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Daily Manifestations of Caregiver- and Self-Reported Maladaptive Personality Traits in

Adolescent Girls

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Abstract

Establishing maladaptive personality traits at a younger age in a developmentally appropriate and clinically tangible way may alert clinicians to dysfunction earlier, and thus reduce the risk of significant impairment later in life. The DSM-5 Alternative Model for Personality Disorders (AMPD) provides a set of traits useful for organizing behavioral and experiential patterns central to daily personality functioning. The goal of the present study was to evaluate manifestations indicative of AMPD traits via ambulatory assessments in the daily lives of adolescent girls. Caregivers and girls (N=129; age: M=12.27, SD=.80) provided baseline assessments of girls' trait vulnerabilities (negative affectivity, detachment, antagonism, disinhibition, psychoticism) and girls additionally completed a 16-day ecological momentary assessment protocol (N= 5036 observations), rating social behaviors and experiences in their daily lives. Multilevel structural equation models revealed that trait vulnerabilities were linked to more extreme shifts in interpersonal experiences and behaviors from one moment to the next, suggesting that maladaptive personality traits were linked to greater variability. Furthermore, AMPD traits were positively and strongly related to negative affect in daily interpersonal situations. More specifically, girls' trait ratings were associated with elevated mean-levels in boredom, disappointment in others as well as interpersonal tension. Caregiver-reports complemented this perspective of dissatisfying social interactions, suggesting that especially detachment and antagonism accounted for lower levels of social connectedness and more variability in social activities in girls' daily lives. Results are discussed in terms of the short-term dynamics and related intervention targets of developmental personality pathology.

Keywords: adolescence; developmental personality pathology; interpersonal processes; ecological momentary assessment; multilevel structural equation modelling;

46   Daily Manifestations of Caregiver- and Self-Reported Maladaptive Personality Traits in

47   Adolescent Girls

48   Disrupted interpersonal and affective processes are defining features of personality

49   pathology (APA, 2013; Hopwood et al., 2013; Wright & Ringwald, 2022). Individual

50   differences in related behavioral and experiential patterns emerge long before adulthood

51   (Sharp et al., 2018; Shiner & Tackett, 2014), and relevant trait vulnerabilities predict a

52   multitude of poor outcomes such as low educational qualifications, official crime records, or

53   victimization (De Fruyt & De Clercq, 2014; Wertz et al., 2020; Winsper, 2021). Because most

54   empirical work has focused on structural models and developmental trajectories of

55   maladaptive personality traits at a young age (Somma et al, 2018; Widiger et al., 2009; De

56   Clercq et al., 2014b), we know little about how trait vulnerabilities manifest in the daily lives

57   of youth (Scott et al., 2015; Vanwoerden et al., 2021). Such knowledge, however, is key to

58   illuminate targets for sustainable treatment and prevention (e.g., Kaurin et al., 2022). To

59   narrow this gap, we offer a conceptual perspective and preliminary data on developmental

60   personality pathology as contextualized processes in the daily lives of adolescent girls. Thus,

61   we illustrate how related research questions can be tested via ambulatory assessment (AA).

62   Adolescence is characterized by considerable cognitive and social-contextual

63   development with important implications for the quality of social relationships (Blakemore &

64   Mills, 2014; Nelson et al., 2005). During late childhood and adolescence, peers become key

65   sources of social support and via social comparison adolescents use peer experiences as

66   primary bases for identity and self-concept development (Dahl et al., 2018). Increases in

67   autonomy and the expansion of social networks to close, intimate, and supportive friendships

68   coincide with the frequency of negative peer and negative emotional events (Bailen et al.,

69   2019; Griffith et al., 2021) with some evidence highlighting particular increases in

70   interpersonal stressors among adolescent girls (Hankin et al., 2007). Although stressful

71   interpersonal events as well as upticks in negative emotionality are – to some degree –

72 developmentally normative, they do not affect all youth equally (De Fruyt & De Clercq,

73 2014) and when severe and pervasive, they hinder successful coping with developmental

74 stressors (Sharp et al, 2018).

75   Although maladaptive personality traits generally tend to decline in adolescence

76 (Álvarez-Tomás et al., 2019), they do so much less in youth characterized by severe

77 emotional sensitivity, impulsivity, as well as a interpersonal reactivity (De Clercq et al.,

78 2009b; Cohen et al., 2005). Similarly, elevated symptoms of borderline personality disorder

79 (BPD) in adolescence predict social, educational, work- as well as health-related impairment

80 during the transition to adulthood (Wertz et al., 2020; Winsper et al., 2020; Wright et al.,

81 2016). Moreover, these effects tend to remain significant even after clinical remission (Biskin

82 et al., 2011) or after controlling for co-morbidity (Winograd et al., 2008; Wright et al., 2016).

83 Conceivably, the contribution of trait vulnerabilities to poor functional outcomes is carried via

84 frequent maladaptive interpersonal experiences (De Clercq et al., 2009a; Kerr et al., 2021;

85 Vanwoerden et al., 2021). Elevated levels of emotional instability (Franssens et al., 2022;

86 Verbeke et al., 2017), introversion or shyness (Coplan et al., 2004), disinhibition, as well as

87 domains of psychoticism (De Clercq et al., 2017; Esterberg et al., 2010) all characterize youth

88 that tend to experience difficulties with the formation of social autonomy via reliable peer

89 relationships. In the long run, difficulties with the mastery of developmental milestones may

90 likely contribute to persisting trait-correlated behaviors (Caspi & Shiner, 2006; Shiner &

91 Caspi, 2003; Shiner & Masten, 2002).

92   Although theoretically well-established (De Fruyt & De Clercq, 2014; Sharp & Wall,

93 2021), to date only one study empirically tested the hypothesized trajectory of disrupted

94 interpersonal processes toward personality pathology in the context of developmentally

95 sensitive periods. In their study, Vanwoerden et al. (2021) found that maladaptive personality

96 traits in childhood, especially those characterized by antagonism and emotional instability,

97 predict self-function in young adulthood via a cascade of social problems in adolescence. By

98   highlighting the contextual importance of interpersonal interactions, these findings emphasize

99   how important it is for clinically useful models of developmental psychopathology to assess

100   trait-relevant behaviors, experiences and perceptions that vary *within* an adolescent, in

101   addition to stable traits that vary *between* adolescents (Wright & Kaurin, 2020).

