# Développement conjoint d'habiletés cognitives et de régulation du comportement

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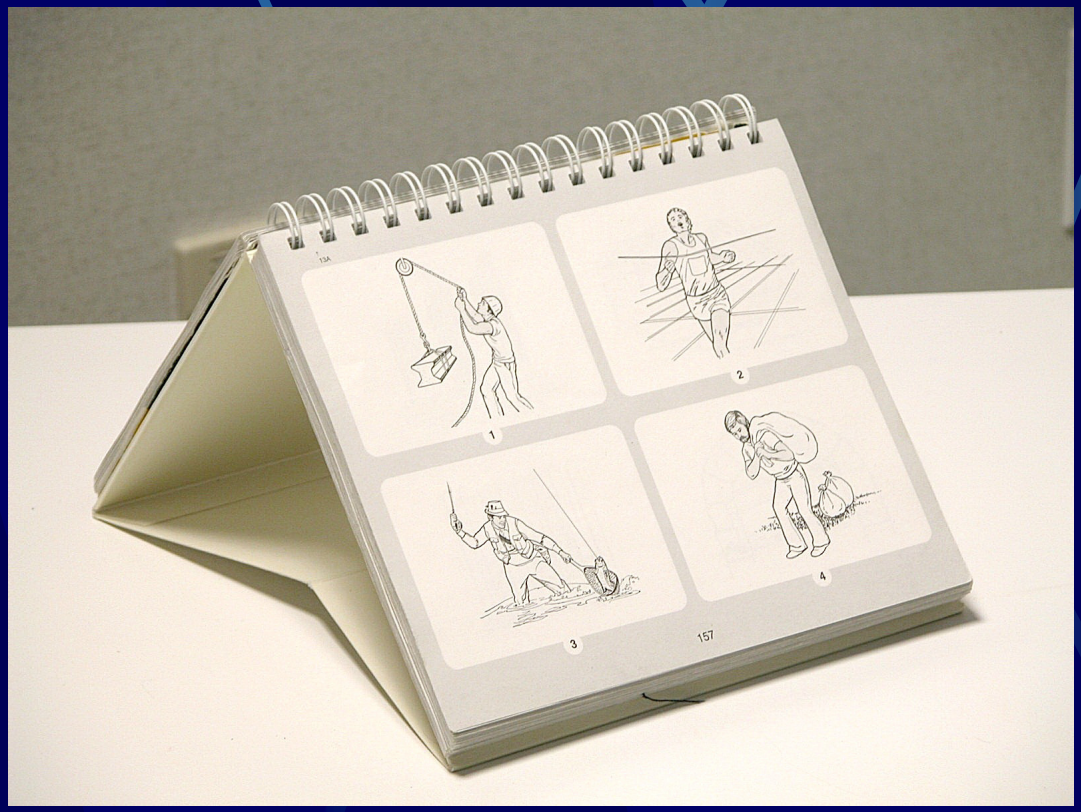
# Troubles du comportement au Québec: 6-14 ans

- Troubles des conduites
  - 0,2 – 2,3%
- Trouble Déficit d'Attention/Hyperactivité
  - 1,8 – 10%
- Trouble d'opposition
  - 1 – 6%

Breton, J.-J., Bergeron, L., Valla, J.-P., Berthiaume, C., Gaudet, N., Lambert, J. et al. (1999). Quebec Child Mental Health Survey: Prevalence of DSM-III-R mental health disorders. *Journal of Child Psychology and Psychiatry, 40,* 375-384.

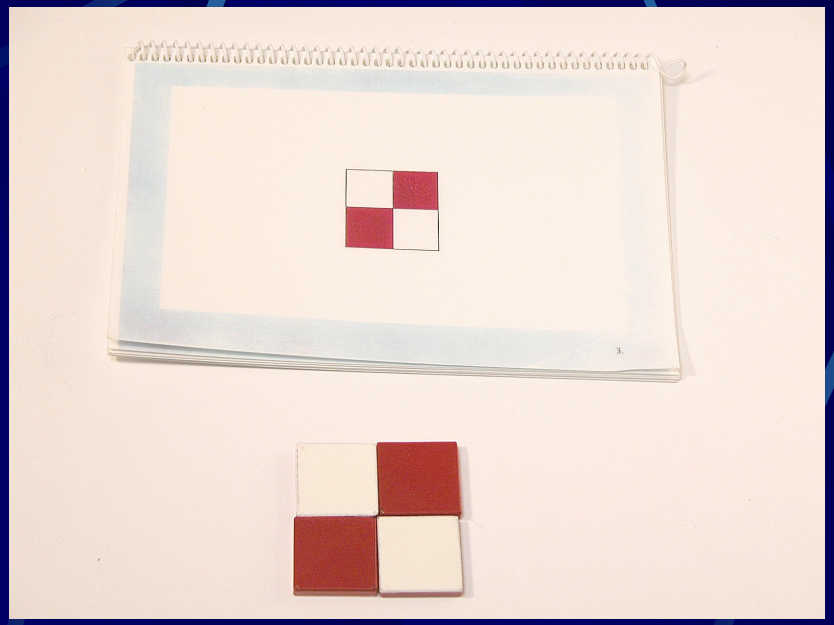
# Échelle Vocabulary en Images de Peabody - R

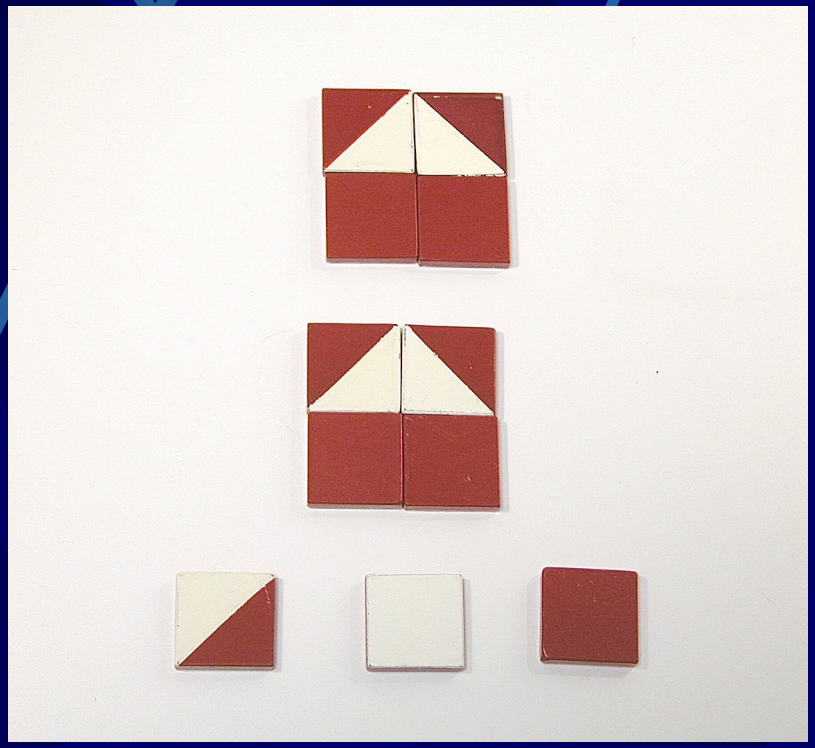



Dunn, L. M. & Dunn, L. M. (1981). *PPVT: Peabody Picture Vocabulary Test-Revised: Manual for forms L and M.* Circle Pines, MN: American Guidance Services.

Dunn, L. M., Theriault-Whalen, C. M., & Dunn, L. M. (1993). *Échelle de Vocabulaire en Images Peabody. Adaptation francaise du Peabody Picture Vocabulary Test-Revised.*

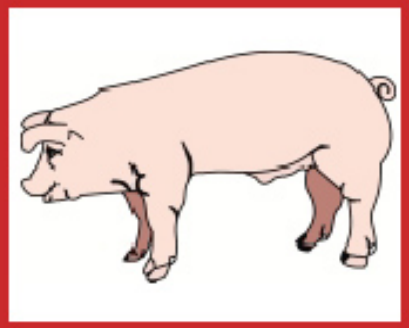
# Blocs du WPPSI

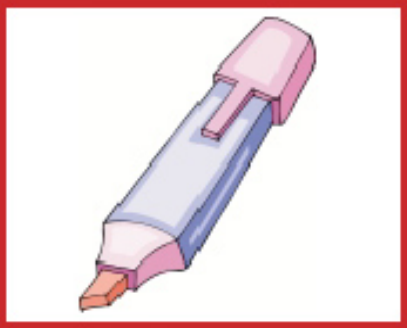




Wechsler, D. (1989). *Manual for the Wechsler Preschool and Primary Scale of Intelligence - Revised*. Toronto, Ontario, CANADA: The Psychological Corporation.

