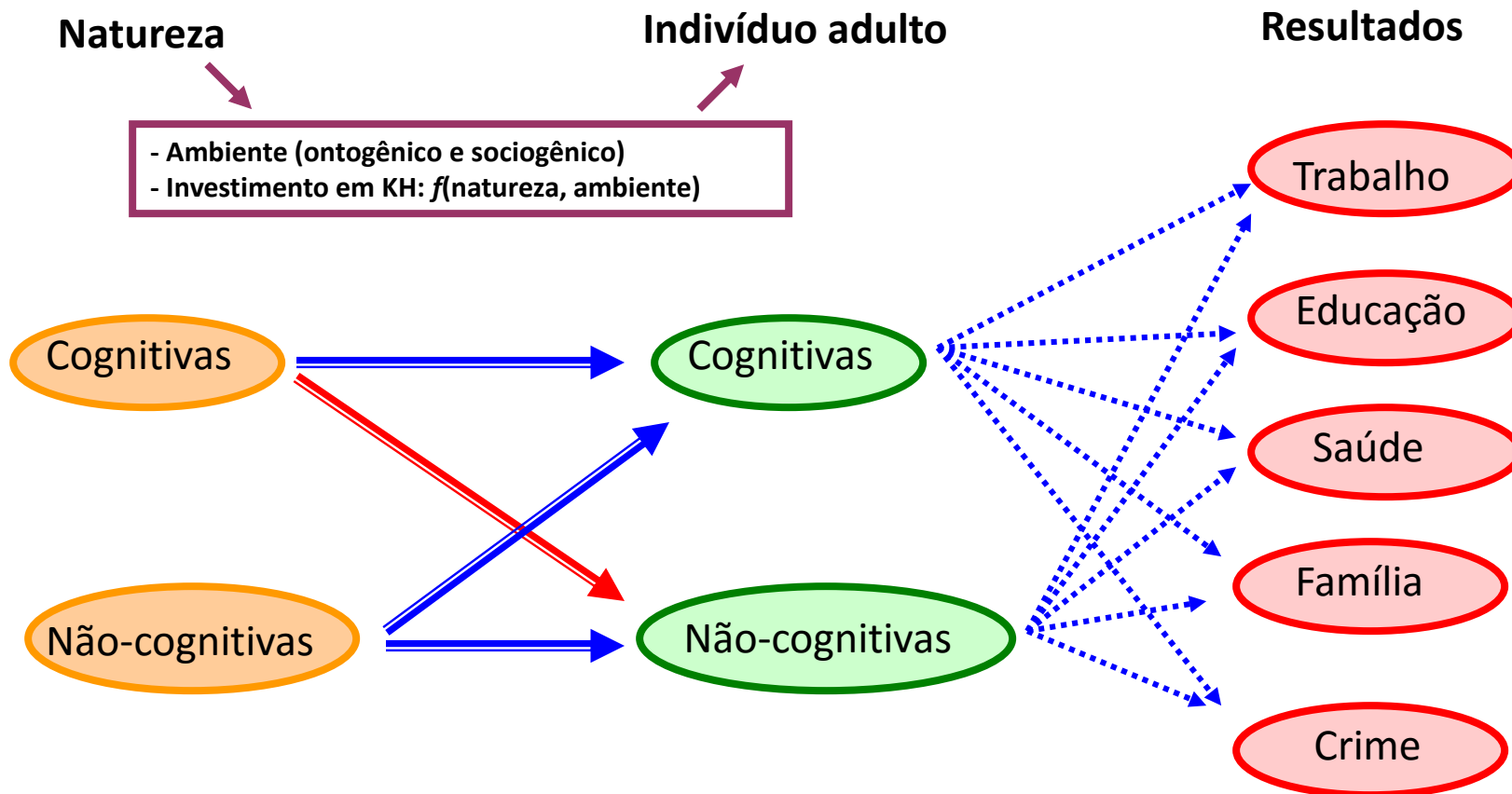
Mediadores dos benefícios do programa Perry School

Figure 1: Decomposition of Treatment Effects, Females, Part I



● For females, both cognitive and socio-emotional channels are involved.

Economia e desenvolvimento humano



Não-cognitivas ao menos tão importantes quanto cognitivas na determinação de resultados

IV. Como se medem características não-cognitivas?

Por que medir?

NCog



Resultados individuais

NCog



Aprendizado (cogs)

NCog



Externalidades

i. Auto-relato

- Auto-percepção sobre suas características. Traços, auto-conceito, crenças, valores, interesses
- Likert, escolha forçada (/ipsativo), Identificação com personagens
- Inventários e escalas
- Vieses de resposta (aquiescência, pontos absorventes, grupo de referência, *overclaiming*, fadiga, incentivos)

ii. Hetero-relato

- Julgamento de terceiros sobre suas características
- Vieses de resposta (horn e halo effects, fadiga)
- Nominations/ role playing
- Ipsativo ou absoluto

Medidas psicológicas

i. Tarefas

- Menor erro de medida
- Interpretação mais difícil
- Cobre apenas alguns comportamentos
- Ex: Marshmellow, Dictator Game, Empatia, Reconhecimento de Olhares

Como medir?

- Poder preditivo: características associadas ao sucesso
- Factibilidade: linguagem, custo, duração
- Maleabilidade na idade escolar
- Capacidade transformadora da escola
- Estabilidade

Modelos com fatores latentes

$$E(\theta) = 0; \quad E(\varepsilon_i) = 0; \quad i = 1, \dots, 5$$

$$Y_1 = \alpha_1\theta + \varepsilon_1, \quad Y_2 = \alpha_2\theta + \varepsilon_2, \quad Y_3 = \alpha_3\theta + \varepsilon_3, \\ Y_4 = \alpha_4\theta + \varepsilon_4, \quad Y_5 = \alpha_5\theta + \varepsilon_5, \quad \varepsilon_i \perp\!\!\!\perp \varepsilon_j$$

$$Cov(Y_1, Y_2) = \alpha_1\alpha_2\sigma_\theta^2$$

$$Cov(Y_1, Y_3) = \alpha_1\alpha_3\sigma_\theta^2$$

$$Cov(Y_2, Y_3) = \alpha_2\alpha_3\sigma_\theta^2$$

Normalize $\alpha_1 = 1$

$$\frac{Cov(Y_2, Y_3)}{Cov(Y_1, Y_2)} = \alpha_3$$

Modelos com fatores latentes: 2 fatores

$$\theta_1 \perp\!\!\!\perp \theta_2$$

$$\varepsilon_i \perp\!\!\!\perp \varepsilon_j \quad \forall i, j$$

$$Y_1 = \alpha_{11}\theta_1 + (0)\theta_2 + \varepsilon_1$$

$$Y_2 = \alpha_{21}\theta_1 + (0)\theta_2 + \varepsilon_2$$

$$Y_3 = \alpha_{31}\theta_1 + \alpha_{32}\theta_2 + \varepsilon_3$$

$$Y_4 = \alpha_{41}\theta_1 + \alpha_{42}\theta_2 + \varepsilon_4$$

$$Y_5 = \alpha_{51}\theta_1 + \alpha_{52}\theta_2 + \varepsilon_5$$

$$Cov(Y_1, Y_2) = \alpha_{21}\sigma_{\theta_1}^2$$

$$Cov(Y_1, Y_3) = \alpha_{31}\sigma_{\theta_1}^2$$

$$Cov(Y_2, Y_3) = \alpha_{21}\alpha_{31}\sigma_{\theta_1}^2$$

Let $\alpha_{11} = 1, \alpha_{32} = 1$.

Modelos com fatores latentes: 2 fatores

Form ratio of $\frac{Cov(Y_2, Y_3)}{Cov(Y_1, Y_2)} = \alpha_{31}$, $\therefore$ we identify $\alpha_{31}, \alpha_{21}, \sigma_{\theta_1}^2$,
as before.

$$Cov(Y_1, Y_4) = \alpha_{41}\sigma_{\theta_1}^2, \quad \therefore \text{we get } \sigma_{\theta_1}^2$$

$$\vdots$$

$$Cov(Y_1, Y_k) = \alpha_{k1}\sigma_{\theta_1}^2$$

$\therefore$ we identify α_{k1} for all k and $\sigma_{\theta_1}^2$.

$$Cov(Y_3, Y_4) - \alpha_{31}\alpha_{41}\sigma_{\theta_1}^2 = \alpha_{42}\sigma_{\theta_2}^2$$

$$Cov(Y_3, Y_5) - \alpha_{31}\alpha_{51}\sigma_{\theta_1}^2 = \alpha_{52}\sigma_{\theta_2}^2$$

$$Cov(Y_4, Y_5) - \alpha_{41}\alpha_{51}\sigma_{\theta_1}^2 = \alpha_{52}\alpha_{42}\sigma_{\theta_2}^2,$$

By same logic,

$$\frac{Cov(Y_4, Y_5) - \alpha_{41}\alpha_{51}\sigma_{\theta_1}^2}{Cov(Y_3, Y_4) - \alpha_{31}\alpha_{41}\sigma_{\theta_1}^2} = \alpha_{52}$$

$\therefore$ get $\sigma_{\theta_2}^2$ and the factor “2” loadings.

Modelos com fatores latentes: 2 fatores

If we have dedicated measurements do not need a normalization on Y .

$$M_1 = \theta_1 + \varepsilon_{1M}$$

$$M_2 = \theta_2 + \varepsilon_{2M}$$

$$\text{Cov}(Y_1, M) = \alpha_{11}\sigma_{\theta_1}^2$$

$$\text{Cov}(Y_2, M) = \alpha_{21}\sigma_{\theta_1}^2$$

$$\text{Cov}(Y_3, M) = \alpha_{31}\sigma_{\theta_1}^2$$

$$\text{Cov}(Y_1, Y_2) = \alpha_{11}\alpha_{12}\sigma_{\theta_1}^2,$$

$$\text{Cov}(Y_1, Y_3) = \alpha_{11}\alpha_{13}\sigma_{\theta_1}^2, \quad \therefore \alpha_{12}\sigma_{\theta_1}^2,$$

$\therefore$ We can get $\alpha_{12}, \sigma_{\theta_1}^2$ and the other factors.

