**Parental Wellbeing, Couple Relationship Quality and Children’s Behavioral Problems in the First Two Years of Life.**

**Online Appendix**

**Contents**

|  |  |  |
| --- | --- | --- |
| 1 | Additional Information about Data Analysis | Pages S2 – S8 |
| 2 | Complete Output for Model 1 | Pages S9 – S11 |
| 3 | Complete Output for Model 2 | Pages S12 – S13 |
| 4 | Complete Output for Model 3 | Pages S14 – S16 |

**Additional Information About Data Analysis.**

**Missing Data**

Complete screening data were available for 437 mothers and 436 fathers and these data were used as predictors of whether questionnaire data were missing for two or more time points in the study. 99% of mothers and 93.6% of fathers completed questionnaires on two or more time points. 71.2% of mothers and 60.3% of fathers provided questionnaire data at all four time points. Maternal missing data was unrelated to age, B =0.033, *SE* = 0.25, *Wald* (1) = 0.017, *p* = 0.89, child gender, B = -0.058, SE = 0.374, *Wald* (1) = 0.024, *p* = 0.88, perceived social standing, B =0.204, *SE* = 0.18, *Wald* (1) = 0.024, *p* = 0.88, or initial levels of depressive symptoms on the GHQ12, *B* = 0.062, *SE* = 0.099, *Wald* (1) = 0.387, *p* = 0.53. Paternal missing data was unrelated to paternal age, *B* = 0.035, *SE* = 0.18, *Wald* (1) = .039, *p* = 0.84, child gender, B = -0.080, SE = 0.259, *Wald* (1) = 0.096, *p* = 0.76, perceived social standing, *B* = 0.088, *SE* =0.12, Wald (1) = 0.595, *p* = 0.44, or initial levels of depressive symptoms on the GHQ12, *B* = -0.066, SE = 0.087, *Wald* (1) = 0.575, *p* = 0.45. Missing data were therefore judged to be missing at random.

**Measurement Models**

To create a measure of perceived parental wellbeing, we tested a one factor model for mothers and fathers in which total scores from the CESD20, GHQ12 and STAI6 loaded onto a single latent factor at each time point. We set the lead indicator intercept to 0 for each latent factor and freely estimated each latent factor mean (Geiser, 2013). We permitted the residuals for the lead indicator (CESD20) to correlate with adjacent time points in both mothers and fathers. To account for measure-specific variance, we also estimated a method factor for the GHQ12 and the STAI6 by allowing indicators from each questionnaire to load onto separate measure-specific latent factors. We fixed the factor loadings for each indicator on the measure-specific latent factors to 1 to reflect the fact that the indicator was the same at each time point (Geiser, 2013). These method factors were residual factors and so were not permitted to co-vary any other latent factor in the model (Geiser, 2013). This measurement model provided a good fit to the data, χ2 (214) = 346.492, *p* < 0.001, RMSEA = 0.038, CFI = 0.968, TLI = 0.959. Figure S1 shows the unstandardized estimates for this model.

We imposed equality constraints on the wellbeing latent factors both across informants and over time to investigate the measurement invariance of the latent factor in mothers and fathers over time. Table S1 shows the results for the nested model comparisons. We inspected the modification indices to identify areas of strain within the model and adjusted the model when these modification indices were theoretically meaningful. The GHQ12 intercepts were higher at Time 2 than at any other time point for both fathers (Est. = -0.446, SE = 0.097) and mothers (Est. = -0.412, SE = 0.100). The intercepts for the STAI6 were higher in fathers at Time 1 than at later time points (T1 Est. = 8.631, SE = 0.138) but lower in mothers at T1 than at later time points (T1 Est. = 7.554, SE = 0.160). The residual variance in the GHQ12 was lower at T1 than at later time points in fathers (T1 Est. = 1.405, SE = 0.203). With the exception of these parameters, all parameters were invariant across informants and over time. The partial measurement invariance model (in which these parameters were free to vary) provided a good fit to the data (see Table S1). From this model we estimated factor scores for each of the wellbeing latent factors.

Having established the partial longitudinal invariance of the wellbeing latent factor in mothers and fathers, we specified a two-variable latent growth curve model (LGCM) using the factor scores for parental wellbeing to examine trajectories of wellbeing across the transition to parenthood. The two-variable LGCM allowed us to examine initial levels and changes in perceived wellbeing in mothers and fathers accounting for the nesting of data within couples. The model provided an adequate fit to the data, χ2 (20) = 81.363, *p* < 0.001, RMSEA = 0.084, CFI = 0.948, TLI = 0.928 (see Figure S2).

|  |  |
| --- | --- |
| A | B |
| Figure S1. *Unstandardized Robust Maximum Likelihood Estimates for Wellbeing Latent Factors in Mothers (A) and Fathers (B) Across Transition to Parenthood.*  Note. \*\*\**p* < .001. \*\**p* <.01. \**p* <.05. T = Time Point. V = Variance. CESD = Center for Epidemiological Studies Depression Scale. GHQ = General Health Questionnaire. STAI = State-Trait Anxiety Inventory. | |