# Visually Cued Recall





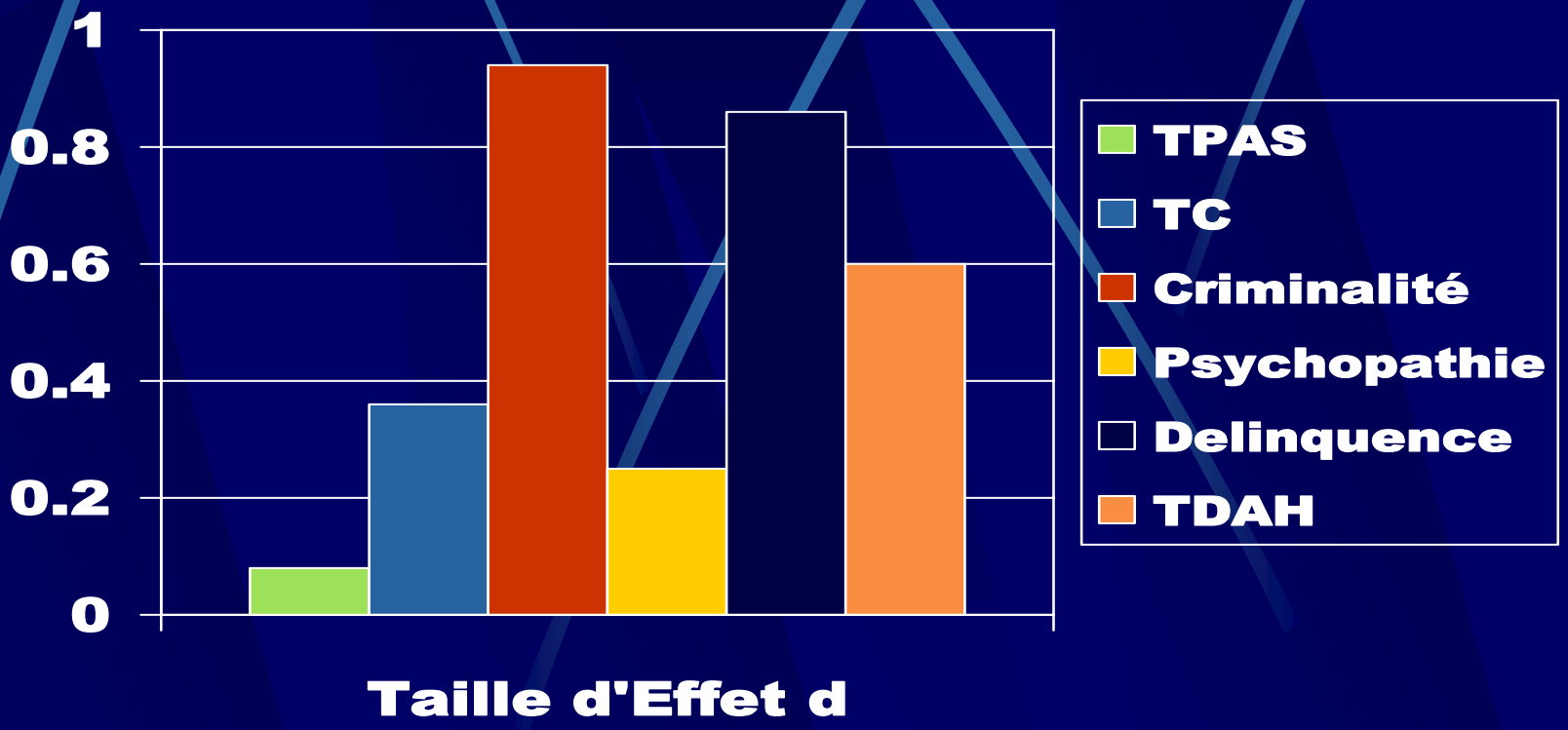







Zelazo, P. D., Jacques, S., Burack, J., & Frye, D. (2002). The relation between theory of mind and rule use: Evidence from persons with autism-spectrum disorders. Infant and Child Development, 11, 171-195.

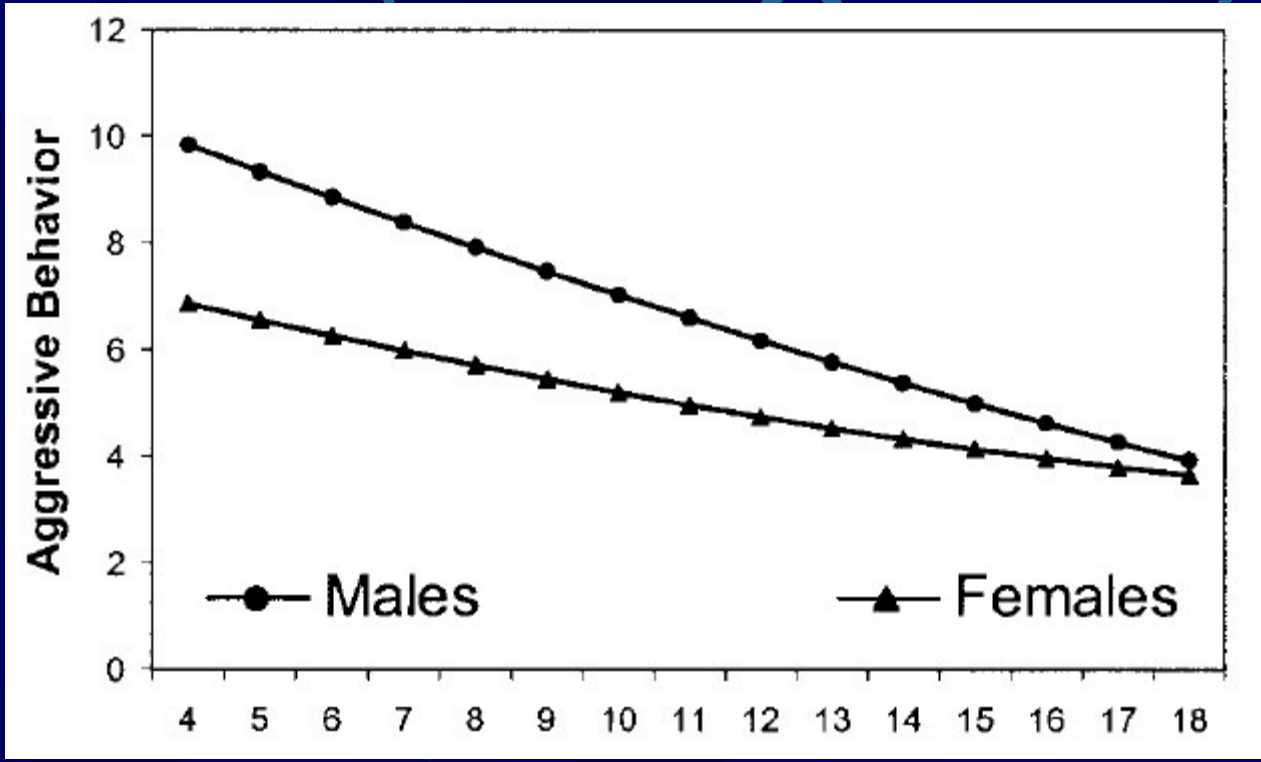
# Habiletés cognitives et syndromes cliniques




Morgan, A. B. & Lilienfeld, S. O. (2000). A meta-analytic review of the relation between antisocial behavior and neuropsychological measures of executive function. *Clinical Psychology Review, 20,* 113-136.

Willcutt, E. G., Doyle, A. E., Nigg, J. T., Faraone, S. V., & Pennington, B. F. (2005). Validity of the executive function theory of attention-deficit/hyperactivity disorder: A meta-analytic review. *Biological Psychiatry, 57,* 1336-1346.

# Fréquence de l'aggression physique de 4 à 11 ans: Pays Bas




Bongers, I. L., Koot, H. M., van der Ende, J., & Verhulst, F. C. (2003). The normative development of child and adolescent problem behavior. *Journal of Abnormal Psychology, 112,* 179-192.