General Case



$$Y_{T \times 1} = M + \Lambda_{T \times K} \theta_{K \times 1} + \varepsilon_{T \times 1}$$

θ are factors, ε uniquenesses

$$E(\varepsilon) = 0$$
$$Var(\varepsilon\varepsilon') = D = \begin{pmatrix} \sigma_{\varepsilon_1}^2 & 0 & \cdots & 0 \\ 0 & \sigma_{\varepsilon_2}^2 & 0 & \vdots \\ \vdots & 0 & \ddots & \vdots \\ 0 & \cdots & 0 & \sigma_{\varepsilon_T}^2 \end{pmatrix}$$
$$E(\theta) = 0$$

$$Var(Y) = \Lambda \Sigma_{\theta} \Lambda' + D \quad \Sigma_{\theta} = E(\theta\theta')$$

Observe that if we multiply Λ by an orthogonal matrix C , ($CC' = I$), we have

$$Var(Y) = \Lambda C [C' \Sigma_{\theta} C] C' \Lambda' + D$$

C is a “rotation”. Cannot separate ΛC from Λ .

Model not identified against orthogonal transformations in the general case.

Generalized Roy Model with Factor Structure

Generalized Roy versions of college choice model:

$$M = \mu(X) + \theta_1 \alpha_{1,M} + \theta_2 \alpha_{2,M} + \varepsilon_M$$

(Measurement: A test score equation)

$$\left. \begin{aligned} Y_1^1 &= \mu_1^1(X) + \theta_1 \alpha_{1,1}^1 + \theta_2 \alpha_{2,1}^1 + \varepsilon_1^1 \\ Y_2^1 &= \mu_2^1(X) + \theta_1 \alpha_{1,2}^1 + \theta_2 \alpha_{2,2}^1 + \varepsilon_2^1 \end{aligned} \right\} \text{College earnings}$$

$$\left. \begin{aligned} Y_1^0 &= \mu_1^0(X) + \theta_1 \alpha_{1,1}^0 + \theta_2 \alpha_{2,1}^0 + \varepsilon_1^0 \\ Y_2^0 &= \mu_2^0(X) + \theta_1 \alpha_{1,2}^0 + \theta_2 \alpha_{2,2}^0 + \varepsilon_2^0 \end{aligned} \right\} \text{High School earnings}$$

Cost

$$C = Z\gamma + \theta_1 \alpha_{1C} + \theta_2 \alpha_{2C} + \varepsilon_C$$

$$\begin{aligned} I &= \mu_1^1(X) + \mu_2^1(X) + \theta_1 (\alpha_{1,1}^1 + \alpha_{1,2}^1) \\ &\quad + \theta_2 (\alpha_{2,1}^1 + \alpha_{2,2}^1) + \varepsilon_1^1 + \varepsilon_2^1 \\ &\quad - \left[\mu_1^0(X) + \mu_2^0(X) + \theta_1 (\alpha_{1,1}^0 + \alpha_{1,2}^0) \right. \\ &\quad \quad \left. + \theta_2 (\alpha_{2,1}^0 + \alpha_{2,2}^0) + \varepsilon_1^0 + \varepsilon_2^0 \right] \\ &\quad - Z\gamma - \theta_1 \alpha_{1C} - \theta_2 \alpha_{2C} - \varepsilon_C \end{aligned}$$

$$I = \varphi(X, Z) + \alpha_{I,1} \theta_1 + \alpha_{I,2} \theta_2 + \varepsilon_I.$$

Complexidade do processo de resposta por auto relato

- Dada a complexidade de dessas dimensões pode-se questionar até que ponto é possível se avaliar essas competências em crianças ? Quão objetivas são as respostas dadas a questionários de auto percepção ? Até que ponto os alunos interpretam da mesma as escalas usadas e se pode representar numericamente essa percepção? Quão validos e confiáveis são as informações extraídas desses instrumentos?

Avalie na escala abaixo o quanto você consegue:

1 Nada		2 Pouco		3 Moderadamente		4 Muito		5 Totalmente				
Quanto você consegue								1	2	3	4	5
87.	Ser legal com os outros.							1	2	3	4	5
88.	Colocar o esforço e tempo necessário nas suas tarefas para obter bons resultados.							1	2	3	4	5
89.	Fazer coisas engraçadas para os amigos darem risadas.							1	2	3	4	5
90.	Manter-se calmo, sem estourar, quando provocado(a).							1	2	3	4	5
91.	Criar coisas artísticas, como um poema.							1	2	3	4	5

Vieses de resposta

- Aquiescência: tendência a concordar
- Pontos absorventes
- Distração e fadiga
- Grupos de referência
- *Overclaiming*

Complexidade do processo de resposta em instrumentos de auto percepção

- Um sistema de avaliação deve reconhecer a complexidade do processo resposta e deve ser objeto de aprimoramento constante por meio de estudos de validade.
- Devem métodos com o objetivo de aprender como o aluno responde, checar a confiabilidade das respostas e usar tais informações para minimizar os erros de medida
 - Questões de controle ao longo do questionário
 - *Esse é um item de controle. Por favor marque o número 2 (Pouco)*
 - Tempo de resposta por item e posição do item (em aplicações computadorizadas)
 - Análise da consistência e aquiescência das respostas (tendência a concordar independentemente do conteúdo)

Cuido das minhas coisas

VS

Largo minhas coisas em qualquer lugar

- Uso de vinhetas âncora antes que ele escolha as alternativas de respostas sobre si mesmo que buscam avaliar como o aluno interpreta a escala do instrumento e ao mesmo tempo fornecendo parâmetros de referência para quem responde o instrumento

Parte 1.

Os itens a seguir descrevem o jeito de ser e o comportamento de algumas pessoas. Por favor, escolha na escala de 1 a 5 o número que melhor indica sua opinião sobre elas.

Itens	1 Nada	2 Pouco	3 Moderadamente	4 Muito	5 Totalmente	1	2	3	4	5
Aline costuma deixar suas coisas todas bagunçadas, odeia limpar a casa deixa as lições de casa sem completar.										
34. Quanto você acha que Aline é organizada?						1	2	3	4	5
Manuela tem noção de organização, mas às vezes deixa seu quarto bagunçado. Tende a completar as lições em cima da hora										
35. Quanto você acha que Manuela é organizada?						1	2	3	4	5
Juliana é bastante cuidadosa e dedicada. Gosta de limpar a casa, é caprichosa nas lições e sempre termina antes do prazo.										
36. Quanto você acha que Juliana é organizada?						1	2	3	4	5
37. Quanto <u>você</u> se acha organizado?						1	2	3	4	5

- Comparabilidade
 - Vieses de resposta (estilo e grupo de referência)
 - Efeitos de contexto (incentivos e estabilidade)
- Sintetização
 - Nem sempre é cumulativo
 - Nem sempre é monotônico

- Estimação
 - Erro de medida
 - Valor adicionado
 - Decisões ($E[O(X') | X]$) vs resultados ($O(X)$)
- Teoria de mudança
 - Simultaneidade dificulta identificação
 - Impactos nem sempre contemporâneos

V. SENNA: A experiência Brasileira

- A literatura especializada enfatiza um número grande de habilidades socioemocionais sugerindo uma aparente multiplicidade de aspectos independentes
- Mas um olhar mais aprofundado revela que essas habilidades ancoram-se a um conjunto menor de temas nucleares comuns
- Um sistema de avaliação deve avaliar essas habilidades socioemocionais abrangendo todos esses temas nucleares conectando-o com a literatura científica sobre funcionamento socio emocional

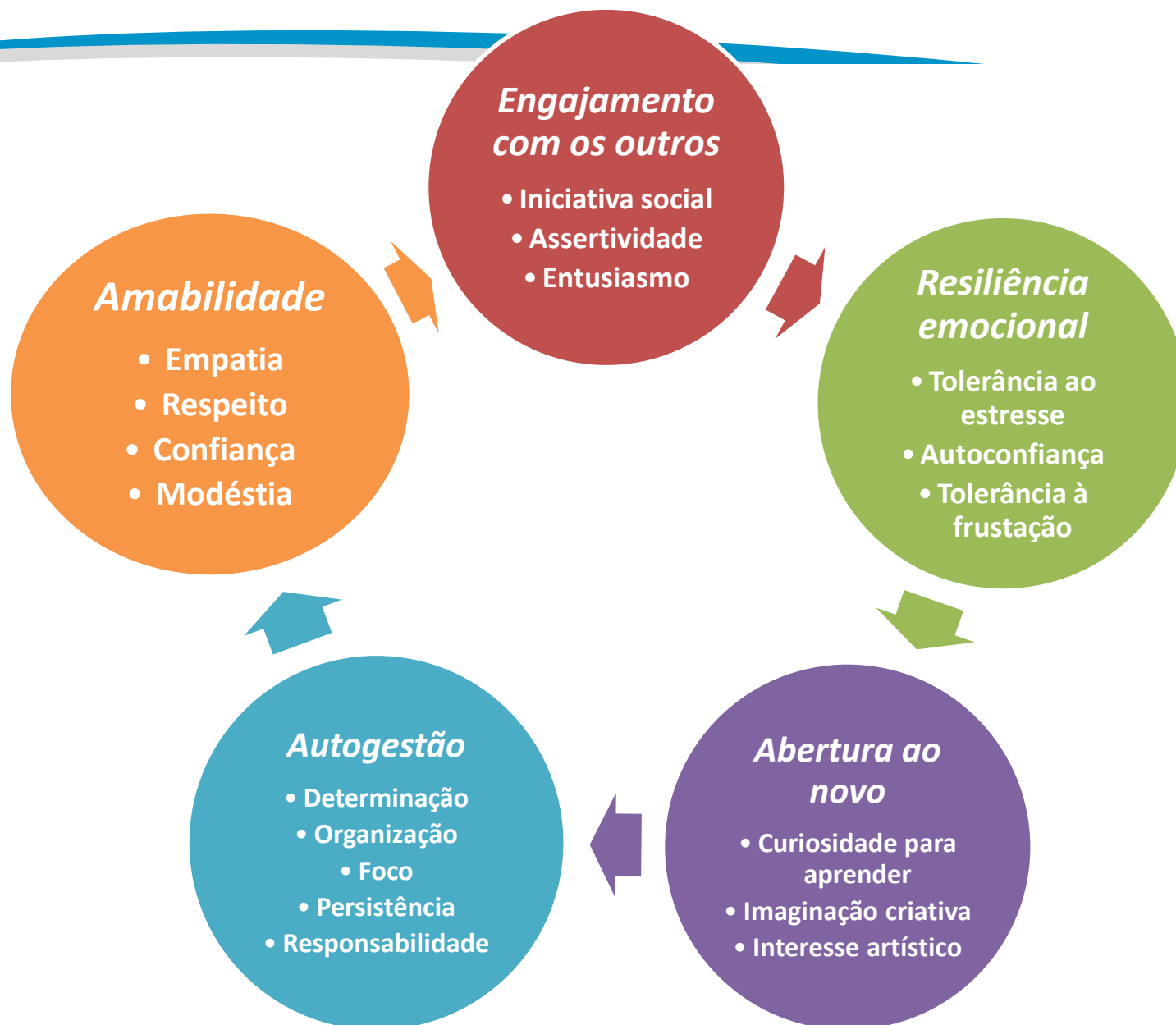
Relacionamento Interpessoal: Energia Engajamento/ Conexão com o mundo