Table S1. *Measurement Invariance for Anxious-Depressive Symptoms in Mothers and Fathers From T1 to T4.*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Model** | **Test of Invariance** | **Model Fit Indices** | | | | | **Comparison** | **Changes in Model Fit** | | | |
| **χ2** | ***df*** | **RMSEA** | **CFI** | **TLI** | **SBΔχ2** | **Δ*df*** | ***p*** | **ΔCFI** |
| 1 | Baseline Model (1.0929) | 346.492 | 214 | 0.038 | 0.968 | 0.959 | - | - | - | - | - |
| 2 | Equal Loadings (1.1144) | 359.720 | 228 | 0.036 | 0.969 | 0.962 | 2 vs. 1 | 15.38 | 14 | .352 | +0.001 |
| 3 | Equal Intercepts (1.1083) | 425.272 | 242 | 0.042 | 0.956 | 0.950 | 3 vs. 2 | 69.83 | 14 | .0001 | -0.014 |
| 4 | Equal Intercepts GHQ12 (1.1112) | 376.069 | 235 | 0.037 | 0.966 | 0.961 | 4 vs. 2 | 16.89 | 7 | .018 | -0.003 |
| 5 | Equal Intercepts GHQ12a. (1.1117) | 368.233 | 233 | 0.036 | 0.968 | 0.962 | 5 vs. 2 | 8.59 | 5 | .126 | -0.001 |
| 6 | Equal Intercepts STAI6 (1.1087) | 415.993 | 240 | 0.041 | 0.958 | 0.952 | 6 vs. 5 | 51.39 | 7 | .0001 | -0.010 |
| 7 | Equal Intercepts STAI6 b. (1.1086) | 377.873 | 238 | 0.037 | 0.967 | 0.961 | 7 vs. 5 | 9.90 | 5 | .078 | -0.001 |
| 8 | Equal Residuals (1.1491) | 416.771 | 259 | 0.037 | 0.962 | 0.960 | 8 vs. 7 | 37.31 | 21 | .016 | -0.005 |
| 9 | Equal Residuals CESD20 (1.1183) | 390.687 | 245 | 0.037 | 0.965 | 0.961 | 9 vs. 7 | 14.43 | 7 | .044 | -0.002 |
| 10 | Equal Residuals GHQ12 (1.1414) | 410.196 | 252 | 0.038 | 0.962 | 0.959 | 10 vs. 9 | 16.05 | 7 | .025 | -0.003 |
| 11 | Equal Residuals GHQ12c. (1.1379) | 393.371 | 251 | 0.036 | 0.966 | 0.963 | 11 vs. 9 | 5.53 | 6 | .478 | +0.001 |
| 12 | Equal Residuals STAI6 (1.1457) | 399.964 | 258 | 0.035 | 0.966 | 0.964 | 12 vs. 11 | 7.452 | 7 | .383 | 0 |
| 13 | Equal Residual Covariance (1.1493) | 400.911 | 263 | 0.035 | 0.967 | 0.966 | 13 vs. 12 | 1.894 | 5 | .863 | +0.001 |

*Note.* The scaling correction factor for each model is reported in parentheses. a. GHQ12 Intercepts at Time 2 free to vary. b. STAI6 Intercepts at T1 for mums and dads free to vary. Modification indices did not highlight any other source of misfit with intercept constraints. c. GHQ12 T1 residual for dads freed to vary over time. The overall difference between Model 1 and Model 13 was SBΔχ2 (49) = 58.82, *p* = .159, ΔCFI = 0.001, supporting partial measurement invariance.

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| Figure S2. *Unstandardized Robust Maximum Likelihood Estimates for Latent Growth Curve Model of Maternal and Paternal Trajectories of Wellbeing Across the Transition to Parenthood.*  Note. \*\*\**p* < .001. \*\**p* <.01. \**p* <.05. MWB = Maternal Wellbeing. DWB = Paternal Wellbeing. T1 = Prenatal. T2 = 4 Months Postnatal. T3 = 14 Months Postnatal. T4 = 24 Months Postnatal. I = Intercept. S = Slope. M = Mean. V = Variance. |

The latent variable framework permitted us to calculate a one-item latent factor for children’s problem behaviors at each time point using the reliability co-efficient associated with each scale to estimate the error variance for that latent factor (Brown, 2015). Specifically, we calculated the error term for each one-item latent factor using the following formula: , where VAR*x* is the variance of variable *x* and ρ is the reliability coefficient of variable *x* (Brown, 2015). We also created a couple relationship quality latent factor in which maternal and paternal ratings of couple satisfaction and couple conflict loaded onto a single factor. To index household socio-economic status, we created a model in which maternal and paternal perceived social standing and education loaded onto a single latent factor. Each of these latent factors were permitted to covary in the measurement model.