# Fréquence de l'aggression physique de 2 à 9 ans: : NICHD

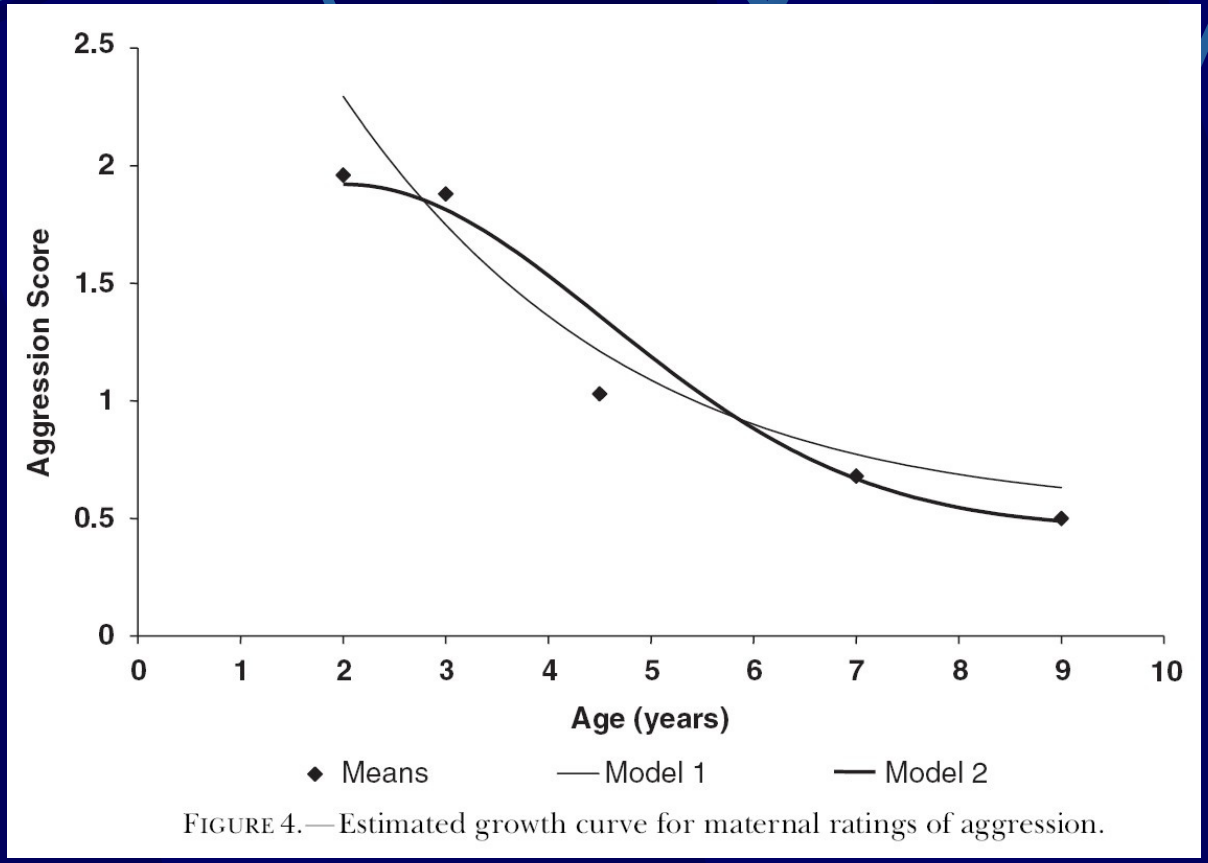
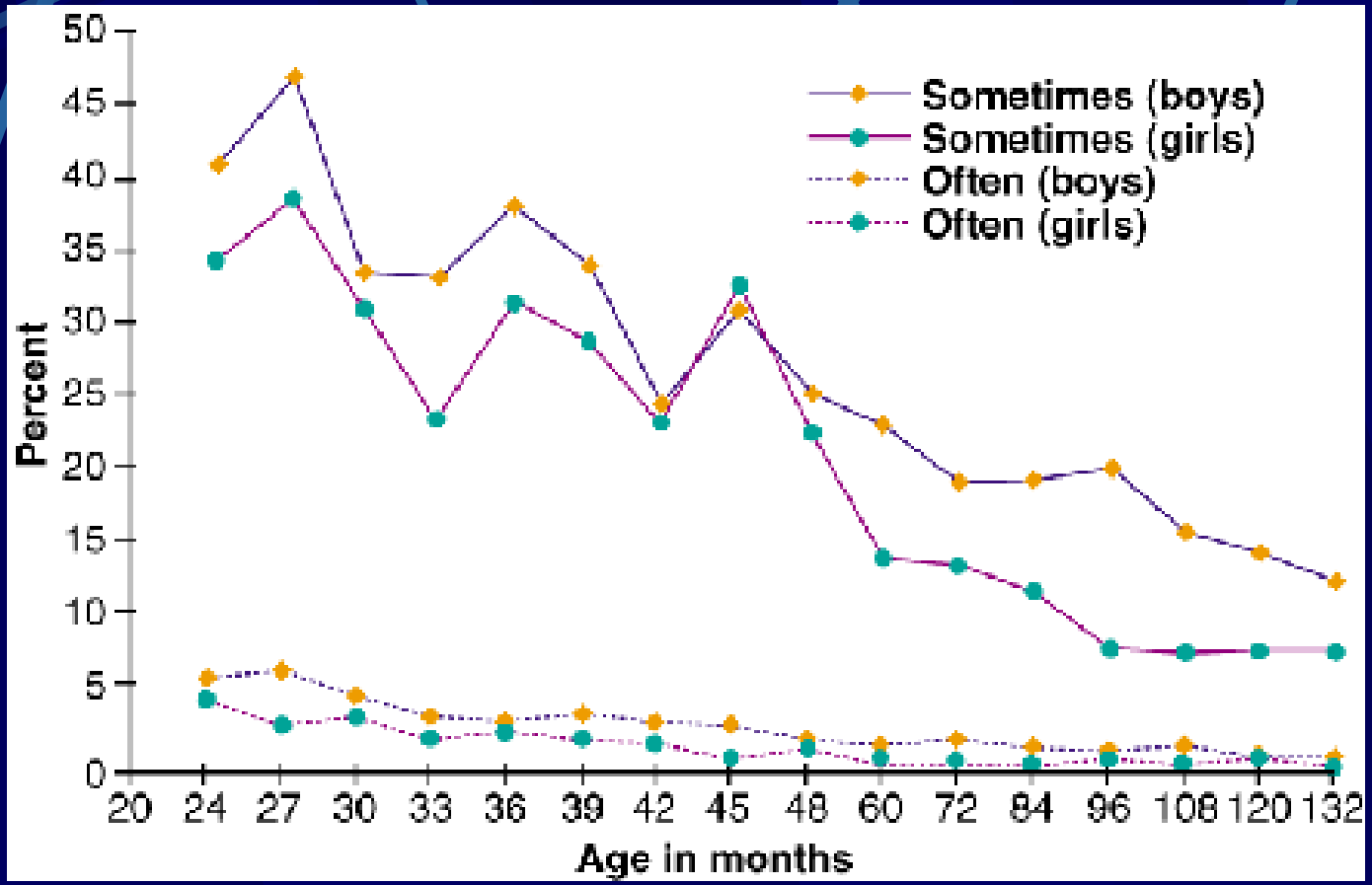



FIGURE 4.—Estimated growth curve for maternal ratings of aggression.

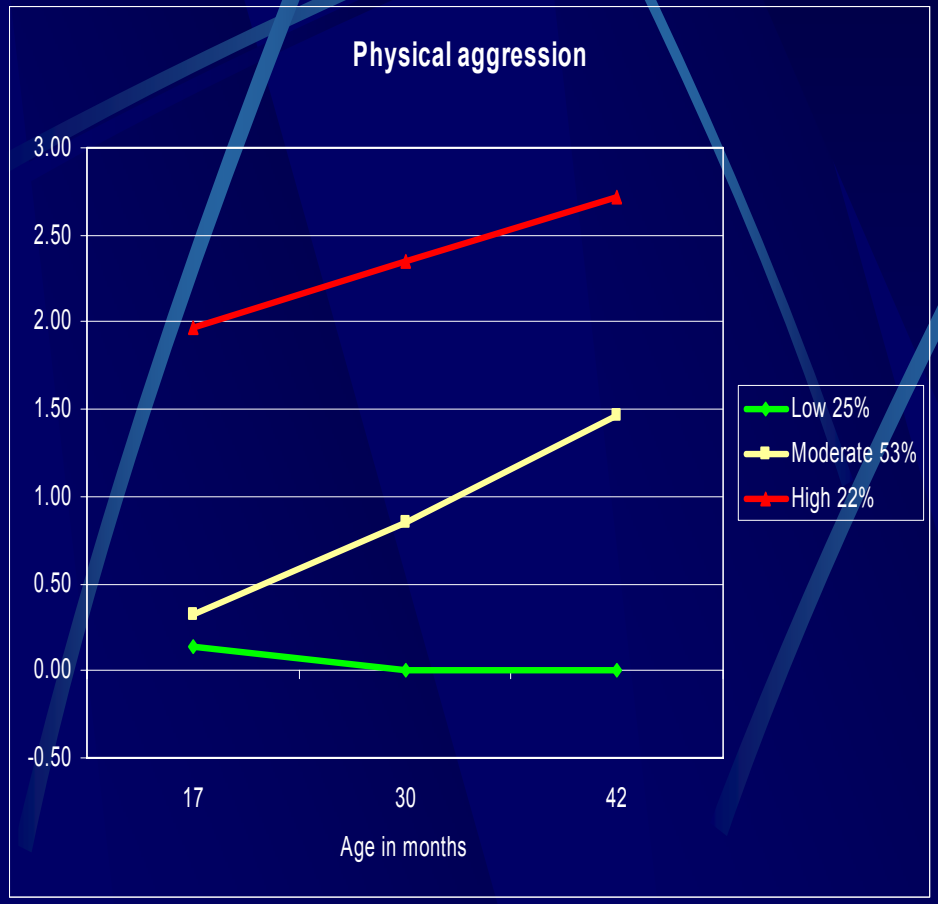
National Institute of Child Health and Human Development Early Child Care Research Network (2004). Trajectories of physical aggression from toddlerhood to middle childhood: Predictors, correlates, and outcomes. *Monographs of the Society for Research in Child Development, 69(4),* vii-128.