Relacionamento Interpessoal: Colaboração

Regulação Emocional

Autogestão executiva

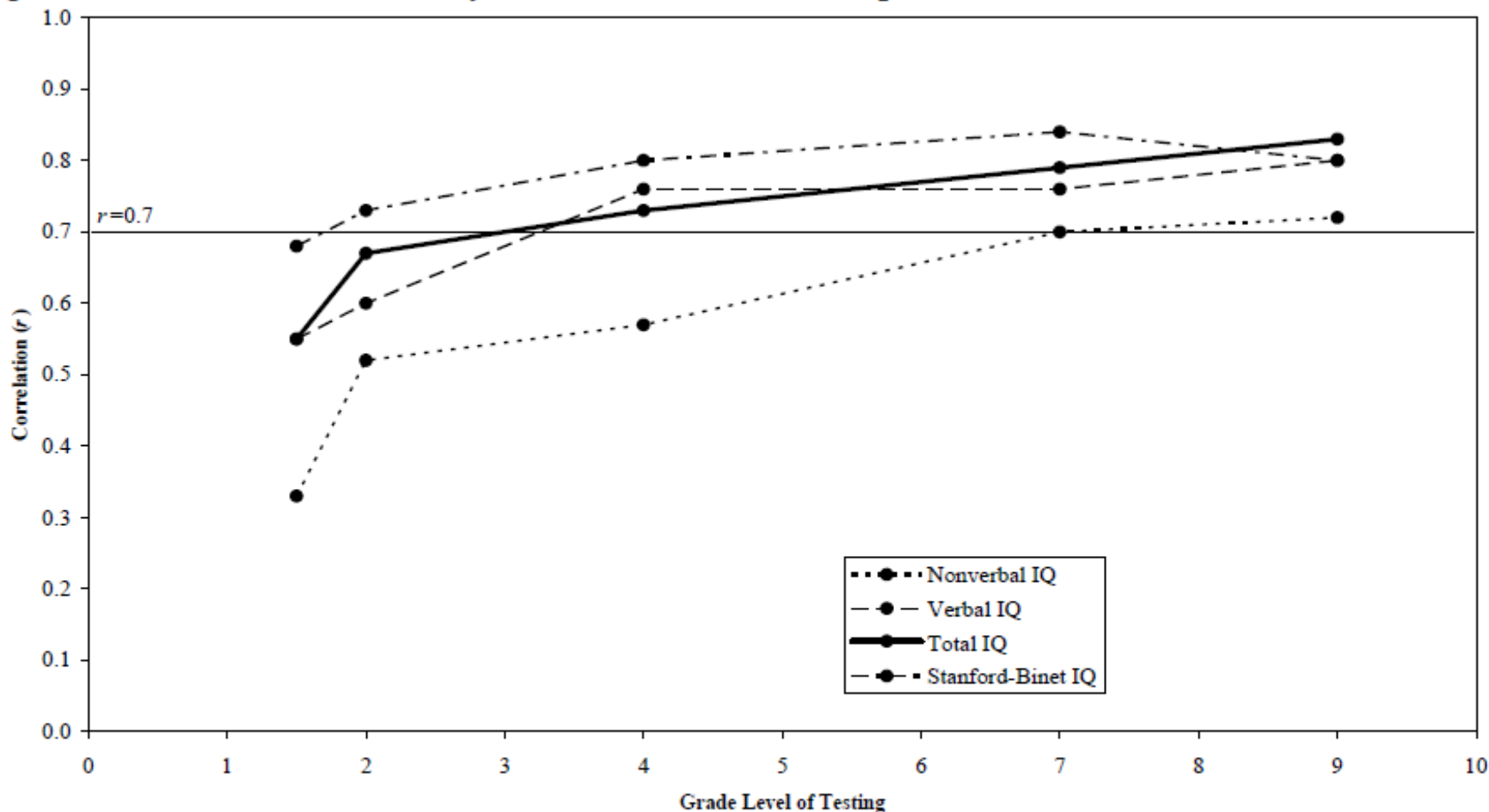
Criatividade e Transformação



Teste-Subescala	F1	F2	F3	F4	F5
Autoeficácia: Acadêmico	0.83				
Garra	0.80				
BFI: Conscienciosidade	0.76				
BFC: Conscienciosidade	0.63				0.21
BFC: Abertura/intelecto	0.53	0.39			
SDQ: Hiperatividade	-0.47	0.24	0.27		
BFC: Extroversão		0.74			
BFI: Extroversão		0.72			-0.35
Autoeficácia: Social SC		0.65	-0.20		
BFI: Abertura/intelecto		0.42			
BFI: Estabilidade emocional/Neuroticismo			-0.93		
BFC: Neuroticismo		0.22	0.68		
Auto eficácia: Emocional		0.40	-0.44		
SDQ: Problemas de conduta		0.23	0.33	-0.33	
BFI: Amabilidade				0.80	
BFC: Amabilidade				0.71	
SDQ: Comportamento pró-social				0.70	
Lócus de controle de Norwick-Strickland					0.53
SDQ: Problemas de relacionamento				-0.26	0.52
Rosemberg/Core Avaliação Nuclear: Auto Estima	0.27	0.21			-0.50
SDQ: Sintomas emocionais			0.35		0.43
Soma dos quadrados das cargas	3.31	2.36	2.23	2.21	1.44
Proporção da variância explicada	0.16	0.11	0.11	0.11	0.07
Proporção da variância explicada acumulada	0.16	0.27	0.38	0.48	0.55
Correlações entre os fatores					
F1					
F2	0.18				
F3	-0.24	0.09			
F4	0.48	0.20	0.22		

Habilidades cognitivas estabilizam cedo

Figure 26. Rank-Order Stability of IQ Across the Life Span



Notes: The points represent ten-year, test-retest correlations over ten-year intervals. Grade level, not age, is on the x-axis.

Age Differences in Personality Traits From 10 to 65: Big Five Domains and Facets in a Large Cross-Sectional Sample

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Colby College

Oliver P. John
University of California, Berkeley

Samuel D. Gosling
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Jeff Potter
Cambridge, Massachusetts

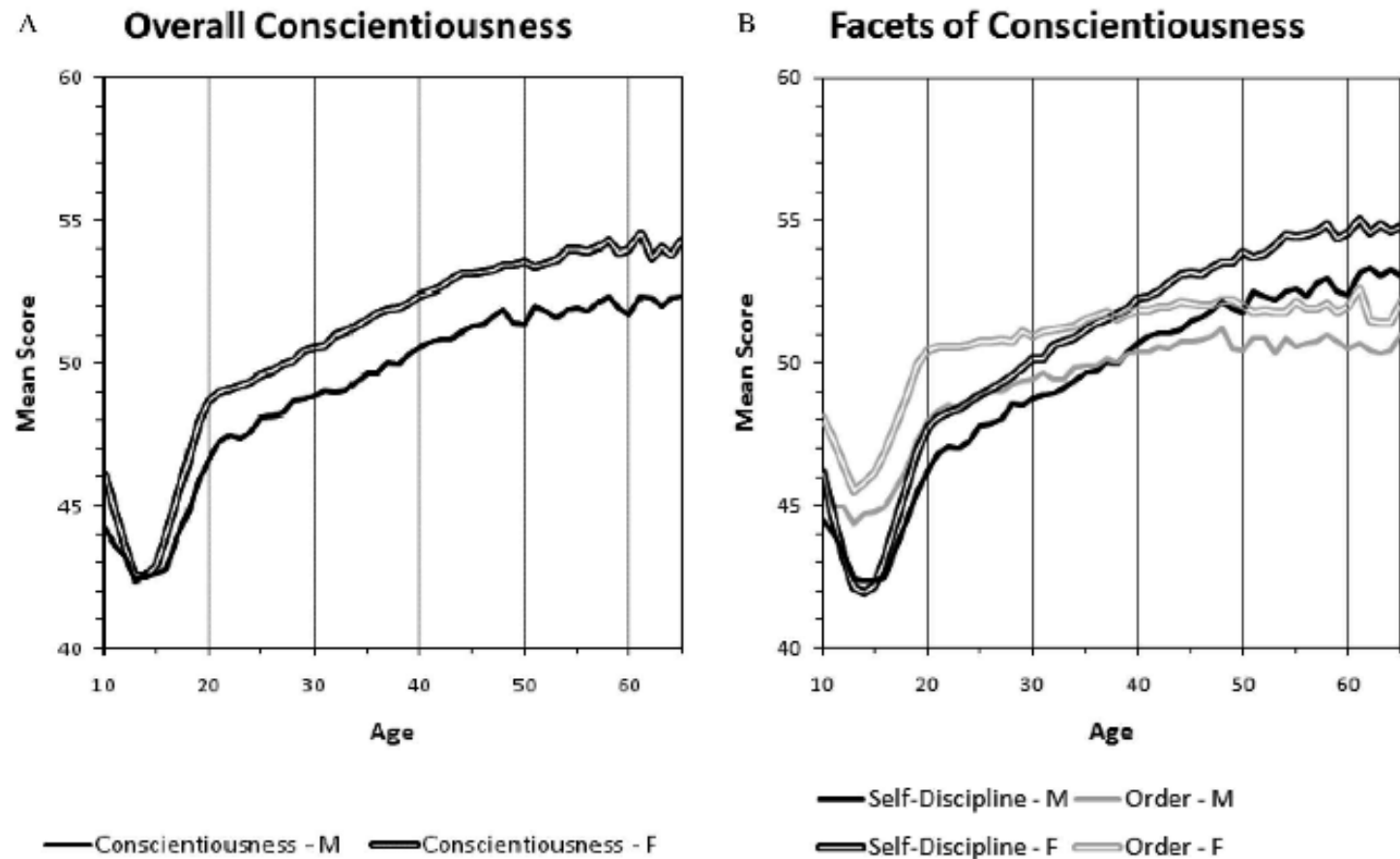


Figure 1. Means for overall Conscientiousness (A) and its facets (B), by age and gender. Single lines show the means for males, and double lines show the means for females. In Panel B, black lines show the means for Self-Discipline, and or gray lines show the means for Order.