102   This distinction of dynamic within-person processes and stable between-person

103   differences of maladaptive personality is key to the Alternative Model for Personality

104   Disorders (AMPD) in DSM-5 Section III (De Clercq et al., 2009b; Sharp, 2020; Shiner,

105   2009). The model emphasizes self and interpersonal functioning (Criterion A) in the context

106   of a dimensional trait model established by psychometric procedures (Criterion B; e.g.,

107   Wright & Kaurin, 2020). Criterion A comprises contextually sensitive within-person

108   processes that match key developmental tasks in adolescence (e.g., empathy, interpersonal

109   proximity, self-regulation). Criterion B is organized around individual differences in how

110   these impairments are expressed and improves the existing diagnostic system by

111   incorporating five dimensions consistent with decades of empirical literature on normative

112   and pathological personality (negative affectivity, detachment, antagonism, disinhibition, and

113   psychoticism). The Personality Inventory for the DSM-5 (PID-5; Krueger et al., 2012) is the

114   most used measure on trait vulnerabilities of personality pathology (Criterion B) and has been

115   validated for use in adolescents (De Clercq et al., 2014b; De Clercq et al., 2014; Somma et al.,

116   2018). Previous work on the assessment of youth maladaptive personality traits, especially in

117   the context of PID-5 based assessments, has largely relied on self-reports. However, because

118   some aspects of behavior are more, or even exclusively, observable from another person's

119   perspective (*see* Oltmanns & Oltmanns (2021) *for an overview*), especially caregiver-reports

120   are key to comprehensive descriptions of youth maladaptive personality (Tackett, 2013). In

121   that regard, previous work shows that caregiver-reports of youth personality pathology are

122   strongly connected with externalizing problems in youth (Tackett et al., 2014), show stronger

123   associations with biological variables relative to youth self-reports (e.g., Tackett, Herzhoff et

124   al., 2013, Tackett, Lahey, et al., 2013), and that they are related to daily self-function in early

125   adulthood (Vanwoerden et al., 2021).

126   Assessing trait-relevant states of youth personality pathology such as those described

127   by Criterion A, in contrast, requires repeated measures, ideally via intensive longitudinal

128   research designs, such as AA. AA captures emotions, thoughts, or behaviors and context

129   repeatedly and with high real-world relevance over time, thereby allowing researchers to

130   quantify variability across time and context, or how much symptoms fluctuate from occasion

131   to occasion (Wright & Kaurin, 2020). This is important, because variability is an essential

132   indicator of reactive fluctuations in behavior and affect presumed to underlie personality

133   pathology (Bender et al., 2011) and many of the concepts in the DSM-5 AMPD Criterion A

134   suggest temporally dynamic processes (e.g., alternating between connection and rejection).

135   Most variability research, however, has focused on adult BPD populations and relied on

136   categorical diagnoses instead of instead of dimensional approaches to pathological personality

137   traits such as the AMPD. Generally, this line of research showed that people diagnosed with

138   BPD relative to non-clinical and clinical controls report significantly greater variability in

139   negative affect, self-esteem, and interpersonal behaviors than non-clinical controls (Ebner-

140   Priemer, 2007; Santangelo et al., 2017; Trull et al., 2008). Based on a situational judgement

141   assessment, Franssens et al. (2022) further suggest that these findings generalize to youth

142   samples, with cross-situational consistency in hostility and elevated variability in separation

143   insecurity being linked to the severity of adolescent BPD symptoms. More recent research

144   suggests that even essential features of BPD (e.g., affective instability) are transdiagnostic,

145   and that variability in socio-affective processes may represent an indicator of general

146   personality pathology (Ringwald et al., *in press*). This builds on prior work investigating the

147   crosscutting dimensions of the DSM-5 PD traits as they manifest from day to day (Wright &

148   Simms, 2016; Roche, 2018). For instance, Wright and Simms (2016) found that daily

149   expressions of PDs in adults were highly variable across days, such that half the total

150   variability was associated with daily fluctuations.

151   The use of AA has also helped describe daily occurrences of several BPD symptoms,

152   such as affective lability (Jahng et al., 2008), interpersonal devaluation, and rejection (Gadassi

153   et al., 2014; Houben et al., 2018), impulsivity (Berenson et al., 2011; Coifman, et al., 2012),

154   as well as other psychological symptoms including psychotic and dissociative symptoms

155   (Glaser et al., 2010; Stiglmayr et al., 2008), quarrelsomeness (Sadikaj et al., 2012), and

156   frequently co-occurring dysfunctional behaviors (e.g., suicidal ideation; e.g., Kaurin et al.,

157   2020). Similar empirical work in youth at risk has just begun to emerge and has advanced our

158   understanding of suicidality and non-suicidal self-injury (Andrewes et al., 2017; Selby et al.,

159   2021), as well as the dynamics of anger-related difficulties (Scott et al., 2015) or the role of

160   parental invalidation in momentary expressions of symptoms in youth diagnosed with BPD

161   (Vanwoerden et al., 2022). This line of research is complemented by Vanwoerden et al.

162   (2021), who asked young adult participants to complete a 14-day daily-diary protocol

163   including one item on self-functioning. Those ratings were correlated with caregiver-reported

164   childhood maladaptive personality traits – assessed 10 years ahead of the daily diary –with the

165   highest correlation coefficient emerging for depressive traits, followed by disagreeableness

166   and emotional instability.