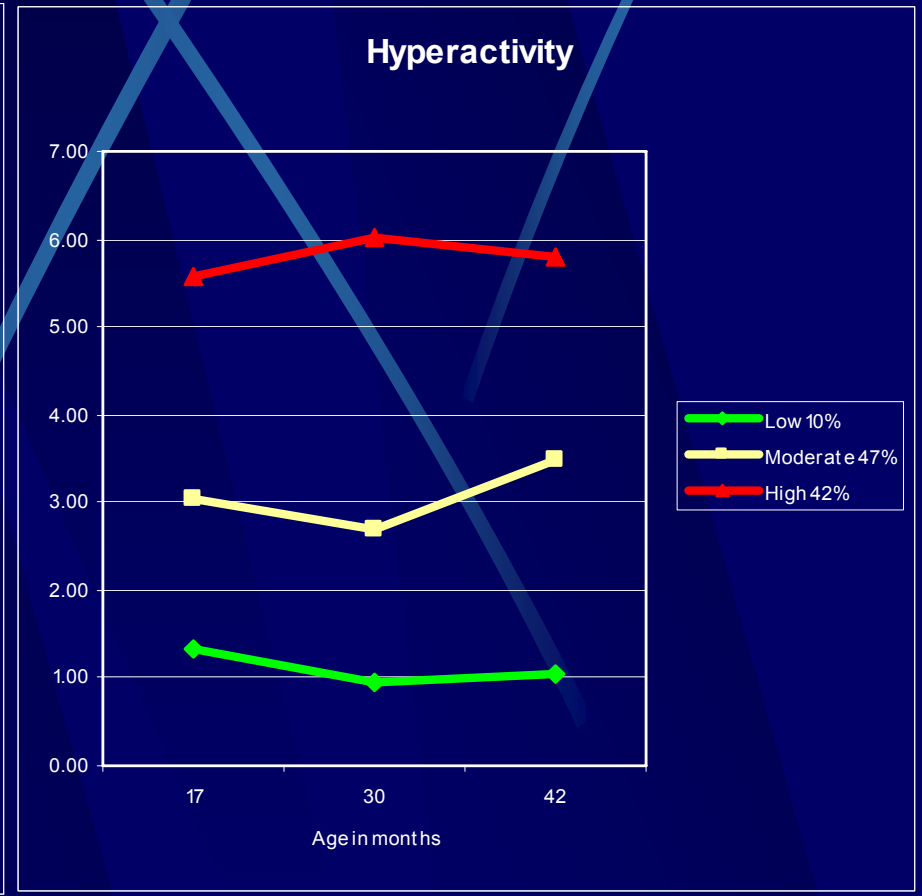
# Fréquence de l'aggression physique de 2 à 11 ans: ELNEJ




Holden, C. (2000). The violence of the lambs. *Science, 289,* 580-581.

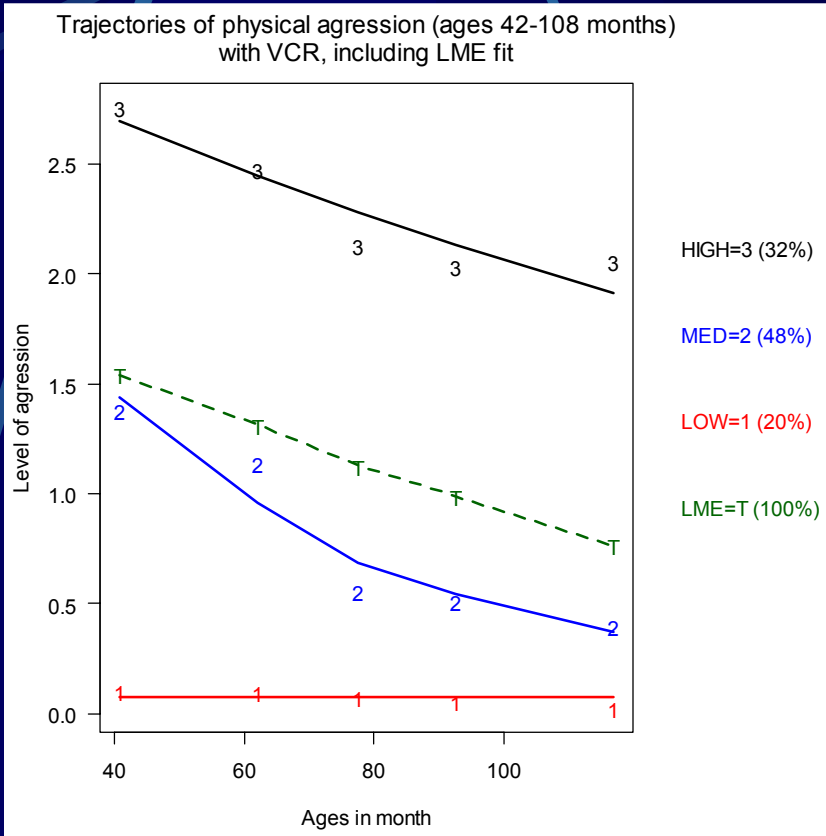
# Trajectoires d'agression physique et d'hyperactivité entre 17 et 42 mois (ELDEQ)