The initial fit of the measurement model was not acceptable. Inspection of the modification indices revealed the presence of correlated residuals between maternal and paternal education and between paternal social standing and paternal education. There was also evidence of correlated residuals between maternal and paternal ratings of conflict and between maternal conflict and paternal couple satisfaction ratings. The revised model incorporating these changes provided an acceptable fit to the data, χ2 (39) = 80.252, CFI = 0.950, TLI = 0.916, RMSEA = 0.049, 90%CI [0.034, 0.064]. Figure S3 shows the unstandardized estimates for this measurement model.

**References**

Brown, T.A. (2015). *Confirmatory Factor Analysis for Applied Research*. London: Guilford

Press.

Geiser, C. (2013). *Data Analysis with Mplus.* London: Guilford Press.

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| Figure S3. *Unstandardized (and Standardized) Robust Maximum Likelihood Estimates for Child Behavior, Couple Relationship Quality and Socio-economic Status Measurement Model.*  Note. \*\*\**p* < .001. \*\**p* <.01. \**p* <.05. T = Time Point. BEH = Behavior Problems. INT = Internalizing. EXT = Externalizing. CRQ = Couple Relationship Quality. SES = Socio-economic Status. IBQ = Infant Behavior Questionnaire. BITSEA = Brief Infant-Toddler Social and Emotional Assessment. SDQ = Strengths and Difficulties Questionnaire. MCSI = Maternal Couple Satisfaction Index. DCSI = Paternal Couple Satisfaction Index. MCTS = Maternal Conflict Tactics Scale. DCTS = Paternal Conflict Tactics Scale. MEDU = Maternal Education. DEDU = Paternal Education. MLAD = Maternal Ladder of Social Standing. DLAD = Paternal Ladder of Social Standing. V = Variance. |

Table S2. *Model 1 Unstandardized and standardized robust maximum likelihood estimates.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **B** | **SE** | **β** | **P** |
| **Maternal WB Intercept BY** |  |  |  |  |
| Maternal WB T1 | 1.00 | 0.00 | .78 | \*\*\* |
| Maternal WB T2 | 1.00 | 0.00 | .69 | \*\*\* |
| Maternal WB T3 | 1.00 | 0.00 | .65 | \*\*\* |
| Maternal WB T4 | 1.00 | 0.00 | .61 | \*\*\* |
| **Maternal WB Slope BY** |  |  |  |  |
| Maternal WB T1 | 0.00 | 0.00 | 0 |  |
| Maternal WB T2 | 1.00 | 0.00 | .14 | \*\*\* |
| Maternal WB T3 | 3.00 | 0.00 | .39 | \*\*\* |
| Maternal WB T4 | 5.00 | 0.00 | .61 | \*\*\* |
| **Paternal WB Intercept BY** |  |  |  |  |
| Paternal WB T1 | 1.00 | 0.00 | .89 | \*\*\* |
| Paternal WB T2 | 1.00 | 0.00 | .73 | \*\*\* |
| Paternal WB T3 | 1.00 | 0.00 | .71 | \*\*\* |
| Paternal WB T4 | 1.00 | 0.00 | .68 | \*\*\* |
| **Paternal WB Slope BY** |  |  |  |  |
| Paternal WB T1 | 0.00 | 0.00 | 0 |  |
| Paternal WB T2 | 1.00 | 0.00 | .13 | \*\*\* |
| Paternal WB T3 | 3.00 | 0.00 | .38 | \*\*\* |
| Paternal WB T4 | 5.00 | 0.00 | .60 | \*\*\* |
| **Socioeconomic Status BY** |  |  |  |  |
| Maternal Education | 1.00 | 0.00 | .38 | \*\*\* |
| Paternal Education | 0.79 | 0.18 | .24 | \*\*\* |
| Maternal Ladder | 2.18 | 0.36 | .85 | \*\*\* |
| Paternal Ladder | 1.55 | 0.32 | .58 | \*\*\* |
| Paternal Education WITH |  |  |  |  |
| Maternal Education | 0.45 | 0.08 | .32 | \*\*\* |
| Paternal Education WITH |  |  |  |  |
| Paternal Ladder | 0.35 | 0.08 | .26 | \*\*\* |
| **T2 Problem Behavior BY** |  |  |  |  |
| IBQ Distress T2 | 1.00 | 0.00 | .91 | \*\*\* |
| **T3 Problem Behavior BY** |  |  |  |  |
| BITSEA Total T3 | 1.00 | 0.00 | .87 | \*\*\* |
| **T4 Internalizing BY** |  |  |  |  |
| SDQ Internalizing T4 | 1.00 | 0.00 | .80 | \*\*\* |
| **T4 Externalizing BY** |  |  |  |  |
| SDQ Externalizing T4 | 1.00 | 0.00 | .84 | \*\*\* |
| T4 Internalizing WITH |  |  |  |  |
| T4 Externalizing | -0.14 | 0.26 | -.06 |  |
| Maternal WB T2 WITH |  |  |  |  |
| Paternal WB T2 | 4.94 | 1.23 | .27 | \*\*\* |
| Maternal WB T3 WITH |  |  |  |  |
| Paternal WB T3 | 5.25 | 1.01 | .36 | \*\*\* |
| Maternal WB InterceptWITH |  |  |  |  |
| Paternal WB Intercept | 3.56 | 1.16 | .22 | \*\* |
| Maternal WB Slope WITH |  |  |  |  |
| Paternal WB Slope | 0.29 | 0.07 | .42 | \*\*\* |