167   **The Present Study.** Despite the waxing and waning course of personality pathology

168   that generally leads to an attenuation over time, there is also evidence to suggest that social

169   and occupational functioning tends to remain poor among those scoring high on trait

170   vulnerabilities. Key to the promotion of sustainable improvements in functioning is the

171   detection of developmentally sensitive intervention targets. For this to succeed, it is important

172   to understand processes and mechanisms key to developmental tasks in youth that underlie

173   pathological personality functioning.

174   Thus, the purpose of the present study was to explore associations of caregiver- and

175   self-reports of maladaptive personality traits as defined by Criterion B of the AMPD with

176   *mean-levels* as well as *variability* in momentary assessments of interpersonal and affective

177   processes key to youth development. Capturing experiences within the everyday situations

178   that are related to pathology, in near real time, aligns closely with how these processes are

179   defined clinically and provide greater ecological validity. To the best of our knowledge, no

180   study has systematically investigated links between caregiver- as well as self-reports of

181   maladaptive personality traits and the relative fluctuation of socio-affective processes as they

182   emerge in youth's daily lives. Our investigation is to be taken as a proof of concept and

183   exploratory analysis because previous relevant data on the relationship of adolescent

184   maladaptive personality traits and a wide range of real-world behaviors and experiences are

185   lacking, and because our momentary measures of socio-affective processes were not

186   specifically developed to comprehensively assess Criterion A. Instead, they represent a subset

187   of measures from an ongoing study chosen to cover the breadth of interpersonal experiences

188   representative of adolescent daily lives (Sequeira et al., 2021).

189   Based on more general work on self- and informant agreement on ratings of

190   pathological personality, we did expect that that caregiver-reported traits of personality

191   pathology would be more strongly related to observable behaviors (e.g., social activities),

192   whereas girls' self-reports would be more strongly related to less visible processes (e.g.,

193   affect, disappointment; e.g., Tackett et al., 2014). Given previous work on the contextual

194   reactivity of key symptoms of personality pathology, we further hypothesized that girls

195   characterized by elevated levels of trait vulnerabilities would also show higher levels of

196   variability in daily socio-affective processes (Franssens et al., 2022; Ringwald et al., *in press*).

197   We focused on early adolescence, because this developmental period is marked by

198   greater emotional and interpersonal instability (Griffith et al., 2021). We further specifically

199   focused on early adolescent girls because research suggests that girls tend to exhibit a stronger

200 relational orientation and greater affiliative needs in adolescence compared to boys

201 (Vanwoerden et al., 2021), which likely contributes to greater interpersonal stress in girls

202 (Kaurin et al., in press). Like in Sequeira et al. (2021), early adolescent girls completed a 16-

203 day ambulatory assessment protocol, reporting on perceptions of their feelings of

204 connectedness as well as negative affect across diverse social contexts, as well as experiences

205 of interpersonal tension, disappointment, boredom, and social activities several times per day.

206 **Method**

207   All study procedures were approved by the University of Pittsburgh Institutional

208 Review Board (STUDY19070027). Participants were recruited for a longitudinal study of risk

209 for anxiety and depression in adolescent girls via community advertisements. Informed

210 consent and youth assent were obtained after a detailed study explanation, and participants

211 received up to $540 for study completion including neuroimaging and clinical interviews.

212 **Participants**

213   Participants were 129 girls (M_{age}=12.27, SD_{age}=.80), of which 65% were white, 20%

214 black/African American, 2% Asian, 1% Native American, 9% biracial, and 1% other. Of

215 these N=129 girls, n=127 completed baseline assessments of personality pathology, for n=126

216 self-reports were incremented by caregiver-reports, and n=117 girls completed the AA

217 protocol. Median total family income in this sample was between $80,000 and $90,000.

218 Descriptive statistics are summarized in supplementary Table 1.

219 **Procedure**

220   The current data were drawn from the initial assessment of a larger longitudinal study.

221 Ratings of youth maladaptive personality traits were obtained during a baseline assessment.

222 Girls then answered questions on a smartphone for 16 consecutive days (2 school weeks, 3

223 weekends). Prompts were randomly sampled within 3 blocks of time on weekdays (morning,

224 after school and evening) and 4 blocks of time on weekends (morning, early afternoon, late

225 afternoon, evening), for a maximum total of 54 samples. They were asked to respond to a 3-5-

226   minute series of prompts about mood and social context based on previous AA studies

227   (Sequeira et al., 2021; Silk et al., 2022) using a study-provided smartphone that included

228   WebDataExpress, an application for secure remote data collection developed by the Office of

229   Academic Computing in the University of Pittsburgh Department of Psychiatry. On average,

230   girls completed M=39.04 prompts (SD=14.60; range=1-54), and compliance in terms of

231   overall percentage of prompts completed across all participants was high (79.71%).

232   **The Personality Inventory for DSM-5—Brief Form (PID-5-BF).** We employed

233   adolescent- and caregiver-reports of the PID-5-BF, a personality trait assessment scale for

234   children ages 11–17. The PID-5-BF assesses 5 personality trait domains (i.e., negative affect

235   (NA), detachment (DET), antagonism (ANT), disinhibition (DIS), and psychoticism (PSY)),

236   with each trait domain captured with 5 items (NA: "I get irritated easily by all sorts of

237   things.", DET: "I'm not interested in making friends.", ANT: "It's no big deal if I hurt other

238   peoples' feelings.", DIS: "People would describe me as reckless.", PSY: "My thoughts often

239   don't make sense to others."). The items ask the adolescent or caregiver to rate how well a

240   statement describes them or their child generally on a scale from 0 ("Very False/Often False")

241   to 3 ("Very True/Often True"). A mean score was calculated across all trait domains.

242   Caregiver- and adolescent-reports were significantly correlated, with coefficients ranging

243   from r=.20 to r=.38, and both displayed acceptable to good levels of internal consistency (see

244   Table 1). Expectedly, for internalizing traits (e.g., negative affect) agreement was lower, and

245   for traits high in observability (e.g., disinhibition) it was higher.