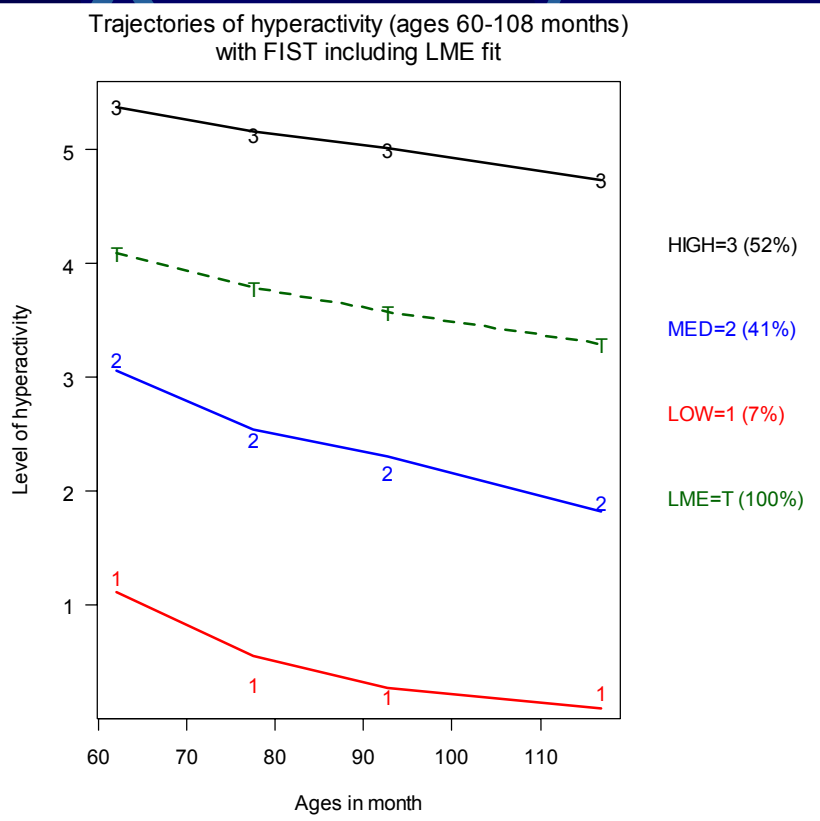


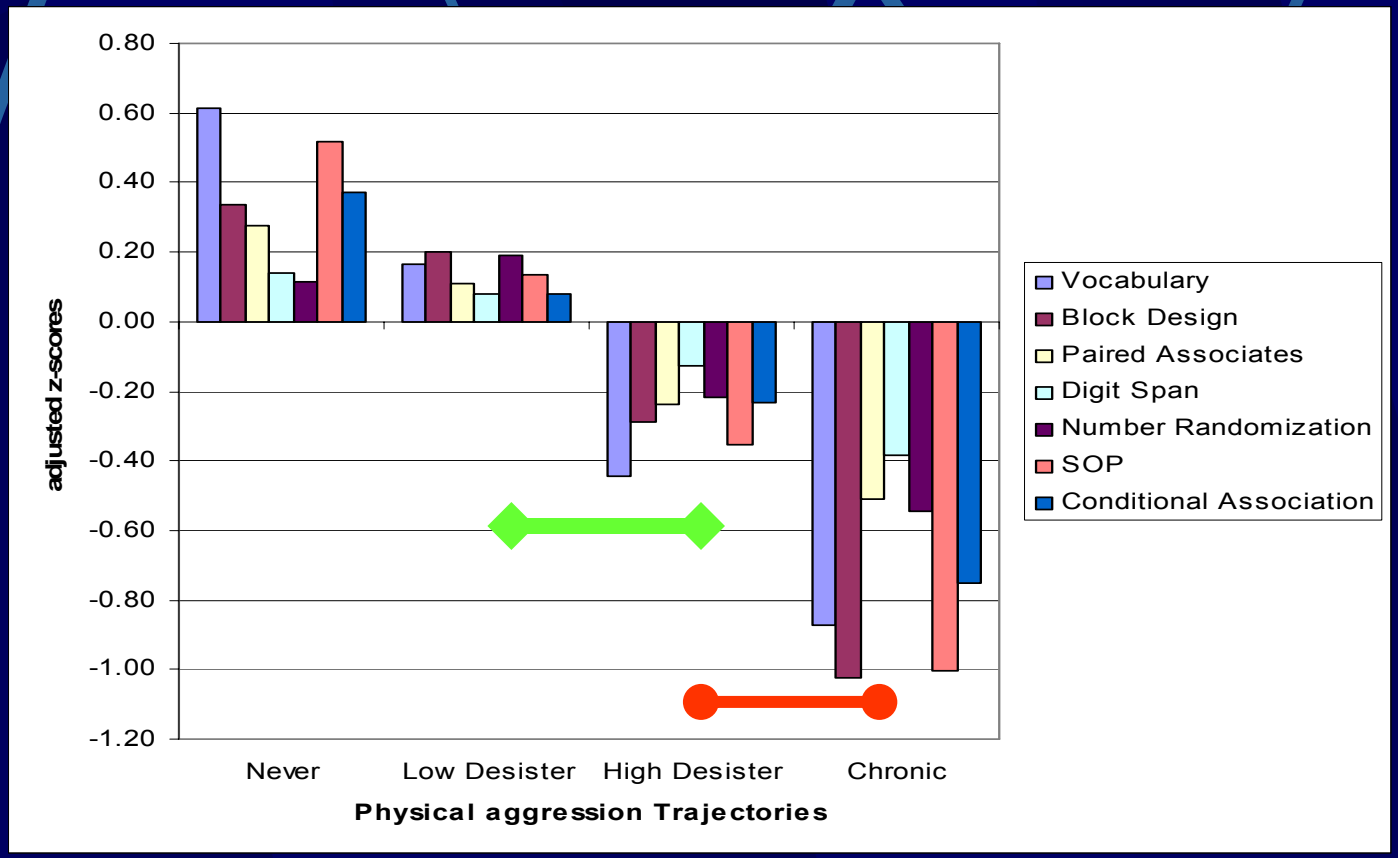

Huijbregts, S. C. J., Séguin, J. R., Zoccolillo, M., Boivin, M., & Tremblay, R. E. (2007). Associations of maternal prenatal smoking with early childhood physical aggression, hyperactivity-impulsivity, and their co-occurrence. *Journal of Abnormal Child Psychology, 35,* 203-215.

# Approche développementale ELDEQ-Pilote



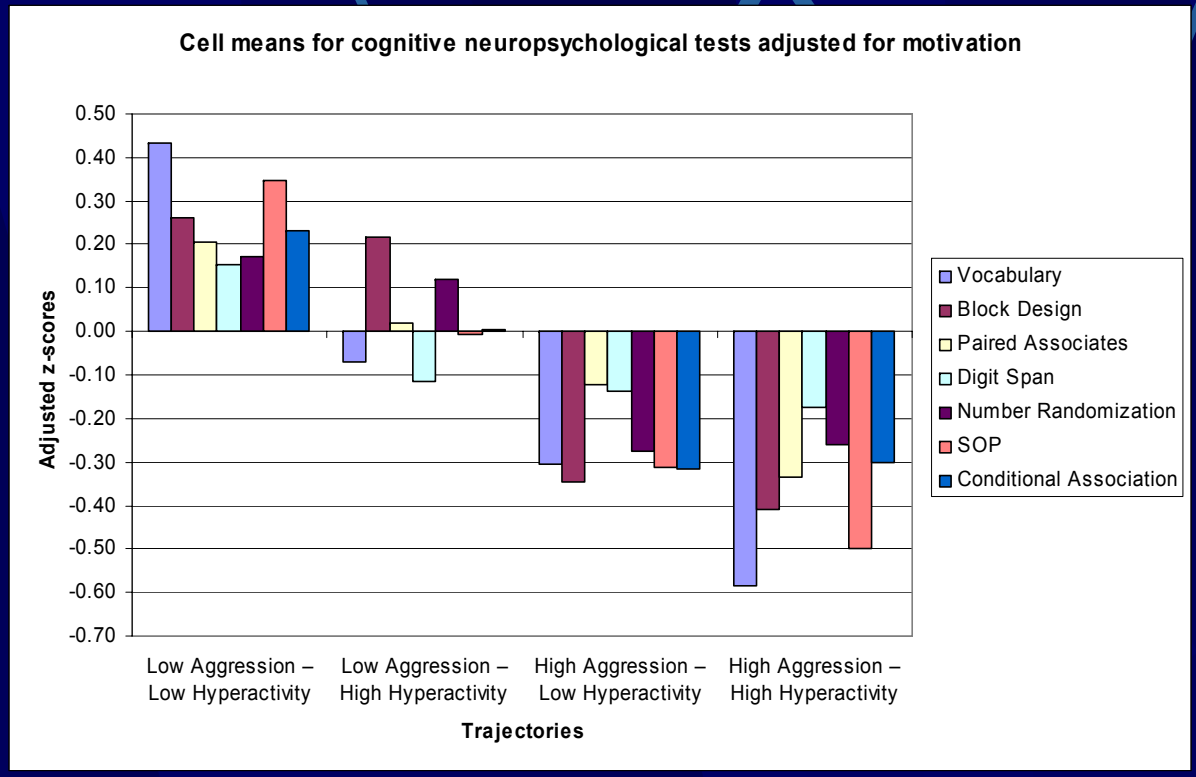



# Habiletés cognitives (20 ans) et trajectoires d'agression physique (ELEM): Devis longitudinal – taille d'effet énormes



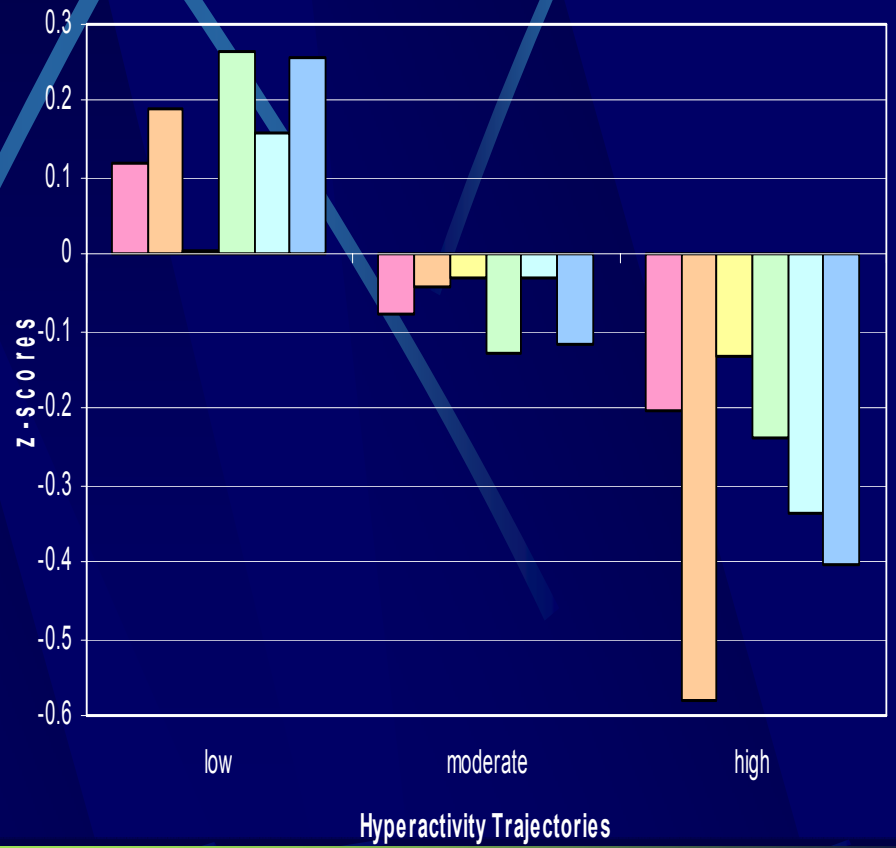

Séguin, J. R., Assaad, J.-M., Nagin, D. S., & Tremblay, R. E. (2004). Cognitive-neuropsychological function in chronic physical aggression and hyperactivity. Journal of Abnormal Psychology, 113, 603-613.