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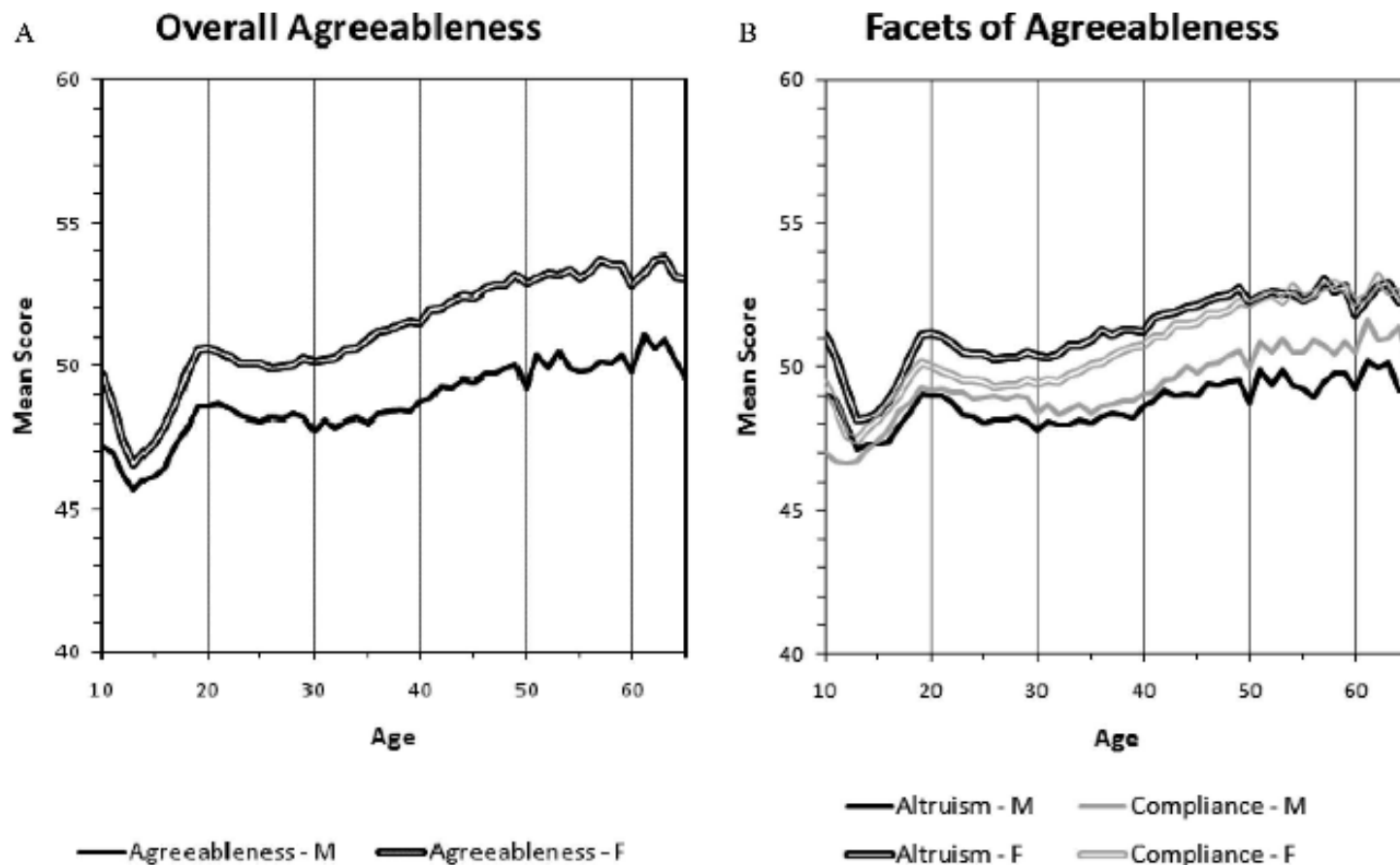


Figure 2. Means for overall Agreeableness (A) and its facets (B), by age and gender. Single lines show the means for males, and double lines show the means for females. In Panel B, black lines show the means for Altruism, and gray lines show the means for Compliance.

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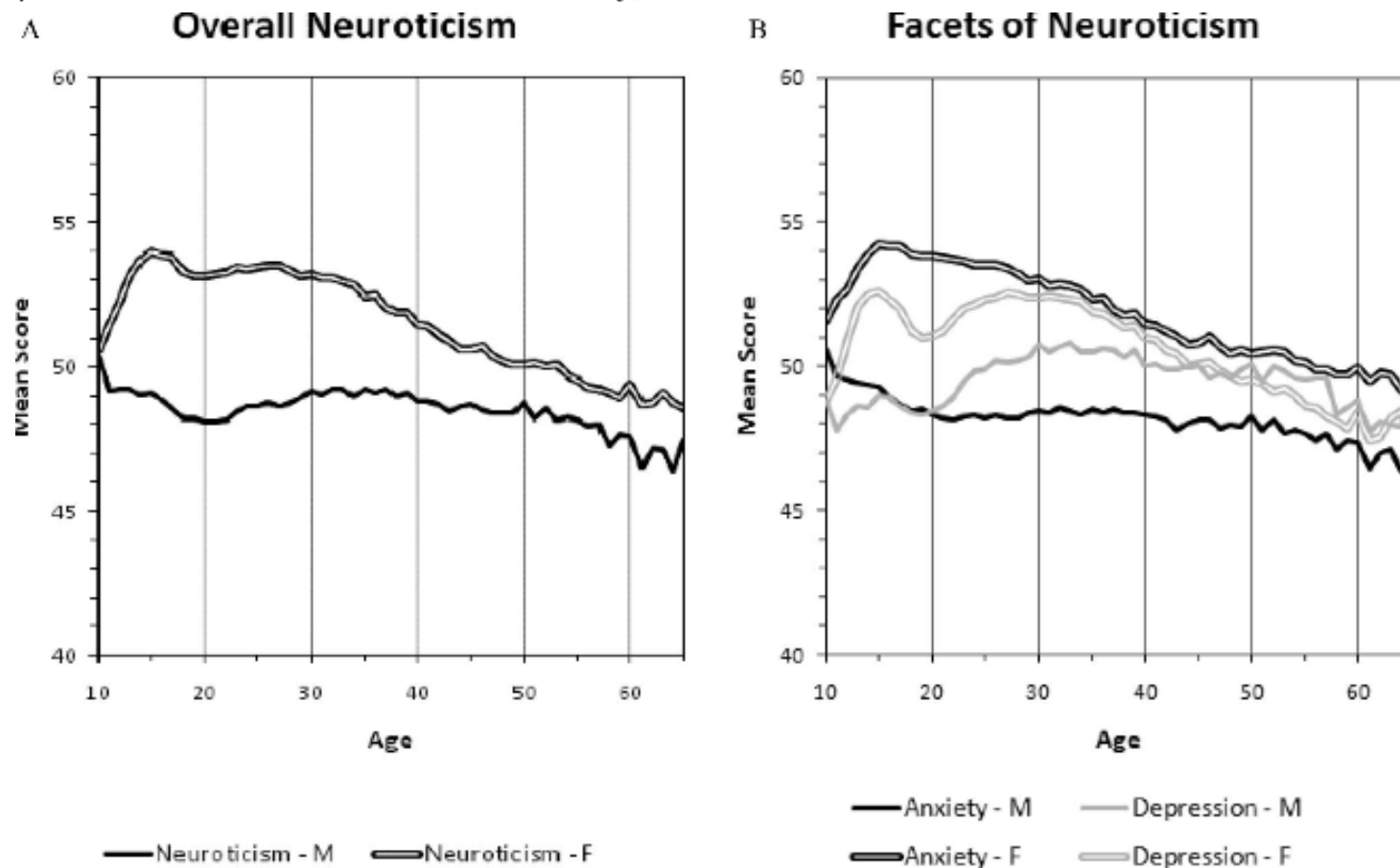


Figure 3. Means for overall Neuroticism (A) and its facets (B), by age and gender. Single lines show the means for males, and double lines show the means for females. In Panel B, black lines show the means for Anxiety, and gray lines show the means for Depression.

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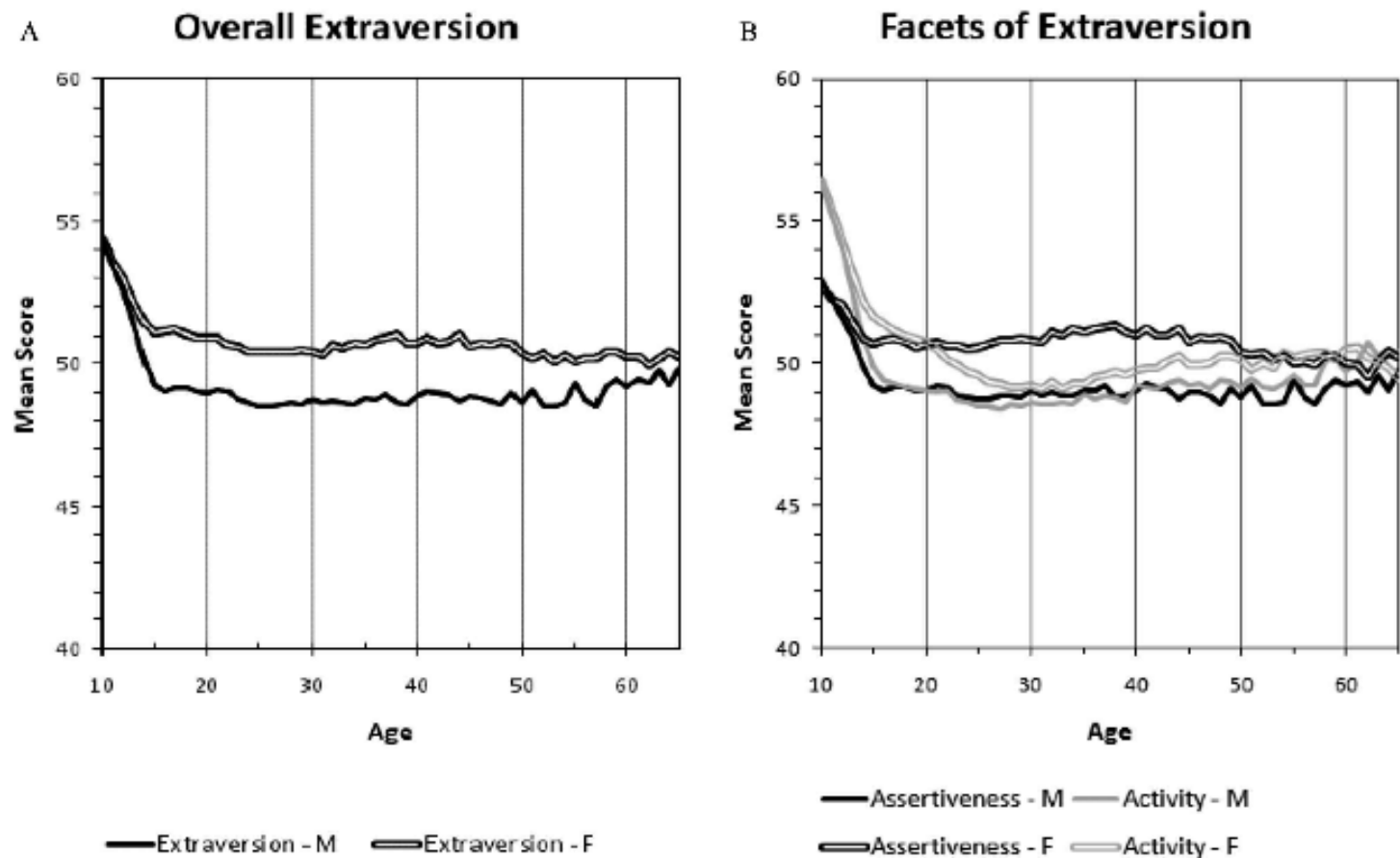