246   **Ambulatory Assessment.** Before the initiation of the AA protocol, girls completed an

247   AA orientation conducted by research staff. On each of these 16 days, girls were randomly

248   sampled (indicated by a delivered survey "beep") three times per day on weekdays (once in

249   the morning between 7 AM and 8 AM and twice between 4 PM and 9:30 PM) and four times

250   per day on the weekends between 10 AM and 9:30 PM, allowing for a maximum of 54

251   samples. The large number of samples allows for a more stable estimate of "typical

252 functioning," even in the potential presence of several atypical days. To keep participant

253 burden reasonably low, the questions took approximately 5 minutes to complete at each

254 interval.

255   After being prompted, girls were guided through a series of questions about their

256 recent interactions, behavior and mood. Specifically, they were asked to indicate social

257 companions (e.g., alone, with peers) at the moment of the call, and were asked how *connected*

258 they felt with those people using a 0 ("Not at all") to 100 ("Extremely") sliding scale. Girls

259 were additionally asked to report on their *most recent negative interaction with a peer* (i.e.,

260 friend, other kid their age, boyfriend/girlfriend) and to type out details about this interaction in

261 a free response box, which allowed for quality checking. Girls were also asked to report on

262 how "worried," "stressed", "mad", and "sad" they felt during each interaction, again using a

263 0-100 slider. After-school assessment allowed youth to report on interactions that occurred

264 during the school day. Therefore, these items were aggregated across participants to obtain a

265 global index of *negative affect* related to peer social interaction, in addition to the one-item

266 outcome of *social connectedness*.

267   Girls were also asked to report on behaviors indicative of *interpersonal tension*. They

268 were given a checklist that included statements that describe how they may have been feeling

269 or behaving during the interaction and were asked to check off which statements applied to

270 them in the situation. These statements included how "angry", "annoyed" with someone,

271 "treated unfairly" or "stressed out" by someone they felt during that interaction, and whether

272 they "disagreed" with their interaction partner.

273   Girls were further asked to indicate whether they felt *disappointed* by someone, or

274 whether they felt *bored* during their interactions. Like girls' reports on negative peer

275 interactions, participants also described their *most recent positive interaction with a peer*.

276   Finally, to sample *social activities*, girls were also asked to recall their social

277 interactions with peers since the previous "beep" during periods when AA sampling is not

278   feasible (i.e., during school, sporting events). They were shown a list of possible social

279   interactions with peers and asked to place a checkmark next to any that they engaged in since

280   the last sampling point. Possible social interactions included "make a phone call", "send a text

281   message", "go to a friend's house", "invite a friend over to your house", "go to a movie,

282   shopping center, or restaurant with a friend or friends", "go to a sporting event, amusement

283   park, pool, or other outdoor activity with other kids", "participate in a team sport, club or

284   extracurricular activity with other kids", "go to a party or dance", "go to a sleepover or

285   overnight event", "talk to a kid you've never talked to before in person", "talk to a kid you've

286   never talked to before via text, email, or online".

287   Because momentary items of interpersonal tension, negative affect, and social

288   activities were strongly intercorrelated (range of $r =.51-.86$), we created a sum score for each

289   of the three scales.

290   **Data Analysis**

291   Repeatedly sampling interpersonal and affective processes in youth's daily lives

292   results in a hierarchical data structure: Momentary assessments (within-person level) are

293   nested within individuals (between-person level). Partitioning the variance into each level

294   provides information about how much of the momentary ratings are attributable to individual

295   differences, and what proportion of the variance is attributable to within-person momentary

296   fluctuations in subjective ratings. To quantify the proportion of total variance of our

297   momentary variables accounted for at the between-person level, we calculated the intraclass

298   correlation (ICC), with 1.0 – ICC capturing the proportion of within-person variance.

299   We adopted a multilevel structural equation modeling approach (MSEM; Sadikaj et

300   al., 2021) for the second portion of our analyses. This framework allows us to test whether

301   momentary departures from a girl's mean-level (i.e., variability) as well as average levels of

302   AA variables were affected by individual differences in caregiver- and self-reported

303   maladaptive personality traits. Separate models were run for each trait, outcome and

304   informant. Figure 1 depicts the statistical models described below.

305   To assess the differential links of caregiver- and self-reported maladaptive personality

306   traits with mean-levels of daily socio-affective processes, we regressed individual differences

307   in means and variances of momentarily assessed variables on PID-5 scales at the between-

308   person level. This is commonly referred to as a location (mean) scale (variances) model in the

309   standard multilevel modeling literature. Within-person residuals were allowed to vary freely

310   across individuals and become outcomes at the between-person level. Individual differences

311   in residual variability can be interpreted as differences in variability around each person's

312   own mean over time and individual differences in the random intercept reflect person-specific

313   averages in behavioral or affective (in)consistency. These individual differences were

314   regressed on caregiver- and self-reported trait vulnerabilities, controlling for girls' age.

315   In all models, time (i.e., time centered on mean of observations) was entered as

316   within-person covariate to account for potential effects of time trends. By detrending

317   momentarily assessed data in this way, the residual variances can be more readily interpreted

318   as "true" variability rather than systematic patterns in the data. Given concerns about the

319   overlap of variable means and variability (Wright & Ringwald, 2022), we adjusted for their

320   association by correlating within-person residual variance of the outcome variables with the

321   person-specific mean of the same variables (Hisler et al., 2020). MSEM was conducted using

322   Mplus Version 8.8 (Muthén & Muthén, 2021), with Bayesian estimation because it allows

323   modeling of heterogeneity in residual variances of outcome variables at the within-person

324   level. Significance for all model parameters was based on 95% Credibility Intervals (CIs),

325   with CIs that excluded zero being indicative of a parameter that differed significantly from

326   zero. Missing data was assumed to be missing at random. A Bayesian approach to SEM uses

327   all available data in estimation: with increasingly large samples, it provides similar results to

328   Full Information Maximum Likelihood to address missing data.

329   Finally, to illustrate how specific processes co-fluctuated in the moment-to-moment

330   stream of daily life, we further assessed within-person associations of interpersonal and

331   affective processes in the daily lives of our participants.