Table S2. *Model 1 Unstandardized and standardized robust maximum likelihood estimates.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **B** | **SE** | **β** | **P** |
| **T4 Externalizing ON** |  |  |  |  |
| T3 Problem Behavior | 0.40 | 0.06 | .68 | \*\*\* |
| Socioeconomic Status | 0.28 | 0.39 | .06 |  |
| Maternal WB Intercept | 0.10 | 0.05 | .18 | \* |
| Maternal WB Slope | -0.05 | 0.25 | -.02 |  |
| Paternal WB Intercept | 0.02 | 0.04 | .04 |  |
| Paternal WB Slope | 0.22 | 0.20 | .08 |  |
| UK vs NL (Dummy) | 1.43 | 0.42 | .28 | \*\* |
| UK vs USA (Dummy) | 0.04 | 0.51 | .01 |  |
| Child Gender | 0.03 | 0.27 | .01 |  |
| Paternal Involvement | -0.05 | 0.19 | -.02 |  |
| **T4 Internalizing ON** |  |  |  |  |
| T3 Problem Behavior | 0.12 | 0.05 | .29 | \* |
| Socioeconomic Status | -0.19 | 0.35 | -.05 |  |
| Maternal WB Intercept | 0.05 | 0.04 | .13 |  |
| Maternal WB Slope | 0.004 | 0.22 | .002 |  |
| Paternal WB Intercept | 0.05 | 0.03 | .14 |  |
| Paternal WB Slope | 0.04 | 0.17 | .02 |  |
| UK vs NL (Dummy) | -0.17 | 0.37 | -.03 |  |
| UK vs USA (Dummy) | -0.21 | 0.43 | -.04 |  |
| Child Gender | 0.35 | 0.22 | .10 |  |
| Paternal Involvement | 0.13 | 0.14 | .06 |  |
| **T3 Problem Behavior ON** |  |  |  |  |
| T2 Problem Behavior | 1.94 | 0.27 | .42 | \*\*\* |
| Socioeconomic Status | -0.62 | 0.56 | -.07 |  |
| Maternal WB Intercept | -0.04 | 0.05 | -.05 |  |
| Paternal WB Intercept | 0.09 | 0.04 | .11 | \* |
| UK vs NL (Dummy) | -3.67 | 0.46 | -.43 | \*\*\* |
| UK vs USA (Dummy) | -4.79 | 0.46 | -.55 | \*\*\* |
| Child Gender | -1.03 | 0.35 | -.13 | \*\* |
| Paternal Involvement | -0.16 | 0.23 | -.03 |  |
| **T2 Problem Behavior ON** |  |  |  |  |
| Socioeconomic Status | -0.17 | 0.14 | -.09 |  |
| Maternal WB Intercept | 0.04 | 0.01 | .21 | \*\* |
| Paternal WB Intercept | 0.01 | 0.01 | .06 |  |
| UK vs NL (Dummy) | -0.75 | 0.10 | -.39 | \*\*\* |
| UK vs USA (Dummy) | -0.14 | 0.11 | -.06 |  |
| Child Gender | 0.02 | 0.08 | .004 |  |
| Paternal Involvement | 0.06 | 0.06 | .05 |  |
| **Maternal WB Intercept ON** |  |  |  |  |
| Socioeconomic Status | -3.24 | 0.81 | -.35 | \*\*\* |
| UK vs NL (Dummy) | -0.99 | 0.52 | -.11 |  |
| UK vs USA (Dummy) | 0.95 | 0.53 | .10 |  |
| **Maternal WB Slope ON** |  |  |  |  |
| T2 Problem Behavior | 0.15 | 0.08 | .16 |  |
| Socioeconomic Status | -0.12 | 0.15 | -.07 |  |
| UK vs NL (Dummy) | 0.01 | 0.14 | .003 |  |
| UK vs USA (Dummy) | 0.11 | 0.12 | .06 |  |
| Child Gender | 0.12 | 0.11 | .07 |  |
| Paternal Involvement | -0.02 | 0.08 | -.02 |  |