Figure 4. Means for overall Extraversion (A) and its facets (B), by age and gender. Single lines show the means for males, and double lines show the means for females. In Panel B, black lines show the means for Assertiveness, and gray lines show the means for Activity.

Age Differences in Personality Traits From 10 to 65: Big Five Domains and Facets in a Large Cross-Sectional Sample

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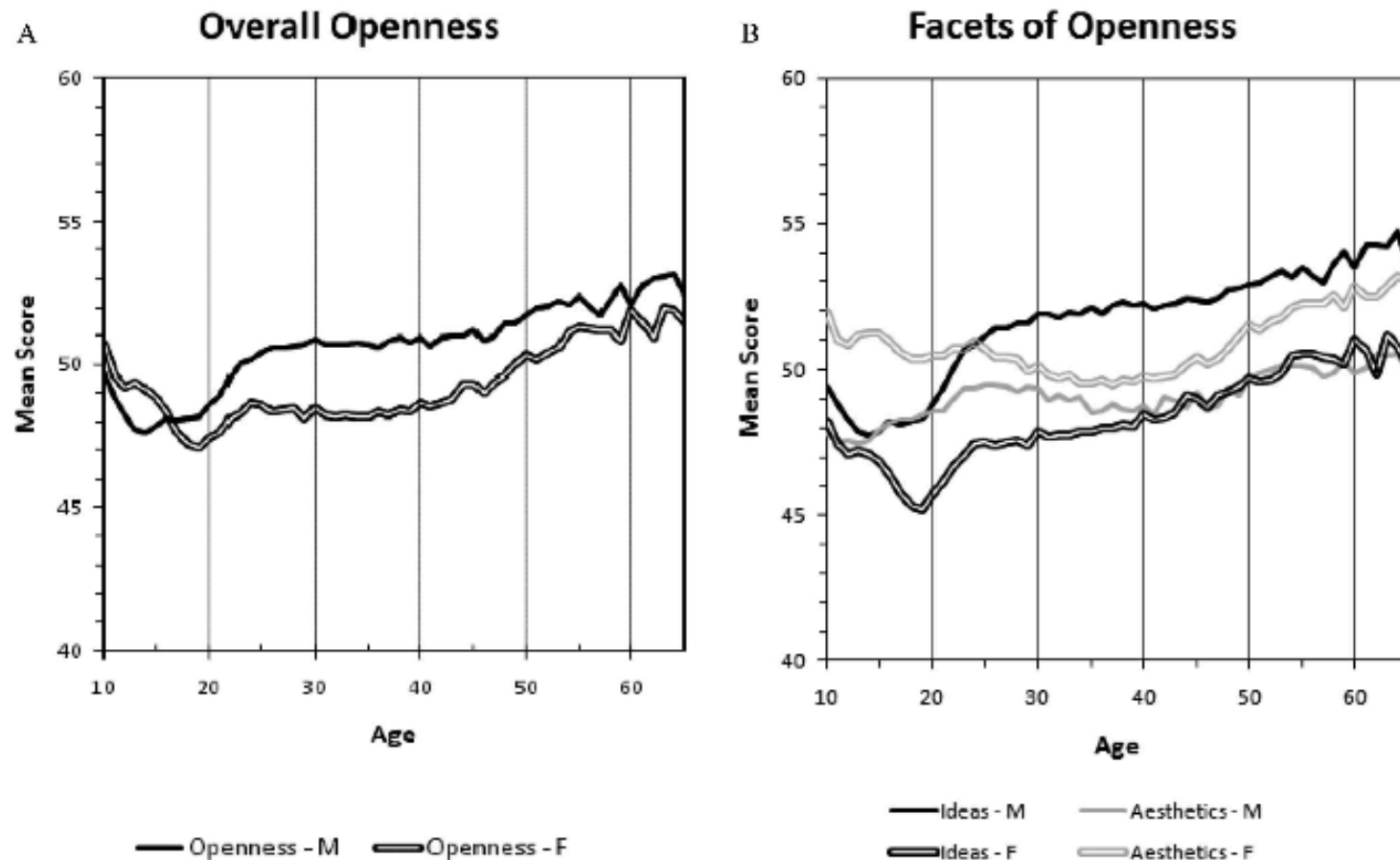
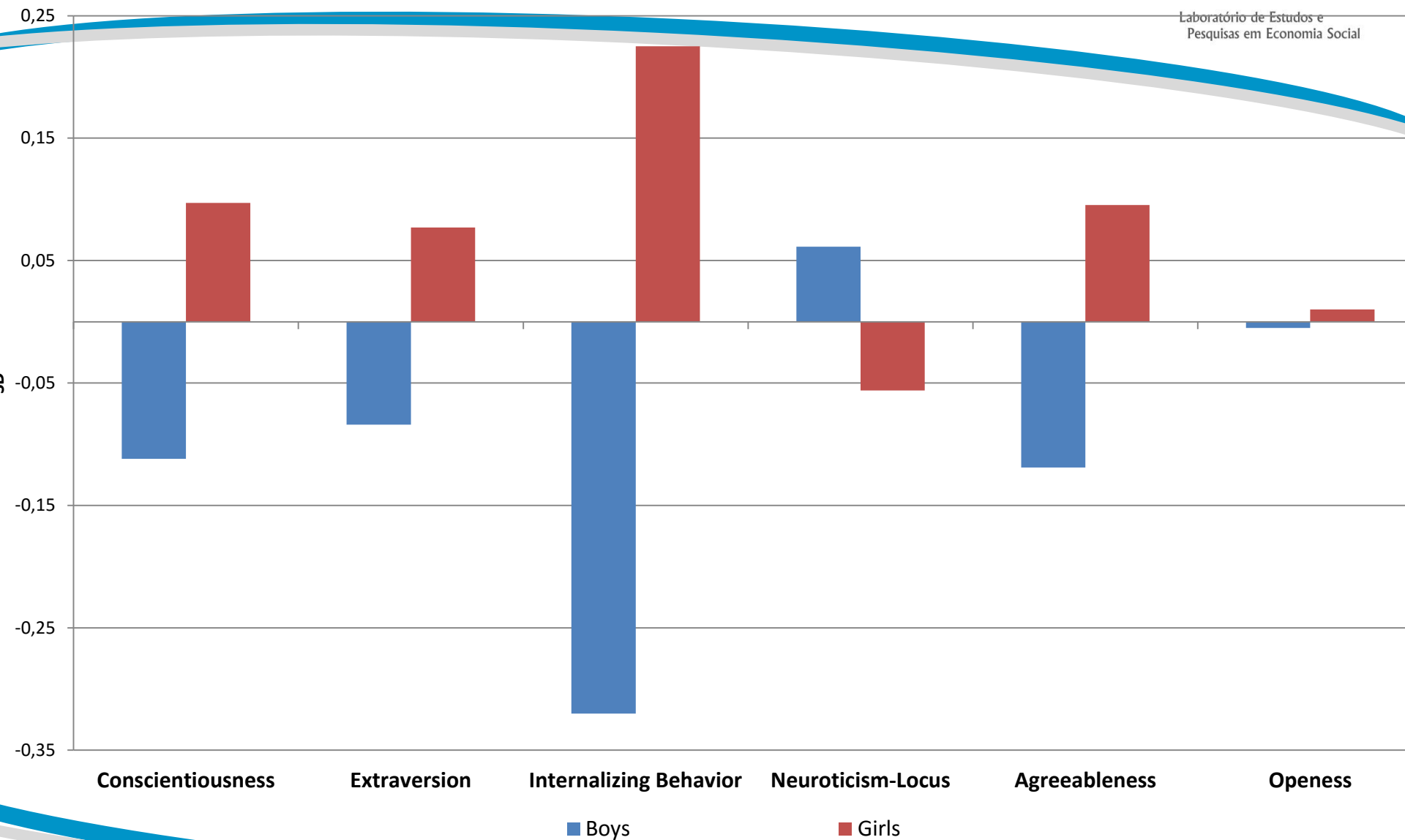
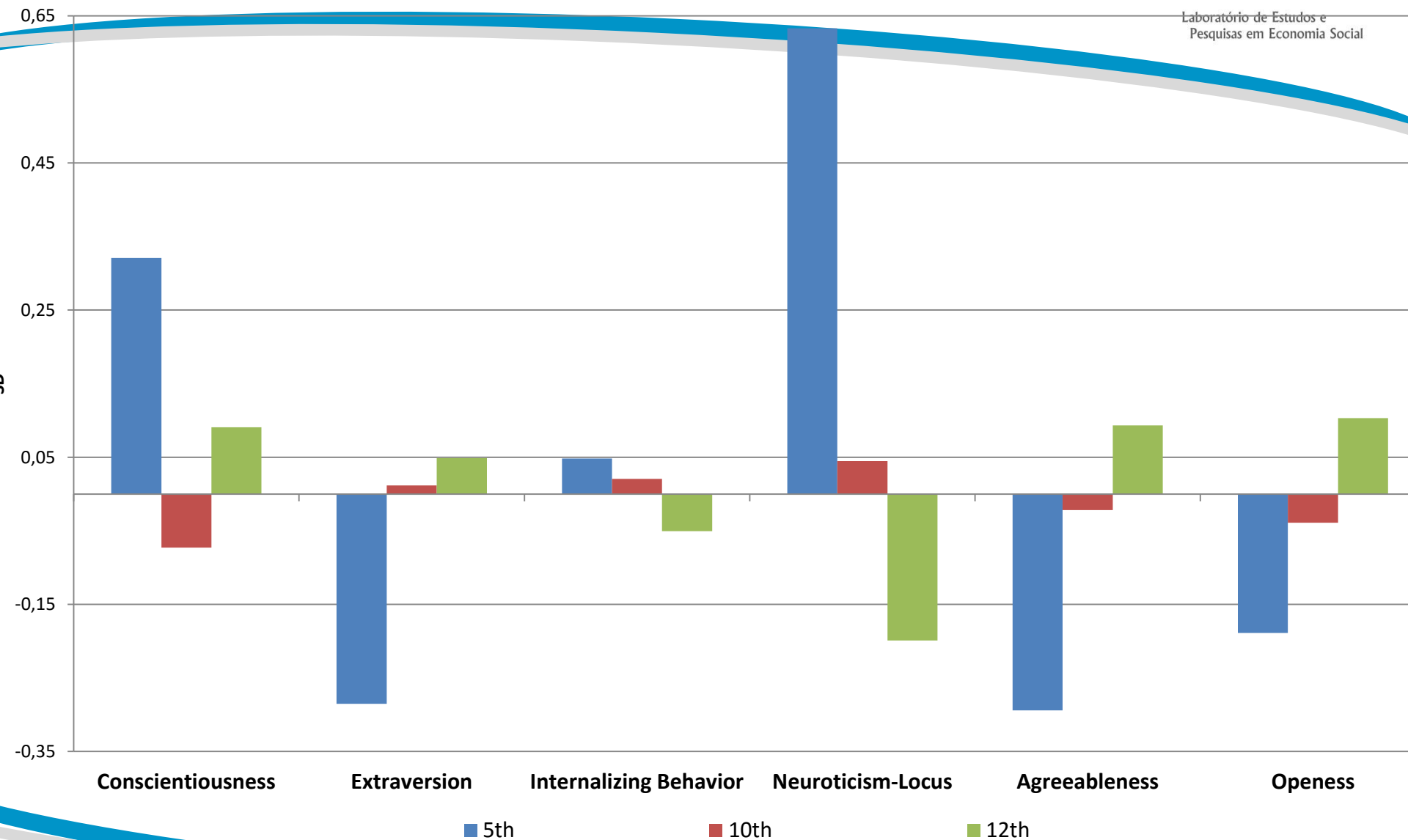