Results

333   **Stability and Variability of Socio-Affective Processes.** We first examined what

334   proportion of variance in momentarily assessed socio-affective processes was attributable to

335   between-person differences. Processes with the highest ICCs were negative affect (.52), social

336   activities (.52) and connectedness (.51), suggesting that, on average, approximately half of the

337   variance in these processes can be attributed to stable individual differences, and the

338   remaining portion, to daily fluctuations. Processes characterized by much stronger situational

339   variability were interpersonal tension (.29), boredom (.19), and disappointment (.08).

340   **Mean-Level Associations with Maladaptive Personality Traits.** The upper half of

341   Tables 2 and 3 provide a detailed overview of coefficients for models based on self- and

342   caregiver-reports respectively. Overall, adolescent-reported personality pathology was

343   significantly positively related to average levels of reported momentary boredom (β =.23, CI:

344   .06; .42), disappointment in others (β =.28, CI: .09; .45), as well as negative affect (β =.33,

345   CI: .17; .49). Caregiver-reports of youth personality, however, were only significantly

346   positively related to negative affect (β =.13, CI: .06; .30) and experiences of boredom (β =.21,

347   CI: .01; .40).

348   Analyses at the domain level revealed that for adolescent-reports, negative affectivity

349   was most strongly related to socio-affective processes in daily life, with significant positive

350   associations emerging for negative affect in social interactions (β =.45, CI: .28; .60) and

351   interpersonal disappointment (β =.33, CI: .15; .51). These were followed by correlations with

352   psychoticism, which was positively related to interpersonal disappointment (β =.24, CI: .05;

353   .43) and negative affect (β =.27, CI: .10; .44). Disinhibition was linked to disappointment (β

354   =.21, CI: .02; .41), interpersonal tension (β =.33, CI: .06; .56) and negative affect (β =.30, CI:

355   .07; .46). Antagonism and detachment were most strongly linked to boredom in social

356   interactions (β =.23, CI: .06; .41; β =.24, CI: .07; .41).

357   Similarly, caregiver-reported psychoticism and disinhibition were positively linked to

358   negative affect (β =.18, CI: .05; .36; β =.21, CI: .00; .38). Detachment was positively

359   associated with boredom (β =.23, CI: .06; .41) and negatively with experiences of

360   connectedness (β =-.33, CI: -.51; .09), while psychoticism was also positively linked to

361   disappointment (β =.24, CI: .03; .45). Finally, negative affectivity was positively linked to

362   interpersonal tension (β =.32, CI: .10; .54).

363   **Within-Person Variability and Maladaptive Personality Traits.** The lower half of

364   Tables 2 and 3 provide a detailed overview of coefficients for models based on self- and

365   caregiver-reports respectively. Adolescent-reported personality pathology was positively and

366   significantly linked to individual differences in daily fluctuations in boredom (β =.24, CI:.09;

367   .41), interpersonal disappointment (β =.21, CI: .05; .40) as well as negative affect (β =.25, CI:

368   .06; .42). In addition to boredom and negative affect, caregiver-reports were also positively

369   linked to variability in connectedness (β =.20, CI: .00; .38) as well as social activities (β =.23,

370   CI: .04; .38) in youth's daily lives.

371   At the domain-level, variability in negative affect was positively linked to adolescent-

372   reported psychoticism (β =.22, CI: .03; .39), disinhibition (β =.20, CI: .01; .37) and

373   detachment (β =.23, CI: .03; .39). Variability in disappointment was positively linked to

374   psychoticism (β =.19, CI: .02; .37), disinhibition (β =.24, CI: .07; .40) and negative affectivity

375   (β =.22, CI: .03; .39), and variability in experiences of boredom with psychoticism (β =.18,

376   CI: .03; .35), detachment (β =.22, CI: .06; .40), and antagonism (β =.25, CI: .12; .43). Finally,

377   a significant positive association emerged between adolescent-reports of disinhibition and

378   fluctuations in interpersonal tension (β =.19, CI: .00; .36).

379   For caregiver-reports, we found that the strongest associations emerged for negative

380   affect (range of βs =.22-.30), with almost all domains showing significant positive

381   associations, except for detachment. The daily process with the second most significant

382   associations was interpersonal tension, being positively linked to negative affectivity (β =.23,

383   CI: .05; .39), detachment (β =.18, CI: .01; .36) and antagonism (β =.19, CI: .02; .36).

384   Variability in social activities was significantly positively linked to psychoticism (β =.22, CI:

385   .06; .37), detachment (β =.26, CI: .08; .41), and antagonism (β =.20, CI: .02; .36). Finally,

386   variability in boredom (β =.22, CI: .06; .40), connectedness (β =.19, CI: .01; .36) and

387   disappointment (β =.27, CI: -.33; .89) all were positively linked to detachment.

388   Momentary mean levels were moderately to strongly positively associated with

389   variability in the matched dimension (e.g., momentary mean of negative affect and variability

390   in negative affect), suggesting that girls that generally tended to experience more negative

391   affect, also tended to be more reactive to situational demands.

392   **Within-Person Associations.** Generally, momentarily assessed socio-affective

393   processes were linked to each other in expected directions, which speaks to the validity of our

394   administered items. To illustrate, interpersonal interactions marked by experiences of

395   boredom tended to coincide with disappointment in the interaction partner and in situations

396   where girls experienced disappointment in others, these feelings tended to be accompanied by

397   increased levels of interpersonal tension and negative affect. Conversely, feelings of

398   connectedness with interaction partners coincided with more social activity. Overall, stronger

399   associations emerged at the between-person level. Where differences appeared across levels

400   of analyses, correlations tended to be significant on one, but not the other level. See Table 4

401   for a full overview of within- as well as between-person associations of momentarily assessed

402   variables.