Table S2. *Model 1 Unstandardized and standardized robust maximum likelihood estimates.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **B** | **SE** | **β** | **P** |
| **Paternal WB Intercept ON** |  |  |  |  |
| Socioeconomic Status | -2.89 | 1.03 | -.27 | \*\* |
| UK vs NL (Dummy) | -2.72 | 0.49 | -.26 | \*\*\* |
| UK vs USA (Dummy) | 1.46 | 0.64 | .14 | \* |
| **Paternal WB Slope ON** |  |  |  |  |
| T2 Problem Behavior | 0.11 | 0.08 | .11 |  |
| Socioeconomic Status | -0.27 | 0.17 | -.14 |  |
| UK vs NL (Dummy) | 0.07 | 0.13 | .04 |  |
| UK vs USA (Dummy) | 0.15 | 0.12 | .08 |  |
| Child Gender | 0.03 | 0.10 | .02 |  |
| Paternal Involvement | -0.001 | 0.07 | -.001 |  |
| **Maternal Education ON** |  |  |  |  |
| UK vs NL (Dummy) | -0.52 | 0.14 | -.20 | \*\*\* |
| UK vs USA (Dummy) | 0.41 | 0.11 | .15 | \*\*\* |
| **Paternal Education ON** |  |  |  |  |
| UK vs NL (Dummy) | -0.90 | 0.17 | -.27 | \*\*\* |
| UK vs USA (Dummy) | 0.43 | 0.14 | .13 | \*\* |
| **Paternal Involvement ON** |  |  |  |  |
| UK vs NL (Dummy) | 0.36 | 0.08 | .21 | \*\*\* |
| UK vs USA (Dummy) | 0.50 | 0.10 | .28 | \*\*\* |

*Note.* \*\*\**p* < .001. \*\**p* <.01. \**p* <.05. BY = Factor Loading. WITH = Correlated with. ON = Regressed on.

Table S3. *Model 2 Unstandardized and standardized robust maximum likelihood estimates.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **B** | **SE** | **β** | **P** |
| **Socioeconomic Status BY** |  |  |  |  |
| Maternal Education | 1.00 | 0.00 | .35 | \*\*\* |
| Paternal Education | 0.79 | 0.16 | .22 | \*\*\* |
| Maternal Ladder | 2.73 | 0.70 | .98 | \*\*\* |
| Paternal Ladder | 1.45 | 0.24 | .50 | \*\*\* |
| Paternal Education WITH |  |  |  |  |
| Maternal Education | 0.45 | 0.08 | .32 | \*\*\* |
| Paternal Education WITH |  |  |  |  |
| Paternal Ladder | 0.37 | 0.08 | .26 | \*\*\* |
| **T2 Problem Behavior BY** |  |  |  |  |
| IBQ Distress T2 | 1.00 | 0.00 | .91 | \*\*\* |
| **T3 Problem Behavior BY** |  |  |  |  |
| BITSEA Total T3 | 1.00 | 0.00 | .87 | \*\*\* |
| **T4 Internalizing BY** |  |  |  |  |
| SDQ Internalizing T4 | 1.00 | 0.00 | .80 | \*\*\* |
| **T4 Externalizing BY** |  |  |  |  |
| SDQ Externalizing T4 | 1.00 | 0.00 | .84 | \*\*\* |
| **T4 Internalizing WITH** |  |  |  |  |
| **T4 Externalizing** | -0.07 | 0.27 | -.06 |  |
| **Couple Relationship BY** |  |  |  |  |
| T2 Maternal Couple Satisfaction | 1.00 | 0.00 | .68 | \*\*\* |
| T2 Paternal Couple Satisfaction | 1.20 | 0.27 | .80 | \*\*\* |
| T2 Maternal Conflict | 0.21 | 0.05 | .67 | \*\*\* |
| T2 Paternal Conflict | 0.13 | 0.04 | .44 | \*\*\* |
| T2 Paternal Conflict WITH |  |  |  |  |
| T2 Maternal Conflict | 0.52 | 0.48 | .12 |  |
| T2 Paternal Conflict WITH |  |  |  |  |
| T2 Paternal Couple Satisfaction | 1.78 | 2.47 | .08 |  |
| T2 Maternal Conflict WITH |  |  |  |  |
| T2 Paternal Couple Satisfaction | -5.85 | 3.28 | -.60 |  |
| Couple Relationship WITH |  |  |  |  |
| Paternal Ladder | 1.54 | 0.72 |  |  |
| **T2 Problem Behavior WITH** |  |  |  |  |
| **Couple Relationship** | -0.32 | 0.34 | -.05 |  |
| **T4 Externalizing ON** |  |  |  |  |
| T3 Problem Behavior | 0.43 | 0.06 | .74 | \*\*\* |
| Socioeconomic Status | -0.14 | 0.34 | -.03 |  |
| Couple Relationship | -0.005 | 0.02 | -.02 |  |
| UK vs NL (Dummy) | 1.45 | 0.43 | .29 | \*\* |
| UK vs USA (Dummy) | 0.37 | 0.51 | .07 |  |
| Child Gender | 0.07 | 0.28 | .02 |  |
| Paternal Involvement | -0.02 | 0.18 | -.01 |  |
| **T4 Internalizing ON** |  |  |  |  |
| T3 Problem Behavior | 0.14 | 0.05 | .34 | \*\* |
| Socioeconomic Status | -0.29 | 0.28 | -.07 |  |
| Couple Relationship | -0.05 | 0.02 | -.24 | \*\* |
| UK vs NL (Dummy) | -0.27 | 0.37 | -.07 |  |
| UK vs USA (Dummy) | -0.15 | 0.42 | -.04 |  |
| Child Gender | 0.42 | 0.22 | .13 |  |
| Paternal Involvement | 0.21 | 0.15 | .10 |  |

