**Appendix A: Sensitivity Analyses**

In the original BSC work, Boyce and Ellis (2005) hypothesized that approximately 20% of children would display high stress reactivity phenotypes. To replicate Ellis et al. (2005), and to ensure adequate cell sizes in the signal detection analyses, we used a 25% cut off to demarcate high (and low) reactivity. Here we conduct sensitivity analyses to examine the results with a different cut off point: 35%. Following BSC theory, we focused these analyses on high reactivity. By using a 35% cut off, we are not so much testing here for predictors of high reactivity (as per the original theory) as for predictors of reactivity in a range that can be considered somewhat above average. The results shown below, using this 35% cut off, do not generally provide evidence for a U-Shaped curve.

**High HPA reactivity**. Figure 6 demonstrates the results obtained from the signal detection analysis for prediction of high HPA reactivity (i.e., the 35% of sample displaying highest cortisol concentrations, based on cortisol difference scores pre- to post-protocol, residualized on time of data collection). Family economic condition with the cut point value of 0.70 *SD* was identified as the first optimal predictor variable that distinguished the heightened HPA reactive children from the rest of the sample (*К* =0.15, *χ2*= 6.30, *p <* 0*.*05). Among children from families with moderate to low family economic condition scores ( < 0.70 *SD*), 31% (59/190) displayed high HPA reactivity. By contrast, in families characterized by relatively stable and better economic conditions (family economic condition ≥ 0.70 *SD*), about 46.6% (41/88) of the children showed high HPA reactivity to laboratory challenges. Child sex (*К* = 0.14, *χ2* = 4.48, *p <* 0*.*05) was identified as the second optimal predictor that offered further discrimination within the first (high reactivity) group. Together, 38.5% of boys (35/91) from families with moderate to low family economic condition ( < 0.70 *SD*) displayed high HPA reactivity. However, rates of high reactivity decreased significantly (24.2%; 24/99) in girls with comparable family economic condition levels (< 0.70 *SD*). On the other hand, for children raised in wealthy families with little perceived financial strain (≥ 0.70 *SD*), family economic condition (*К* = 0.24, *χ2* = 5.29, *p <* 0*.*05) provided further discriminations at the cut point value of 1.01 *SD*, resulting in a curvilinear relationship between family economic condition and high HPA reactivity. Just as children raised in very wealthy families (≥ 1.01 *SD*) showed high rates of HPA reactivity (35.4%), children from families with about average economic condition levels (> 0.70 *SD* to < 1.01 *SD*) also showed substantially high rates of HPA reactivity (60%; 24/40).

Taken together, the overall results for high HPA reactivity had the shape of an inverted U-shaped curvilinear relation between family economic condition and high HPA reactivity, with children from families with moderate levels of economic condition demonstrated the highest rate of high HPA reactivity (60%). Children of wealthy families (family economic condition > 1.01 *SD*) and those with below than average family economic condition levels (< 0.70 *SD*) demonstrated the lowest rates of high HPA reactivity.

**High PNS reactivity.** Figure 7 displays a decision tree classifying the characteristics of children with high PNS reactivity (i.e., the 35% of sample displaying lowest heart period variability, based on RSA difference scores from control to challenge conditions). Restrictive parenting (*К* = 0.22, *χ2* = 13.64, *p <* 0*.*05) was identified as the first-order predictor variable that significantly distinguished highly reactive children from the rest of the sample. Among children with very low exposure to restrictive parenting (< -0.45 *SD*), about 49.5% (46/93) showed high PNS reactivity to laboratory challenges. By contrast, among children with greater exposure to restrictive parenting ( ≥ -0.45 *SD*), only 27.3% (53/194) displayed high PNS reactivity. Within the first group, restrictive parenting (*К* = 0.24, *χ2* = 5.71, *p <* 0*.*05) offered further discrimination at the cut point value of -0.88 *SD*. The rates of high PNS reactivity decreased significantly (38.5%; 20/52) among children with very low experiences of restrictive parenting ( < -0.88 *SD*), but they increased (63.4%; 26/41) for those with relatively higher (but still low) levels of restrictive parenting (> -0.88 *SD* to < -0.45 *SD*). Within the group of children with higher experiences of restrictive parenting (> -0.45 *SD*), age (*К* = 0.14, *χ2* = 4.06, *p <* 0*.*05) divided the sample into two groups at the cut point value of 5.20 years old, with younger children demonstrated higher rates (35.6%) of high PNS reactivity than the older children (22.3%). This set of results is hard to interpret but does not appear to provide support for any of the stress responsivity patterns in the BSC model.

**High SNS reactivity.** Figure 8 displays a decision tree classifying the characteristics of children with high SNS reactivity (i.e., the 35% of sample displaying shortest PEP intervals based on difference scores from control to challenge conditions). Family economic condition (*К* = 0.154, *χ2* = 7.88, *p <* 0*.*05) was identified as the first-order predictor variable that significantly distinguished highly reactive children from the rest of the sample. Among children from families with moderate to low family economic condition scores ( < 0.82 *SD*), 32.2% (74/230) displayed high SNS reactivity. However, the rates of high SNS reactivity was significantly higher (50.7%; 35/69) among children of families with better and relatively stable economic condition (family economic condition ≥ 0.82 *SD*). No other significant predictor offered further discrimination within the first (high reactivity) group. However, for the latter group (family economic condition ≥ 0.82 *SD*), restrictive parenting (*К* = 0.22, *χ2*= 3.93, *p <* 0*.*05) divided them into two subgroups at the cut point value of -0.60 *SD*. Of the 22 children raised in wealthy families ≥ 0.82 *SD*) with very low experiences of restrictive parenting (< -0.60 *SD*), 15 of them (68.2%) showed shortest PEP intervals. However, rates of high SNS reactivity decreased significantly (42.6%; 20/47) in children who experienced comparable family economic condition levels (≥ 0.82 *SD*) but exposed to higher levels of restrictive parenting ( ≥ -0.60 *SD*) than the former group. This set of results is again hard to interpret but does not appear to provide support for any of the stress responsivity patterns in the BSC model.