# Habiletés cognitives (20 ans) agression physique et hyperactivité ELEM

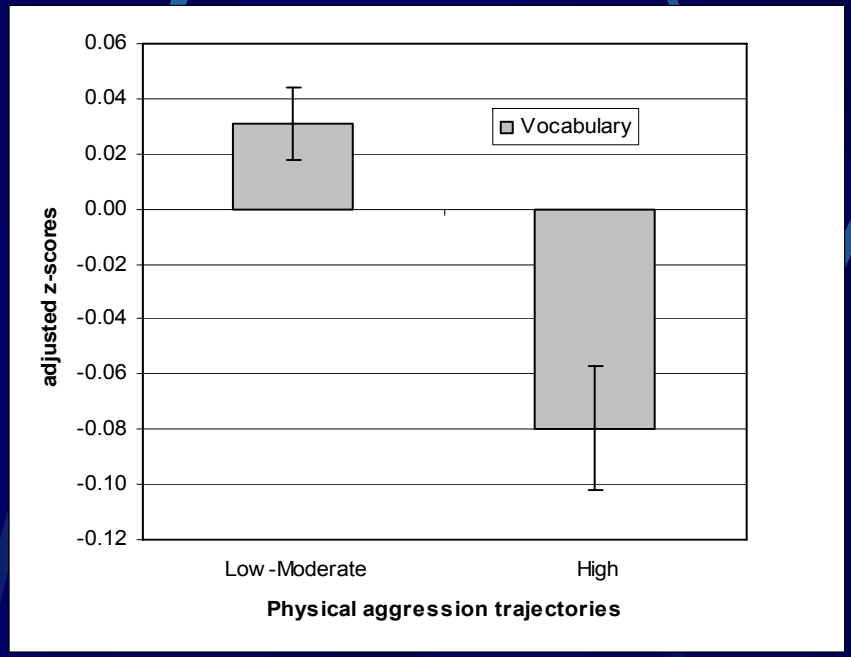


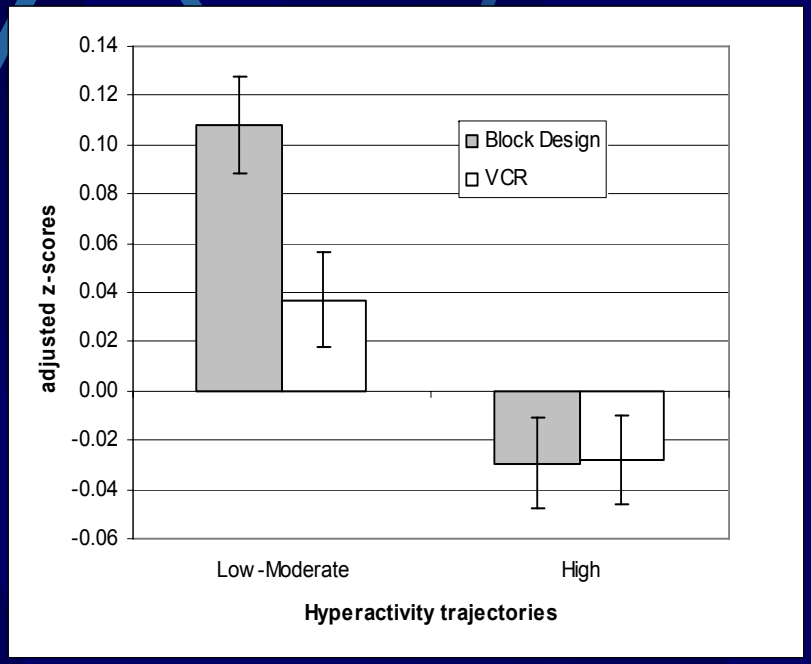

Séguin, J. R., Assaad, J.-M., Nagin, D. S., & Tremblay, R. E. (2004). Cognitive-neuropsychological function in chronic physical aggression and hyperactivity. Journal of Abnormal Psychology, 113, 603-613.

# Habiletés cognitives (42 mois) agression physique et hyperactivité II ELDEQ-Pilote

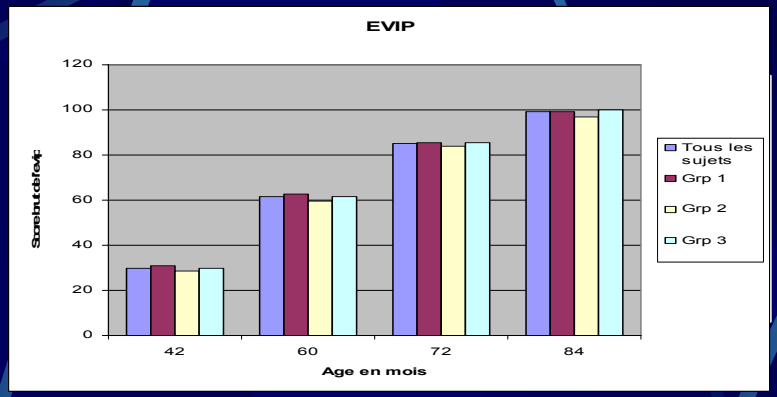
# Habiletés cognitives (42 mois) agression physique et hyperactivité II ELDEQ

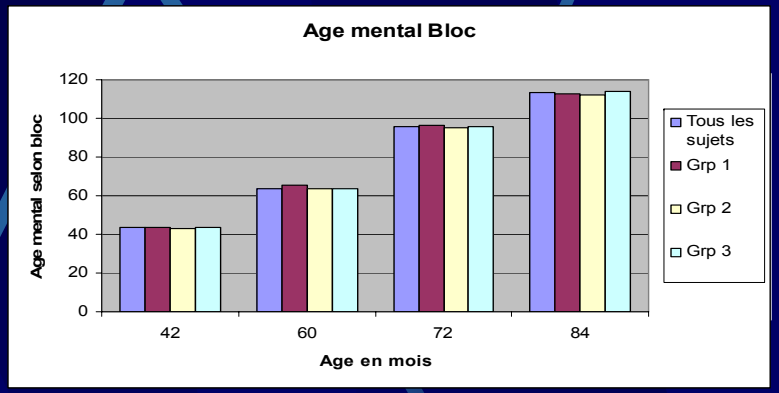


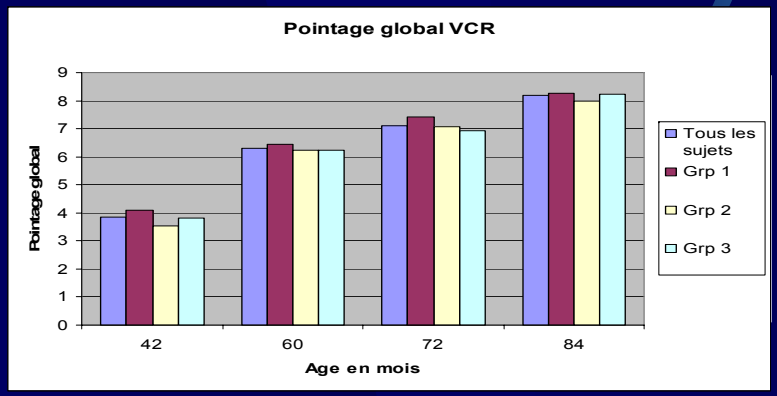



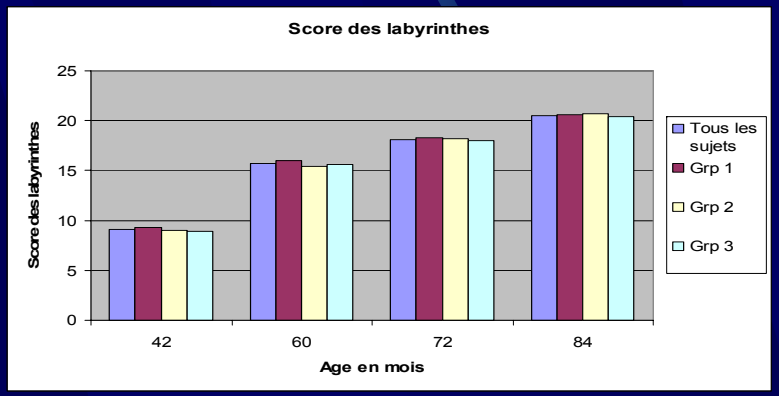

Séguin, J. R., Parent, S., Tremblay, R. E., & Zelazo, P. D. Different neurocognitive functions regulate physical aggression and hyperactivity in early childhood. *Journal of Child Psychology and Psychiatry,* (accepté).