Figure 5. Means for overall Openness (A) and its facets (B), by age and gender. Single lines show the means for males, and double lines show the means for females. In Panel B, black lines show the means for Openness to Ideas, and gray lines show the means for Openness to Aesthetics.

Gender differences in Non-Cognitive Skills

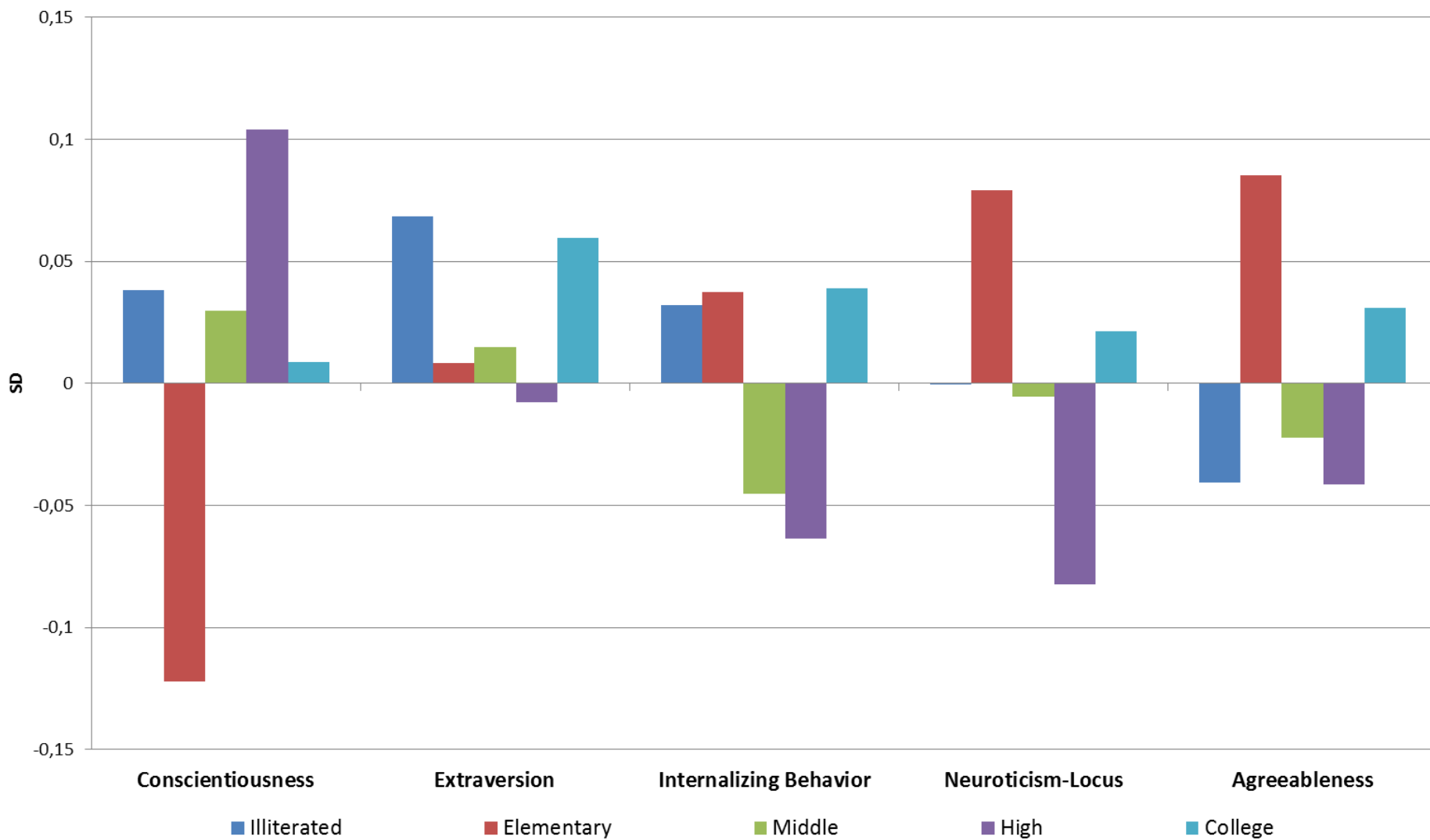


Differences in Non-Cognitive Skills by Grade



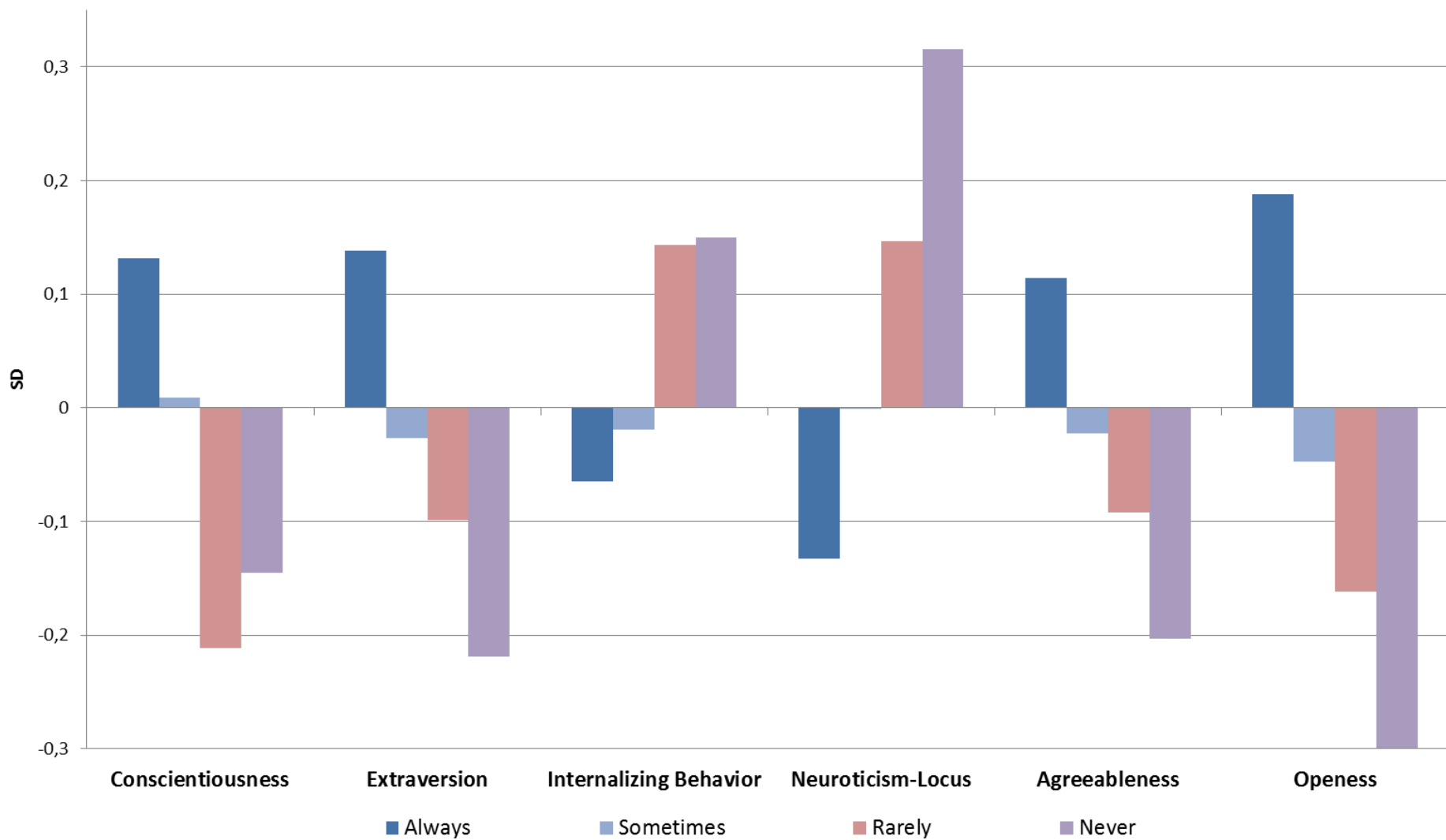


Differences in Non-Cognitive Skills by Mother Education