403   **Discussion**

404   Personality pathology has significant interpersonal costs. These costs are particularly

405   impactful during sensitive developmental periods such as early adolescence, which coincide

406   with the foundation of social autonomy through successful peer relationships, and thus pave

407   the way for future social-contextual and occupational functioning. We set out to illustrate how

408   caregiver- and adolescent-reported individual differences in relevant trait vulnerabilities affect

409   daily interpersonal and affective processes in adolescent girls. We found that socio-affective

410   processes were highly variable, with momentary fluctuations accounting for ~50-90% in their

411   overall variance, and that individual differences in this variability were meaningfully related

412   to adolescent- and especially to caregiver-reports of youth's maladaptive personality traits.

413   We also found that both parent- and self-reported traits were linked with average momentary

414   reported behavior and emotions, albeit somewhat differently across reporters.

415   Two sets of implications arise from these findings. First, youth personality pathology

416   occurs early in development, it can be reliably assessed, and caregiver- and adolescent-reports

417   both represent meaningful sources of information that potentially complement each other.

418   (Kraemer et al. 2003). Second, youth maladaptive personality traits appear to give rise to

419   experiential and behavioral processes central to hypothesized etiological models of youth

420   personality pathology, including temporally dynamic and contextually reactive processes.

421   Conceivably, higher levels of variability in relevant socio-affective processes may be affected

422   by stronger sensitivity to situational cues as well as impulsive modes of processing. As an

423   example, youth who experience sustainably elevated levels of negative affect are likely more

424   prone to react in a disproportionate way to situations elicited by emotional stressors such as

425   peer conflict, which – in turn – could manifest in quarrelsome behaviors (Sadikaj et al., 2013).

426   Generally, these broad processes are consistent with our results suggesting that trait

427   vulnerabilities correlated with more extreme shifts in emotional and behavioral reactions from

428   one moment to the next. More variability, however, may also be indicative of alternative

429   person–environment transactions such as the selection into specific, potentially hostile, or less

430 supportive, environments as well as the evocation of dysfunctional responses from that

431 environment (Hopwood et al., 2022). One possibility to disentangle and characterize these

432 processes more precisely, would be to use a yoked ambulatory assessment design, in which

433 youth provide data about an interaction and one of their peers, teachers, siblings or other

434 family members is prompted to do the same.

435   We found convergence in the range of .2-.4 for self and parent repots, which is typical

436 of dimensionally assessed traits (Oltmanns & Oltmanns, 2021). In general, associations with

437 daily processes emerged for *internalizing* traits (i.e., negative affect, psychoticism) per girls'

438 reports, whereas caregiver reports showed such daily associations with *externalizing* traits

439 (i.e., antagonism), though the differential predictive value of caregiver- and self-report was

440 not as clear-cut as expected. To illustrate, one notable exception to this general expected

441 pattern was that caregiver-reported detachment was linked to interpersonal processes at levels

442 comparable to antagonistic traits and disinhibition, both of which are highly externalizing.

443 Possibly, distress (for both the adolescent and caregiver) associated with personality

444 pathology traits may moderate their observability in addition to externalizing behavioral

445 patterns (Yalch & Hopwood, 2016). Some traits might tend to bother people in a way that is

446 not noticeable to others (e.g., derealization in psychoticism), whereas for other traits' intra-

447 and interpersonal distress might be easily perceived (e.g., rejection associated with

448 withdrawal in detachment; Kaurin et al., 2018). Additionally, because of enhanced peer-

449 sociability that marks adolescence, distress related to social withdrawal may be more salient,

450 and thus more likely to be picked up by caregivers during this developmental period.

451   Caregiver-reports of elevated personality pathology were related to adolescent daily

452 socio-affective experience in several ways. Adolescent girls high in caregiver-reported

453 personality pathology tended to report feeling less connected to their interaction partners in

454 daily life. At the same time, almost all socio-affective experiences were related to variability,

455 suggesting a behavioral profile of trait vulnerabilities that is potentially indicative of greater

456   reactivity. This finding is in line with previous work (e.g., Wright & Simms, 2016; Ringwald

457   & Wright, 2022), signifying that adults with higher maladaptive trait levels generally report

458   greater variability in daily personality disorder features.

459   　　　Adolescent-reports of personality pathology were further linked to elevated mean-

460   levels as well as variability in daily experience of boredom, or finding little stimulation in

461   social contact, and the tendency to experience disappointment in others. Boredom is a

462   common dysphoric experience that is consistently associated with youth (personality)

463   psychopathology, both cross-sectionally and longitudinally (Spaeth et al., 2015; Speranza et

464   al., 2012), but this is the first time it has been demonstrated in daily life of youth high in

465   maladaptive personality pathology. In adult samples, boredom has been associated with

466   arousal mechanisms that may plausibly lead to quarrelsomeness, but also to reckless

467   behaviors, possibly due to poor affect-regulatory strategies (Miskewicz et al., 2015;

468   Vanwoerden et al., 2022). In our study, momentary experiences of boredom were negatively

469   linked to negative affect. This provides a plausible mechanism via which boredom, and

470   impulsive behaviors in turn, might be perpetuated via experiences of reduced negative affect.

471   　　　The consistent links to stability and fluctuation in disappointment in daily

472   interpersonal interactions integrate well into the wealth of literature documenting a strong

473   overlap between insecure attachment and personality pathology (Crawford et al., 2007).

474   Moreover, heightened rejection sensitivity is to some degree developmentally normative (e.g.,

475   Guyer et al., 2016; Masten et al., 2009; Silk et al., 2014). At the within-person level,

476   significant positive links between momentary experiences of disappointment and negative

477   affect as well as interpersonal tension further suggest that maladaptive personality is an

478   important individual difference that may moderate adolescents' distress in response to

479   perceived social exclusion.