# Développement des habiletés cognitives en fonction de l'agression physique (ELDEQ-Pilote)

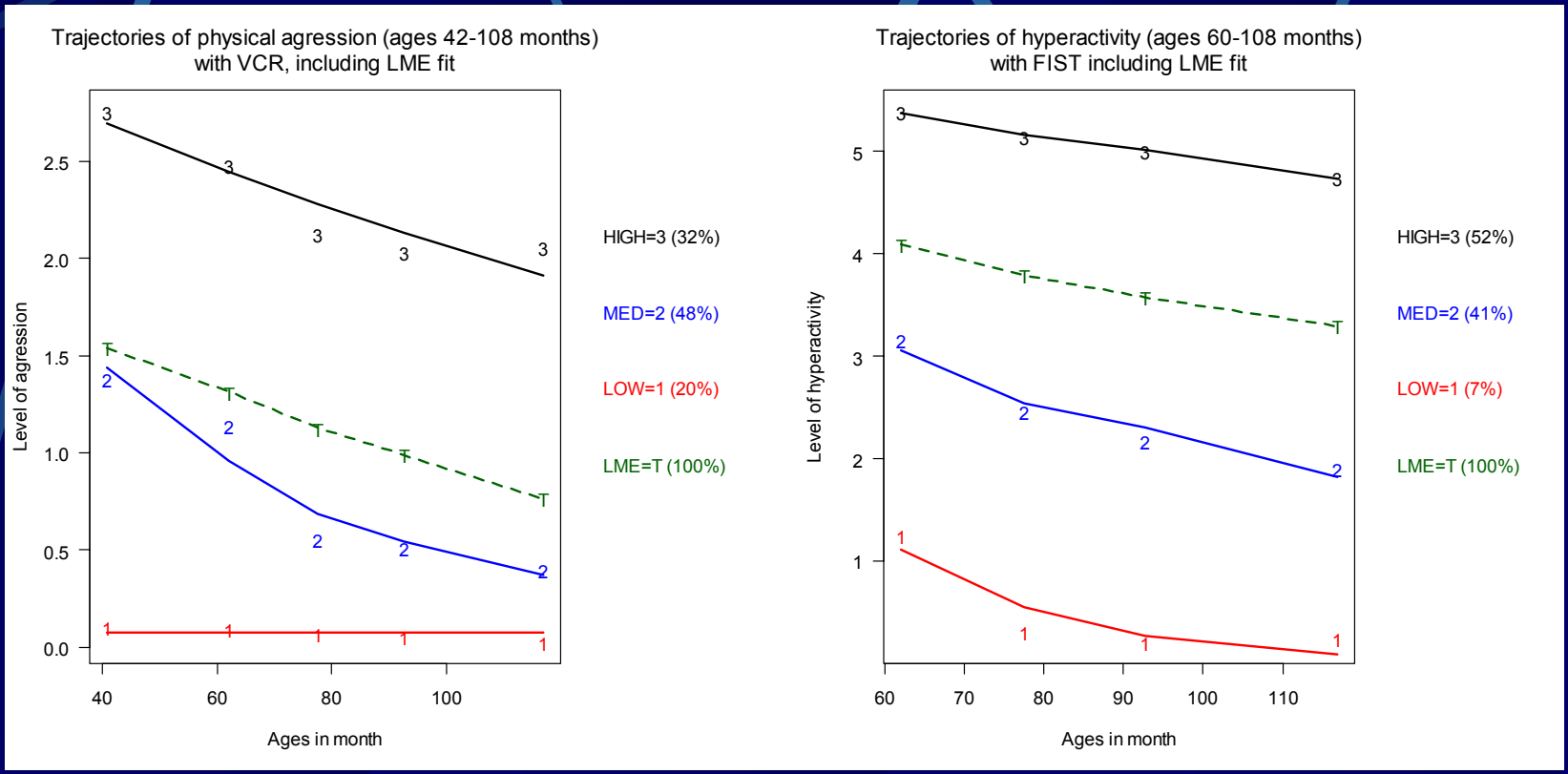


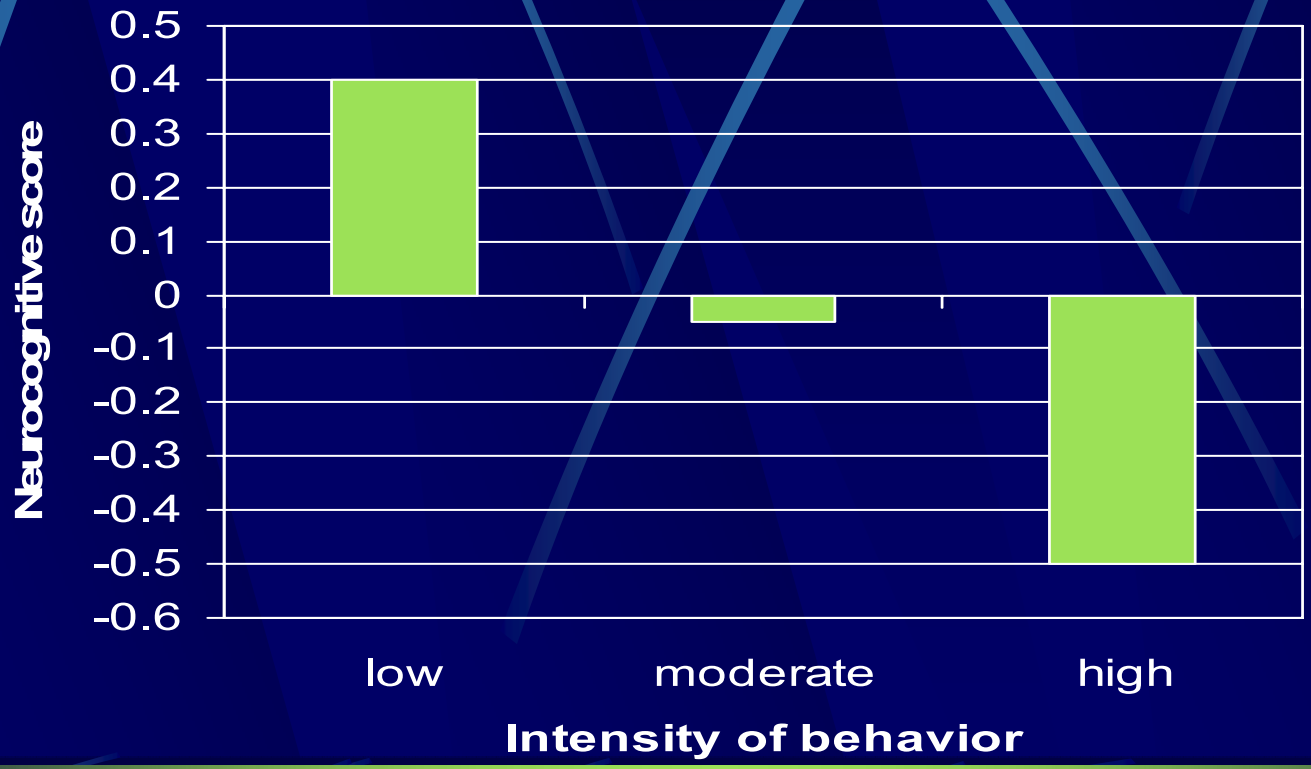



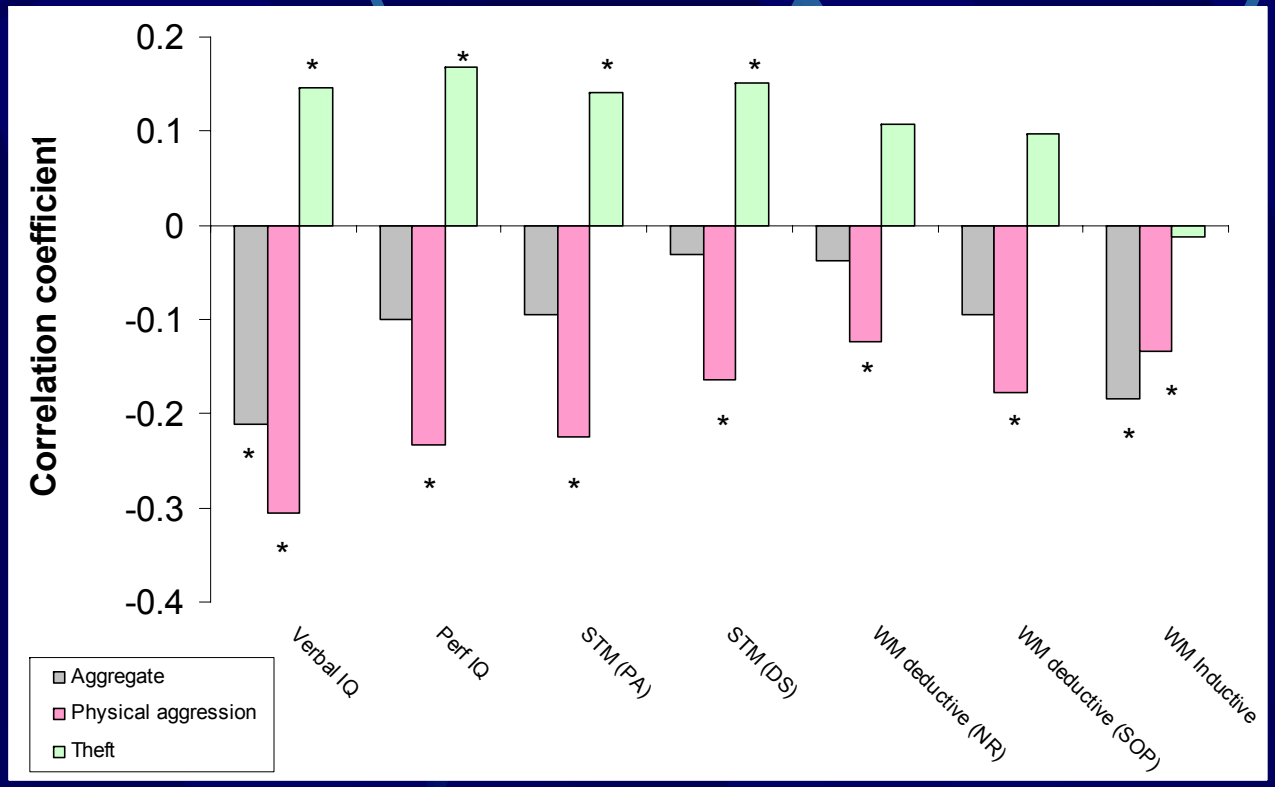
# Développement conjoint: Déterminer la séquence (ELDEQ-Pilote)