Table S3. *Model 2 Unstandardized and standardized robust maximum likelihood estimates.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **B** | **SE** | **β** | **P** |
| **T3 Problem Behavior ON** |  |  |  |  |
| T2 Problem Behavior | 1.99 | 0.26 | .43 | \*\*\* |
| Socioeconomic Status | -0.42 | 0.52 | -.05 |  |
| Couple Relationship | -0.02 | 0.03 | -.04 |  |
| UK vs NL (Dummy) | -3.82 | 0.44 | -.44 | \*\*\* |
| UK vs USA (Dummy) | -4.76 | 0.45 | -.54 | \*\*\* |
| Child Gender | -1.04 | 0.35 | -.13 | \*\* |
| Paternal Involvement | -0.17 | 0.23 | -.03 |  |
| **T2 Problem Behavior ON** |  |  |  |  |
| Socioeconomic Status | -0.38 | 0.13 | -.18 | \*\* |
| UK vs NL (Dummy) | -0.83 | 0.09 | -.44 | \*\*\* |
| UK vs USA (Dummy) | -0.09 | 0.11 | -.05 |  |
| Child Gender | 0.03 | 0.08 | .01 |  |
| Paternal Involvement | 0.06 | 0.06 | .06 |  |
| **Couple Relationship ON** |  |  |  |  |
| Socioeconomic Status | 3.40 | 1.43 | .19 | \*\* |
| UK vs NL (Dummy) | -0.51 | 0.91 | -.03 |  |
| UK vs USA (Dummy) | -3.39 | 1.75 | -.20 | \* |
| Child Gender | 1.87 | 0.82 | .12 | \* |
| Paternal Involvement | 1.45 | 0.92 | .15 |  |
| **Maternal Education ON** |  |  |  |  |
| UK vs NL (Dummy) | -0.53 | 0.14 | -.20 | \*\*\* |
| UK vs USA (Dummy) | 0.40 | 0.11 | .15 | \*\* |
| **Paternal Education ON** |  |  |  |  |
| UK vs NL (Dummy) | -0.90 | 0.17 | -.27 | \*\*\* |
| UK vs USA (Dummy) | 0.43 | 0.14 | .13 | \*\* |
| **Paternal Involvement ON** |  |  |  |  |
| UK vs NL (Dummy) | 0.36 | 0.08 | .21 | \*\*\* |
| UK vs USA (Dummy) | 0.50 | 0.10 | .28 | \*\*\* |

*Note.* \*\*\**p* < .001. \*\**p* <.01. \**p* <.05. BY = Factor Loading. WITH = Correlated with. ON = Regressed on.