480   　　　Both reporting sources reliably picked up persistent experiences of negative affect in

481   daily social interactions, with somewhat stronger and more consistent correlational patterns

482   emerging for caregiver-reports. This somewhat contradicts previous work, generally

483   suggesting that the self is a better source for less visible traits or states (De Los Reyes &

484   Kazdin, 2005; Kraemer et al., 2003). The negative affect subscale of the PID-5-BF represents

485   a blend of states that differ in whether they are typically linked to more overt or covert signs

486   of discomfort and distress. That is, caregivers are going to be able to pick up girls' irritable

487   mood more than girls' "fear of being alone". In line with this reasoning, follow-up analyses at

488   the item-level suggest that particularly high correlations with momentary negative affect

489   emerged for caregiver-reported items indicative of externalizing domains such as irritability

490   ($r = .24$, $p = .010$), and lower ones for those indicative of internalizing such as the fear of

491   being alone ($r = .09$, $p = .331$). The reverse pattern was observed for adolescent reports

492   (irritability: $r = .25$, $p = .010$; fear of being alone: $r = .42$, $p < .001$). Moreover, girls in our

493   sample were pre-teens and early teens, and were possibly less autonomous socially, with

494   caregivers being more involved in their private lives.

495   **Limitations.** Because AMPD-based youth personality pathology has not been studied

496   with the use of AA, there are no well-validated momentary measures of Criterion A. The ad-

497   hoc scale used in this study covers a breadth of interpersonal experiences that are relevant for

498   adolescent social lives, but its nomological network needs to be assessed further to test its

499   construct validity. Although our exploratory analyses generally returned plausible

500   associations among AA and dispositional variables, some unexpected links emerged, that

501   warrant further study. We know very little about the resolution of interpersonal and affective

502   processes in daily life, and it is unlikely that the length of, for instance, an affective state is

503   the same from one Individual to another or even from one social situation to the next (Kaurin

504   et al., 2022). Such knowledge is key toward formalizing functional relationships between

505   specific events and relevant intraindividual processes at any given time point. Thus, it may

506   very likely be that the timing of our prompts did not match the "true" timescale of the

507   processes we assessed and thus blurred momentary co-occurrences of socio-affective states.

508   Another limitation to consider is shared method variance between AA variables and

509   self-reports, which likely explains why more correlates emerged for girls' reports. One

510   alternative might be to use a yoked ambulatory assessment design, in which one person

511   provides data about an event (e.g., conflict) and another is prompted to do the same (e.g.,

512   peers, caregivers; Ringwald et al., 2022). Because previous work has documented particularly

513   high levels of informant discrepancies between caregiver- and adolescent-reports on questions

514   about peer relationships (Kraemer et al. 2003), future studies further need to account for blind

515   spots of both self- and caregiver-reports. This can be done by complementing these with

516   teacher- and peer-reports, thereby providing a more complete assessment of the diverse daily

517   social contexts of youth.

518   Moreover, the choice of a homogeneously female (defined by sex at birth) sample

519   oversampled for fearful temperament was motivated by our goal to represent a

520   developmentally sensitive period of hypervigilance to peer processes. Thus, we cannot be sure

521   of the extent to which gender identity or sex potentially moderated the extent of judgment

522   accuracy in our study. Elevated levels of shy temperament may have also contributed to a

523   restricted range of externalizing behaviors, particularly so for caregiver-reports, which were

524   consistently and significantly lower than girls' self-reported maladaptive traits. Similarly, in

525   our study, the total number of AA entries was negatively related to personality pathology,

526   which further diminishes the variance in negatively experienced social interactions or even

527   disruptive behaviors. Thus, to evaluate whether our findings are representative, they need to

528   be replicated in a sample of youth at risk for personality pathology, that is, youth

529   characterized by elevated emotional sensitivity, impulsivity, and reactivity to environmental

530   demands (De Clercq et al., 2009b). The relative frequency of specific processes or events key

531   to adolescent daily lives also has direct implications for the optimal length of AA protocols.

532   To illustrate, frequent daily assessments help capturing short-term dynamics of interpersonal

533   and affective processes. However, when administered over a relatively short period,

534   researchers may likely miss rare and episodic events and high-risk time windows, such as

535   those when affective dysregulation may escalate into rare, but critical events that are prevalent

536   in personality pathology (e.g., self-injury). Similarly, brief protocols also offer little in the

537   way of illustrating periodical shifts in processes central to psychopathology (e.g.,

538   exacerbating symptoms from week to week or during a developmentally critical period; e.g.,

539   Ren et al., 2022). Relatedly, our study needs to be replicated with different measures of

540   personality pathology. The PID-5-BF has been shown to have generally good psychometric

541   properties, but it does not assess some aspects of personality pathology, such as self-harm and

542   antisocial behavior, that may limit its utility for assessing consequential clinical problems.

543   **Future Directions.** Most empirical research on developmental personality pathology

544   in the context of the AMPD is based on the analysis of between-person variation (Fossati &

545   Somma, 2021) and there is evidence to suggest that personality pathology can be reliably

546   framed within a single structural framework across the lifespan (De Clercq et al., 2014b).

547   What is, however, missing in the literature are studies that test which processes

548   moderate the persistency of elevated personality pathology across development. We extend

549   this line of research by analyzing variation within adolescent girls across trait relevant

550   contexts in daily life, uniting the benefits of dimensional and clinical approaches. However,

551   future studies are needed to illustrate whether and how daily interpersonal and affective

552   experiences foster vicious circles that disrupt complex developmental tasks, thereby

553   accumulating into stable inter-individual differences (De Fruyt & De Clercq, 2014;

554   Vanwoerden et al., 2021). Crucial to the success of this undertaking are empirical designs that

555   study long-term developmental trajectories in accord with changes in daily interpersonal and

556   affective processes. Similarly, despite the waxing and waning course of personality pathology

557   and a general attenuation of pathological traits over time, social and occupational functioning

558   tend to remain poor and relatively stable in individuals with clinically relevant manifestations

559   of personality pathology (Winsper et al., 2021). Moving forward, we need broader measures

560 of individual treatment progression and recovery experiences. Assessing experiential and

561 behavioral patterns as they emerge in the moment-to-moment stream of daily life of youth

562 offers a clinically useful approach to relevant perpetuating mechanisms as well as sustainable

563 steps of intervention that directly target idiosyncrasies of functional impairment.