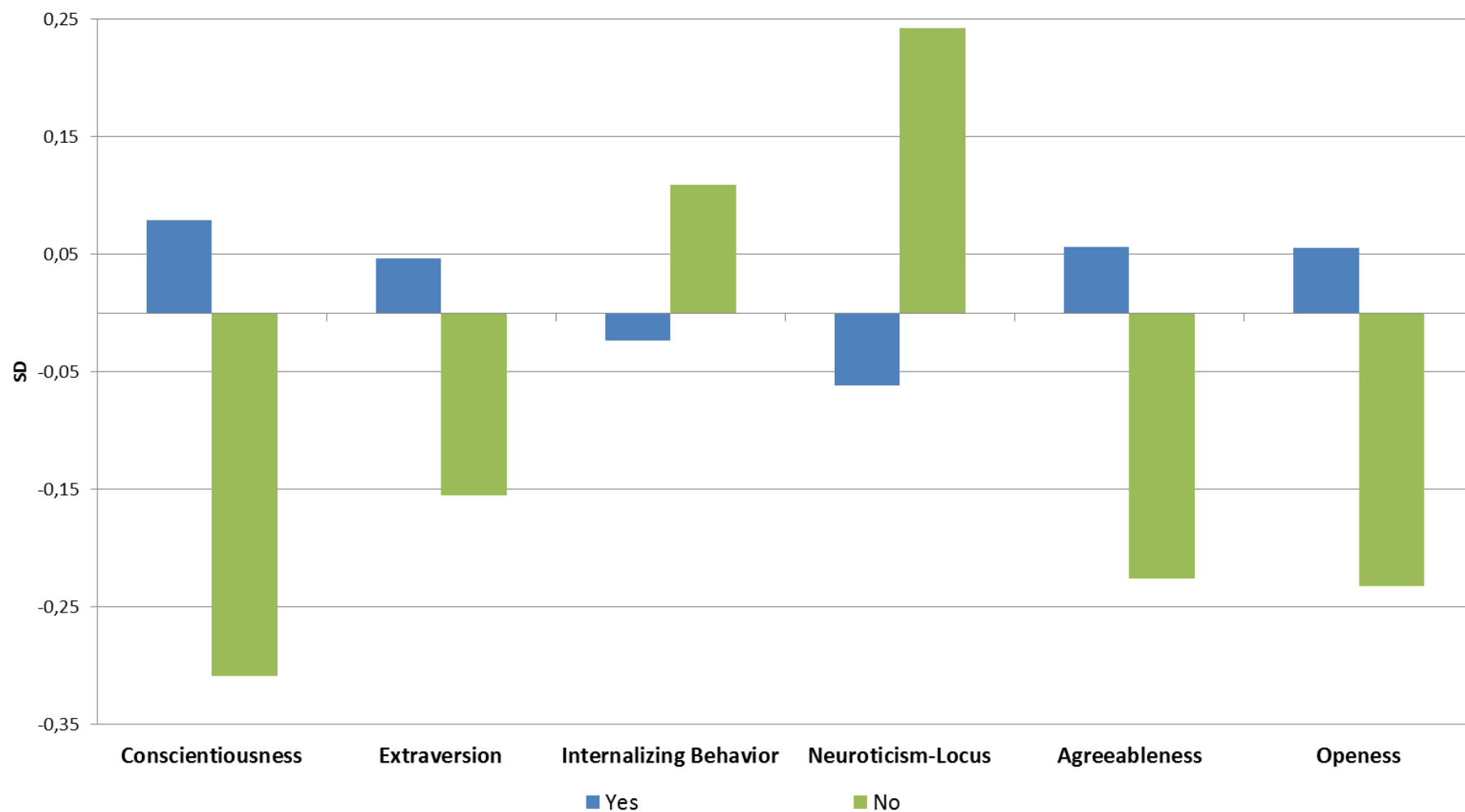


Differences in Non-Cognitive Skills by Parental Reading Habits



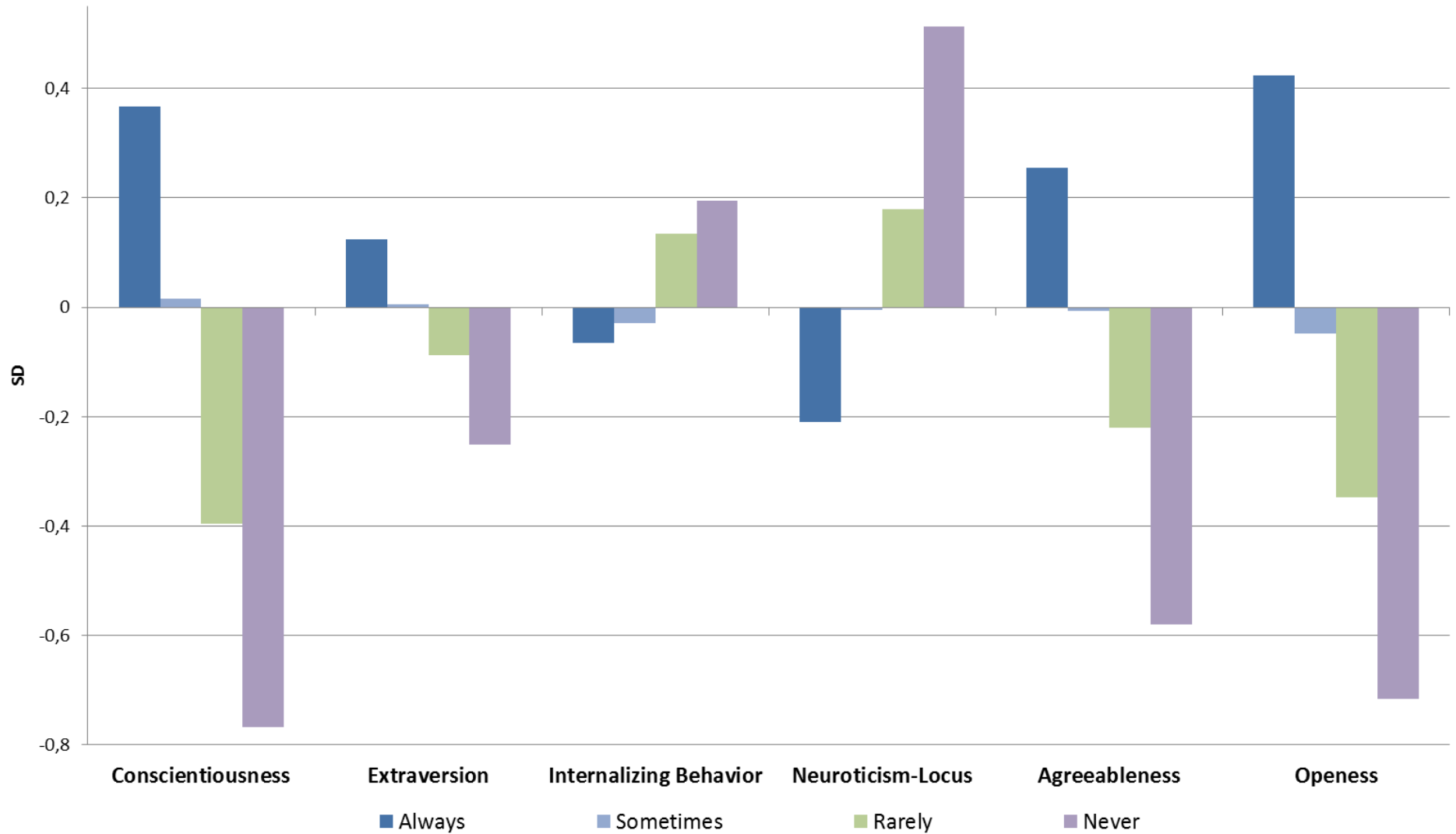


Differences in Non-Cognitive Skills According to Whether Parents Incentivize Children to Study



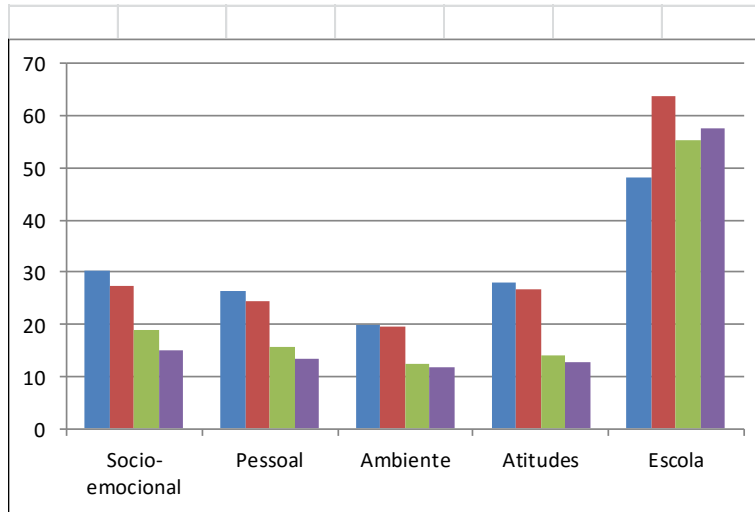


Differences in Non-Cognitive Skills by Reading Habits

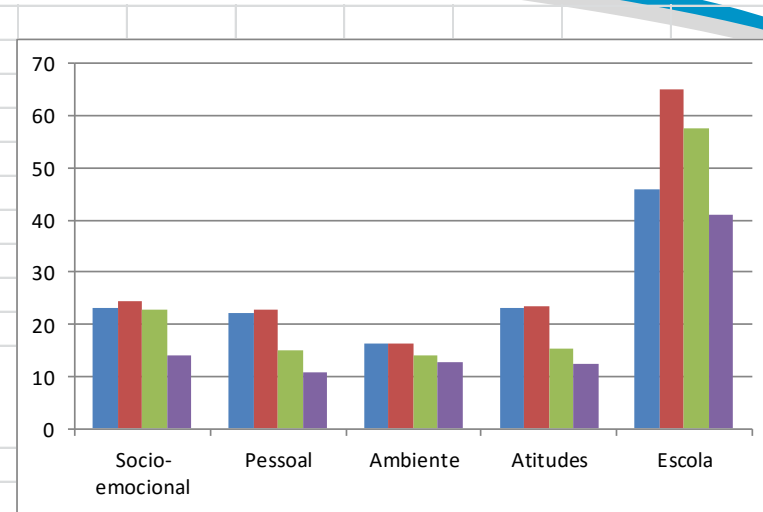


Quanto das diferenças de nota está associado a diferenças em características e oportunidades dos indivíduos