*Table S4. Model 3 Unstandardized and standardized robust maximum likelihood estimates.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **B** | **SE** | **β** | **P** |
| **Maternal WB Intercept BY** |  |  |  |  |
| Maternal WB T1 | 1.00 | 0.00 | .78 | \*\*\* |
| Maternal WB T2 | 1.00 | 0.00 | .67 | \*\*\* |
| Maternal WB T3 | 1.00 | 0.00 | .63 | \*\*\* |
| Maternal WB T4 | 1.00 | 0.00 | .59 | \*\*\* |
| **Maternal WB Slope BY** |  |  |  |  |
| Maternal WB T1 | 0.00 | 0.00 |  |  |
| Maternal WB T2 | 1.00 | 0.00 | .14 | \*\*\* |
| Maternal WB T3 | 3.00 | 0.00 | .39 | \*\*\* |
| Maternal WB T4 | 5.00 | 0.00 | .60 | \*\*\* |
| **Paternal WB Intercept BY** |  |  |  |  |
| Paternal WB T1 | 1.00 | 0.00 | .88 | \*\*\* |
| Paternal WB T2 | 1.00 | 0.00 | .73 | \*\*\* |
| Paternal WB T3 | 1.00 | 0.00 | .71 | \*\*\* |
| Paternal WB T4 | 1.00 | 0.00 | .68 | \*\*\* |
| **Paternal WB Slope BY** |  |  |  |  |
| Paternal WB T1 | 0.00 | 0.00 |  |  |
| Paternal WB T2 | 1.00 | 0.00 | .13 | \*\*\* |
| Paternal WB T3 | 3.00 | 0.00 | .37 | \*\*\* |
| Paternal WB T4 | 5.00 | 0.00 | .59 | \*\*\* |
| **Socioeconomic Status BY** |  |  |  |  |
| Maternal Education | 1.00 | 0.00 | .36 | \*\*\* |
| Paternal Education | 0.79 | 0.16 | .23 | \*\*\* |
| Maternal Ladder | 2.56 | 0.58 | .95 | \*\*\* |
| Paternal Ladder | 1.44 | 0.24 | .51 | \*\*\* |
| Paternal Education WITH |  |  |  |  |
| Maternal Education | 0.45 | 0.08 | .32 | \*\*\* |
| Paternal Education WITH |  |  |  |  |
| Paternal Ladder | 0.35 | 0.08 | .26 | \*\*\* |
| **T2 Problem Behavior BY** |  |  |  |  |
| IBQ Distress T2 | 1.00 | 0.00 | .91 | \*\*\* |
| **T3 Problem Behavior BY** |  |  |  |  |
| BITSEA Total T3 | 1.00 | 0.00 | .87 | \*\*\* |
| **T4 Internalizing BY** |  |  |  |  |
| SDQ Internalizing T4 | 1.00 | 0.00 | .80 | \*\*\* |
| **T4 Externalizing BY** |  |  |  |  |
| SDQ Externalizing T4 | 1.00 | 0.00 | .84 | \*\*\* |
| **T4 Internalizing WITH** |  |  |  |  |
| **T4 Externalizing** | -0.12 | 0.26 | -.06 |  |
| Maternal WB T2 WITH |  |  |  |  |
| Paternal WB T2 | 5.12 | 1.26 | .28 | \*\*\* |
| Maternal WB T3 WITH |  |  |  |  |
| Paternal WB T3 | 5.25 | 1.01 | .35 | \*\*\* |
| Maternal WB Intercept WITH |  |  |  |  |
| Paternal WB Intercept | 3.71 | 1.04 | .20 | \*\* |
| Maternal WB Slope WITH |  |  |  |  |
| Paternal WB Slope | 0.26 | 0.07 | .40 | \*\*\* |

*Table S4. Model 3 Unstandardized and standardized robust maximum likelihood estimates.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **B** | **SE** | **β** | **P** |
| **Couple Relationship BY** |  |  |  |  |
| T2 Maternal Couple Satisfaction | 1.00 | 0.00 | .83 | \*\*\* |
| T2 Paternal Couple Satisfaction | 0.82 | 0.14 | .68 | \*\*\* |
| T2 Maternal Conflict | 0.14 | 0.03 | .53 | \*\*\* |
| T2 Paternal Conflict | 0.09 | 0.02 | .38 | \*\*\* |
| T2 Paternal Conflict WITH |  |  |  |  |
| T2 Maternal Conflict | 1.08 | 0.29 | .12 |  |
| T2 Paternal Conflict WITH |  |  |  |  |
| T2 Paternal Couple Satisfaction | 4.49 | 1.45 | .08 |  |
| T2 Maternal Conflict WITH |  |  |  |  |
| T2 Paternal Couple Satisfaction | -0.72 | 1.51 | -.60 |  |
| **T4 Externalizing ON** |  |  |  |  |
| T3 Behavior Problems | 0.39 | 0.07 | .67 | \*\*\* |
| Socioeconomic Status | 0.22 | 0.37 | .04 |  |
| Couple Relationship | 0.02 | 0.03 | .07 |  |
| Maternal WB Intercept | 0.12 | 0.05 | .21 | \* |
| Maternal WB Slope | -0.07 | 0.26 | -.03 |  |
| Paternal WB Intercept | 0.02 | 0.04 | .04 |  |
| Paternal WB Slope | 0.25 | 0.21 | .09 |  |
| UK vs NL (Dummy) | 1.42 | 0.42 | .28 | \*\* |
| UK vs USA (Dummy) | 0.07 | 0.50 | .01 |  |
| Child Gender | 0.01 | 0.28 | .001 |  |
| Paternal Involvement | -0.08 | 0.19 | -.03 |  |
| **T4 Internalizing ON** |  |  |  |  |
| T3 Behavior Problems | 0.15 | 0.05 | .36 | \*\* |
| Socioeconomic Status | -0.30 | 0.28 | -.08 |  |
| Couple Relationship | -0.04 | 0.02 | -.25 | \*\* |
| Maternal WB Slope | -0.004 | 0.19 | .01 |  |
| Paternal WB Slope | 0.05 | 0.17 | .02 |  |
| UK vs NL (Dummy) | -0.24 | 0.37 | -.07 |  |
| UK vs USA (Dummy) | -0.17 | 0.42 | -.05 |  |
| Child Gender | 0.42 | 0.23 | .13 |  |
| Paternal Involvement | 0.21 | 0.15 | .10 |  |
| **T3 Behavior Problems ON** |  |  |  |  |
| T2 Behavior Problems | 1.95 | 0.27 | .42 | \*\*\* |
| Socioeconomic Status | -0.36 | 0.50 | -.04 |  |
| Couple Relationship | 0.01 | 0.03 | .02 |  |
| Maternal WB Intercept | -0.02 | 0.06 | -.02 |  |
| Paternal WB Intercept | 0.12 | 0.04 | .14 | \*\* |
| UK vs NL (Dummy) | -3.55 | 0.47 | -.41 | \*\*\* |
| UK vs USA (Dummy) | -4.80 | 0.48 | -.54 | \*\*\* |
| Child Gender | -1.06 | 0.36 | -.14 | \*\* |
| Paternal Involvement | -0.19 | 0.23 | -.04 |  |
| **T2 Behavior Problems ON** |  |  |  |  |
| Socioeconomic Status | -0.20 | 0.13 | -.09 |  |
| Maternal WB Intercept | 0.04 | 0.01 | .21 | \*\* |
| Paternal WB Intercept | 0.01 | 0.01 | .06 |  |
| UK vs NL (Dummy) | -0.76 | 0.10 | -.40 | \*\*\* |
| UK vs USA (Dummy) | -0.14 | 0.11 | -.07 |  |
| Child Gender | 0.02 | 0.08 | .01 |  |
| Paternal Involvement | 0.06 | 0.06 | .05 |  |