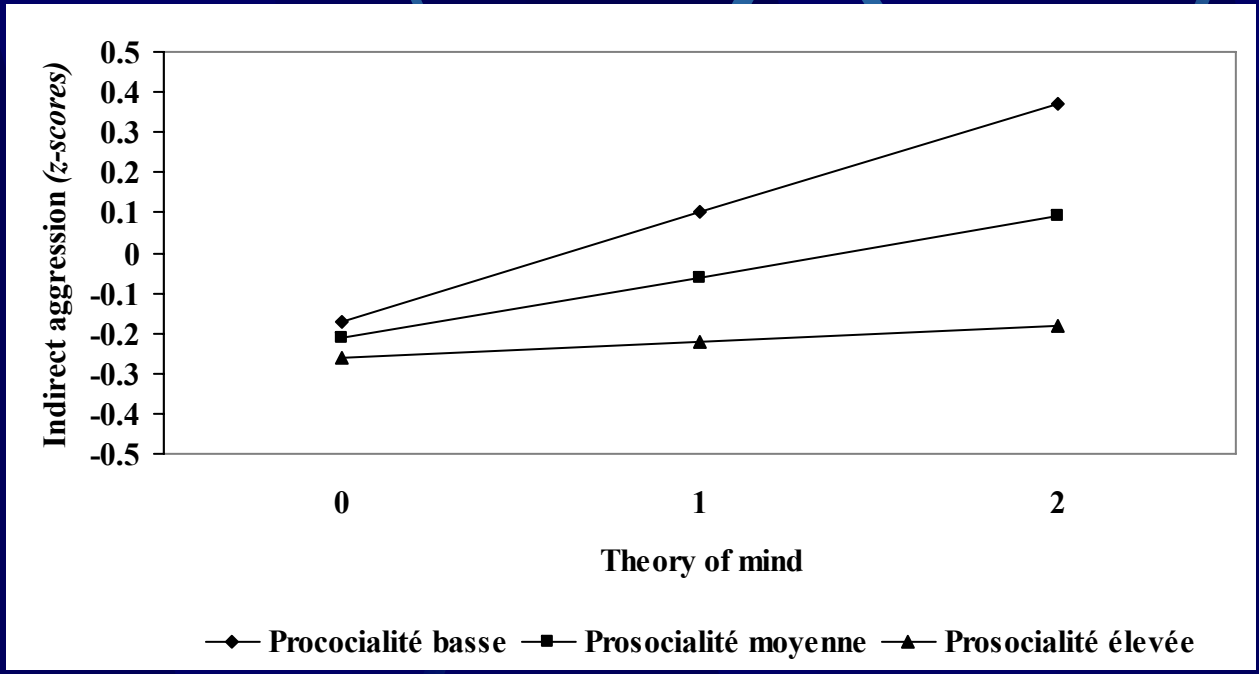
# Compte tenu du lien négatif généralement observé, y aurait-il lieu de favoriser une intervention cognitive pour aider à la régulation des conduites problématiques?



# Habiletés cognitives, comportement antisocial, agression physique et vol (ELEM)



# Habiletés cognitives, agression indirecte et prosocialité (ELDEQ-Pilote)




Renouf, A., Brendgen, M., Parent, S., Vitaro, F., Zelazo, P. D., Boivin, M., Dionne, G., Tremblay, R.E., Pérusse, D., Séguin, J.R. (2008). Predictive link between theory of mind and indirect aggression in kindergarten: Evidence of the moderating role of empathy. (Soumis)

# DRD4-7 et comportements extériorisés (ELEM + Toronto)

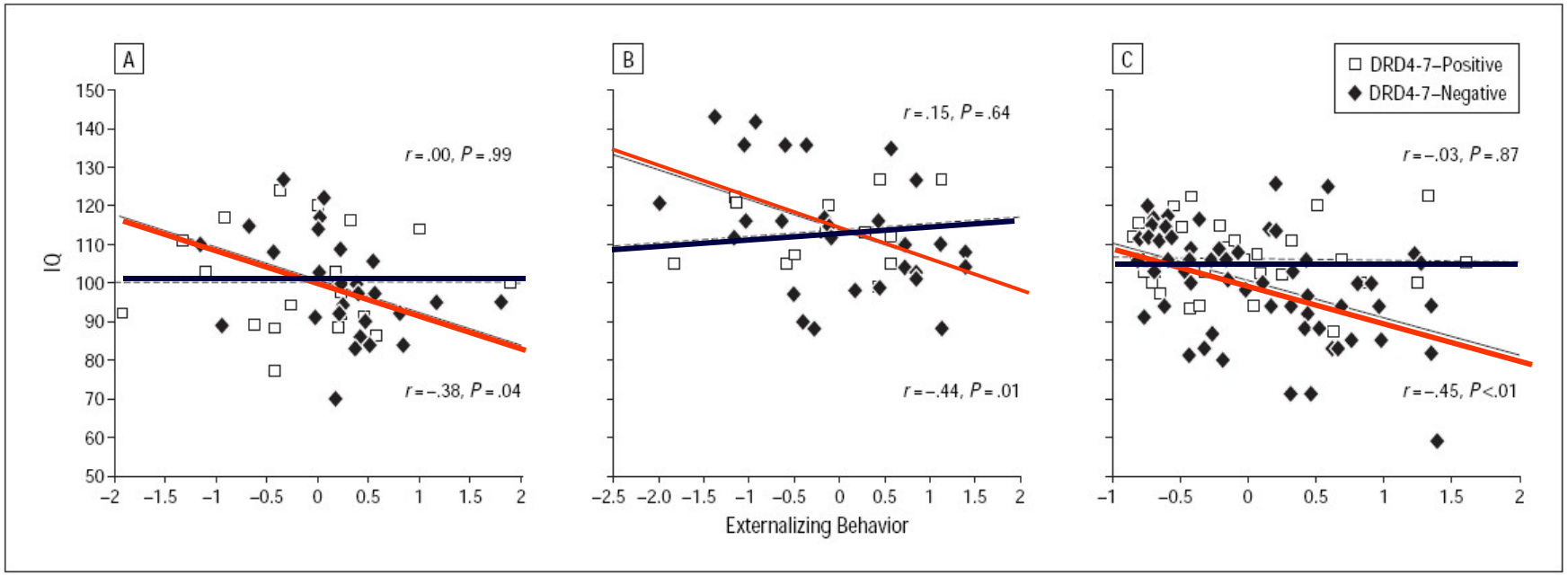



**Figure 1.** Association between externalizing behavior (standardized within each sample) and IQ in 3 male samples, as a function of dopamine D4 receptor 7-repeat allele (*DRD4-7*) status. A, Sample 1: aggressive children (n = 48). B, Sample 2: adult attention-deficit/hyperactivity disorder (n = 42). C, Sample 3: low economic status community child sample (n = 87). All *P* values are 2-tailed.

*DRD4*: $r = -.43, p < .0001$; *DRD4-7*: $r = .02, p = .45$; $z = -2.99, p < .01$

DeYoung, C.G., Peterson, J. B., Séguin, J. R., Mejia, J., Pihl, R. O., Beitchman, J.H.; Jain, U.; Tremblay, R.E.; Kennedy, J.; Palmour, R.M. (2006). Variation in the Dopamine D4 Receptor Gene Moderates the Association between Externalizing Behavior and IQ. Archives of General Psychiatry.

# Influences sur le développement

- Facteurs multiples - Tremblay et coll (2004)
- Perinatalité - Huijbregts et coll (2006, 2007, 2008)
- Sommeil - Touchette et coll (2007)
- Rêves – Gauchat et coll (soumis)
- Diabète gestationnel - Dionne et coll (accepté)
- Préparation à l'école – Lemelin et coll (2007), Forget-Dubois (2007), Boivin et al (2008)
- Relations mère-enfant – Caron et al (2007)
- Fonctionnement familial – Felli et coll (2007)
- Garde non-maternelle - Geoffroy et coll, (2007)
- Comportements petite enfance – Baillargeon et coll (2007)
- Alimentation – (Nantel-Vivier et coll., en préparation)
- Jeux rudes – Flanders (en préparation)
- Cortisol et rythmes circadiens – (Walsh et coll, en préparation)

# Remerciements


- *Institut de la statistique du Québec* (ISQ) - MSSS.
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- Ste-Justine's University Hospital Research Center
- Fonds de Recherche en Santé du Québec
- Fonds de Recherche sur la Société et la Culture du Québec
- Instituts de Recherche en Santé du Canada
- Conseil de Recherches en Sciences Hmaines du Canada
- Conseil de Recherches en Sciences Naturelles et en Génie (Canada)
- The National Consortium on Violence Research (NCOVR/NSF)
- Fondation Molson