Ensino médio

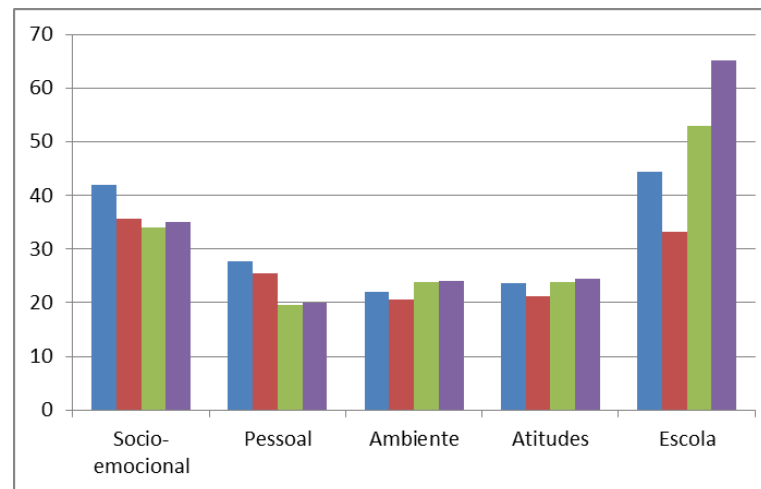


1º ano



3º ano

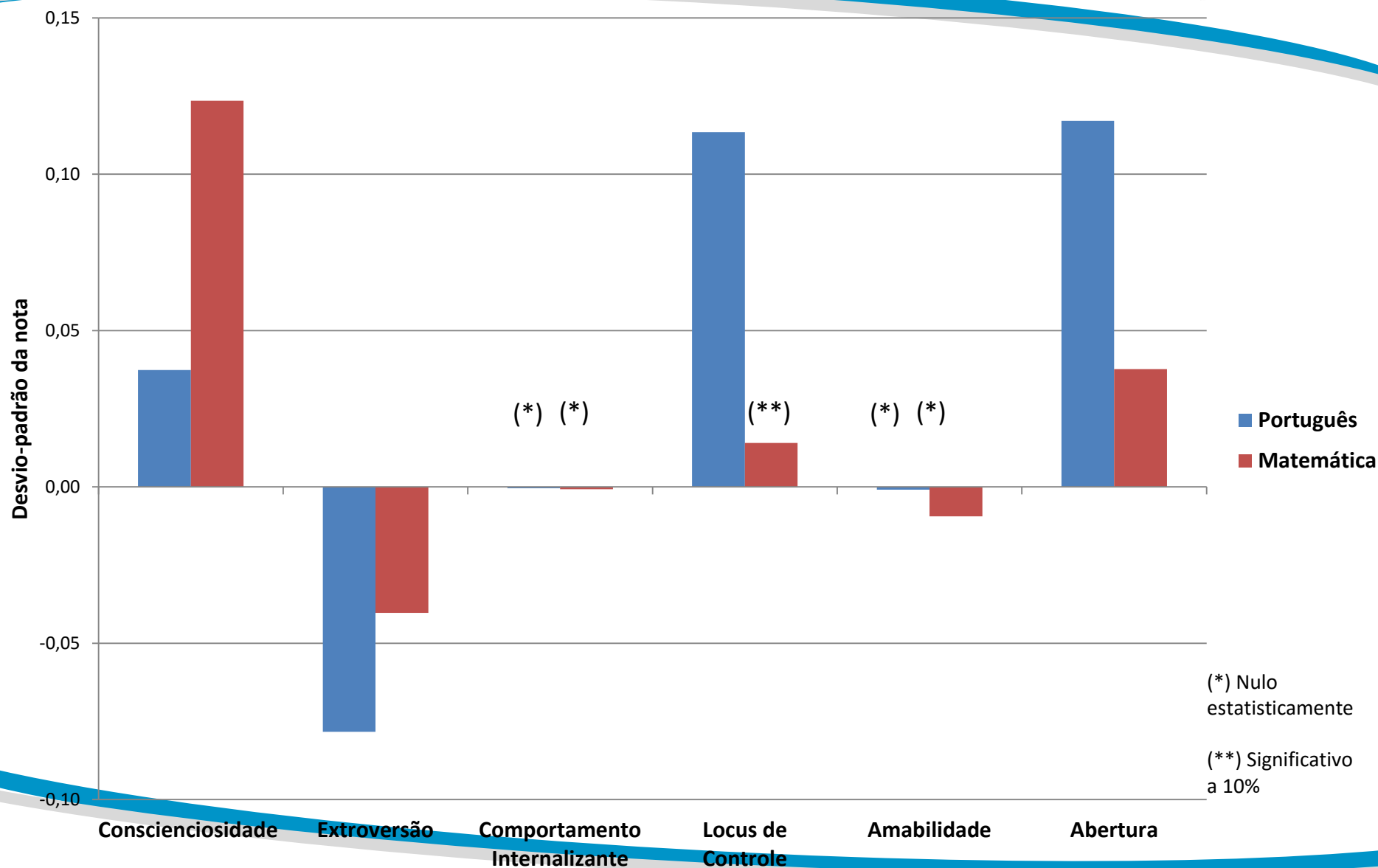
Ensino fundamental



5º ano

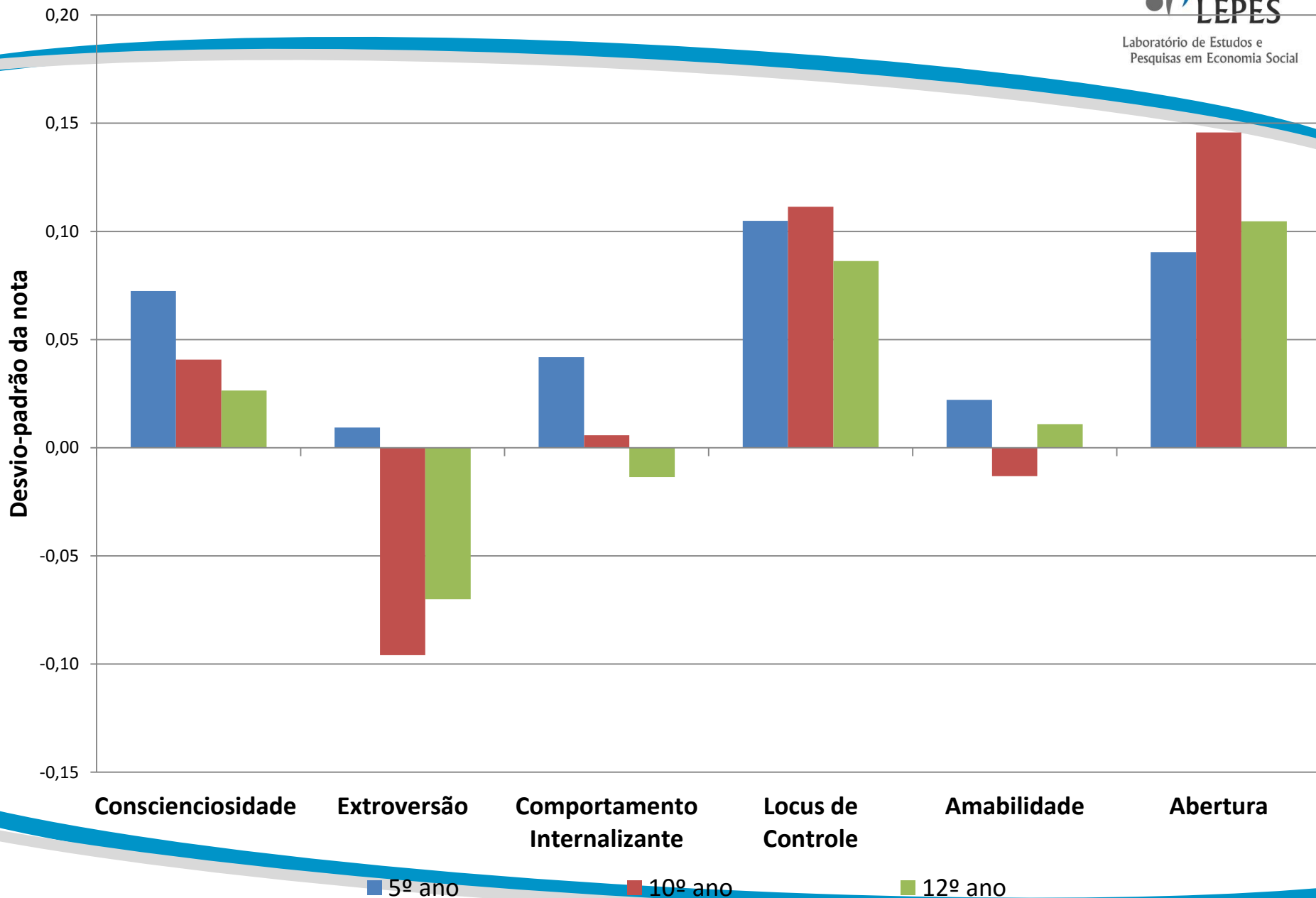
■ Port. Desvio Padrão
■ Port. Matemática
■ Mat. Desvio padrão
■ Mat. Coeficiente de Variação

Impacto sobre o desempenho de se levar uma criança do 25º ao 75º percentil socioemocional



Impacto de diferentes atributos socioemocionais sobre a nota de Português

75º - 25º percentil



Impacto de diferentes atributos socioemocionais sobre a nota de Matemática

75º - 25º percentil