*Table S4. Model 3 Unstandardized and standardized robust maximum likelihood estimates.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **B** | **SE** | **β** | **P** |
| **Couple Relationship ON** |  |  |  |  |
| Socioeconomic Status | -0.88 | 1.47 | -.04 |  |
| Maternal WB Intercept | -0.76 | 0.20 | -.33 | \*\*\* |
| Paternal WB Intercept | -0.50 | 0.15 | -.25 | \*\* |
| UK vs NL (Dummy) | -3.11 | 1.18 | -.15 | \*\* |
| UK vs USA (Dummy) | -3.39 | 1.29 | -.16 | \*\* |
| Child Gender | 1.94 | 0.92 | .10 | \* |
| Paternal Involvement | 2.10 | 0.75 | .17 | \*\* |
| **Maternal WB Intercept ON** |  |  |  |  |
| Socioeconomic Status | -3.22 | 0.80 | -.33 | \*\*\* |
| UK vs NL (Dummy) | -0.98 | 0.52 | -.11 |  |
| UK vs USA (Dummy) | 0.96 | 0.53 | .10 |  |
| **Maternal WB Slope ON** |  |  |  |  |
| Socioeconomic Status | -0.03 | 0.16 | -.02 |  |
| T2 Behavior Problems | 0.15 | 0.08 | .15 |  |
| Couple Relationship | -0.02 | 0.01 | -.22 | \* |
| UK vs NL (Dummy) | 0.002 | 0.14 | .001 |  |
| UK vs USA (Dummy) | 0.03 | 0.12 | .02 |  |
| Child Gender | 0.15 | 0.11 | .09 |  |
| **Paternal WB Intercept ON** |  |  |  |  |
| Socioeconomic Status | -2.87 | 1.03 | -.26 | \*\*\* |
| UK vs NL (Dummy) | -2.78 | 0.48 | .14 | \*\* |
| UK vs USA (Dummy) | 1.45 | 0.63 | .14 | \* |
| **Paternal WB Slope ON** |  |  |  |  |
| Socioeconomic Status | -0.20 | 0.17 | -.10 |  |
| T2 Behavior Problems | 0.11 | 0.08 | .12 |  |
| Couple Relationship | -0.01 | 0.01 | -.16 |  |
| UK vs NL (Dummy) | 0.08 | 0.14 | .04 |  |
| UK vs USA (Dummy) | 0.10 | 0.13 | .05 |  |
| Child Gender | 0.03 | 0.10 | .02 |  |
| **Maternal Education ON** |  |  |  |  |
| UK vs NL (Dummy) | -0.53 | 0.14 | -.20 | \*\*\* |
| UK vs USA (Dummy) | 0.40 | 0.11 | .15 | \*\*\* |
| **Paternal Education ON** |  |  |  |  |
| UK vs NL (Dummy) | -0.90 | 0.17 | -.27 | \*\*\* |
| UK vs USA (Dummy) | 0.43 | 0.14 | .13 | \*\* |
| **Paternal Involvement ON** |  |  |  |  |
| UK vs NL (Dummy) | 0.36 | 0.08 | .21 | \*\*\* |
| UK vs USA (Dummy) | 0.50 | 0.10 | .28 | \*\*\* |
| **T2 Behavior Problems WITH** |  |  |  |  |
| Couple Relationship | 0.89 | 0.41 | .16 | \* |
| **Maternal WB T2 WITH** |  |  |  |  |
| Couple Relationship | -11.84 | 3.62 | -.34 | \*\* |
| **Paternal WB T2 WITH** |  |  |  |  |
| Couple Relationship | -9.88 | 3.39 | -.28 | \*\* |

*Note.* \*\*\**p* < .001. \*\**p* <.01. \**p* <.05. BY = Factor Loading. WITH = Correlated with. ON = Regressed on.