564 Moreover, through labelling and conceptualizing personality pathology in line with

565 the processes that are most indicative of it, we can focus our assessment on processes of

566 dysfunction rather than diagnosing the person as the disorder (e.g., interpersonal disorder;

567 Wright & Ringwald, 2021). Despite studies that demonstrate sufficient levels of malleability

568 over the life course, clinicians are worried about negative effects of stigma of formal PD

569 diagnoses in youth (Laurenssen et al., 2013). A stricter focus on dysregulated interpersonal

570 and affective processes in daily life, therefore, may also reform the professional and public

571 view on personality pathology, which is dominated by perceptions of destiny rather than

572 manageable risk.

573 **Conclusion**

574 We found that self- and caregiver-reported trait vulnerabilities were consistently

575 linked to interpersonal experiences primarily characterized by negative affect, boredom, and

576 disappointment as well as a behavioral and experiential profile marked by variability. Future

577 studies are needed to more clearly characterize whether associated shifts in socio-affective

578 processes are primarily indicative of pronounced reactivity to social-contextual demands, or

579 whether mechanisms of selection into certain interpersonal contexts as well as evocation of

580 specific responses from one's environment may be equally plausible sources of variability. It

581 is also important to further examine the mechanism through which costs of socio-affective

582 dysregulation coalesce into clinically relevant personality pathology later in life, and how risk

583 may fluctuate as a function of developmental tasks. Formalizing risk at a younger age in a

584 developmentally appropriate and clinically tangible way may bring dysfunction much earlier

585 to attention, and thus reduce the risk of significant impairment later in life.

References

586   Álvarez-Tomás, I., Ruiz, J., Guilera, G., & Bados, A. (2019). Long-term clinical and

588   functional course of borderline personality disorder: A meta-analysis of prospective

589   studies. *European Psychiatry, 56*(1), 75-83.

590   American Psychiatric Association, D. S., & American Psychiatric Association. (2013).

591   *Diagnostic and statistical manual of mental disorders: DSM-5* (Vol. 5). American

592   Psychiatric Association.

593   Andrewes, H. E., Hulbert, C., Cotton, S. M., Betts, J., & Chanen, A. M. (2017). Ecological

594   momentary assessment of nonsuicidal self-injury in youth with borderline personality

595   disorder. *Personality Disorders: Theory, Research, and Treatment, 8*(4), 357.

596   Bailen, N. H., Green, L. M., & Thompson, R. J. (2019). Understanding emotion in

597   adolescents: A review of emotional frequency, intensity, instability, and clarity.

598   *Emotion Review*, 11(1), 63–73.

599   Biskin, R. S., Paris, J., Renaud, J., Raz, A., & Zelkowitz, P. (2011). Outcomes in women

600   diagnosed with borderline personality disorder in adolescence. *Journal of the*

601   *Canadian Academy of Child and Adolescent Psychiatry, 20*(3), 168.

602   Blakemore, S. J., & Mills, K. L. (2014). Is adolescence a sensitive period for sociocultural

603   processing?. *Annual Review of Psychology, 65*, 187-207.

604   Caspi, A., & Shiner, R. L. (2006). Personality Development. In N. Eisenberg, W. Damon, &

605   R. M. Lerner (Eds.), *Handbook of child psychology: Social, emotional, and*

606   *personality development* (pp. 300–365). John Wiley & Sons, Inc.

607   Cohen, P., Crawford, T. N., Johnson, J. G., & Kasen, S. (2005). The children in the

608   community study of developmental course of personality disorder. *Journal of*

609   *personality disorders, 19*(5), 466-486.

610   Coplan, R. J., Findlay, L. C., & Nelson, L. J. (2004). Characteristics of preschoolers with

611   lower perceived competence. *Journal of Abnormal Child Psychology, 32*(4), 399-408.

612   Crawford, T. N., John Livesley, W., Jang, K. L., Shaver, P. R., Cohen, P. & Ganiban, J.

613   (2007). Insecure attachment and personality disorder: a twin study of adults. *European*

614   *Journal of Personality*, *21*(2), 191–208. https://doi.org/10.1002/per.602

615   Dahl, R. E., Allen, N. B., Wilbrecht, L., & Suleiman, A. B. (2018). Importance of investing in

616   adolescence from a developmental science perspective. *Nature, 554*(7693), 441-450.

617   De Clercq, B., De Fruyt, F., De Bolle, M., Van Hiel, A., Markon, K. E., & Krueger, R. F.

618   (2014). The hierarchical structure and construct validity of the PID-5 trait measure in

619   adolescence. *Journal of Personality, 82*(2), 158-169.

620   De Clercq, B., De Fruyt, F., & Widiger, T. A. (2009a). Integrating a developmental

621   perspective in dimensional models of personality disorders. *Clinical Psychology*

622   *Review, 29*(2), 154-162.

623   De Clercq, B., Van Leeuwen, K., Van Den Noortgate, W., De Bolle, M., & De Fruyt, F.

624   (2009b). Childhood personality pathology: Dimensional stability and change.

625   *Development and Psychopathology, 21*(3), 853-869.

626   De Clercq, B., Verbeke, L., De Caluwé, E., Vercruysse, T., & Hofmans, J. (2017).

627   Understanding adolescent personality pathology from growth trajectories of childhood

628   oddity. *Development and Psychopathology, 29*(4), 1403-1411.

629   De Los Reyes, A., & Kazdin, A. E. (2005). Informant discrepancies in the assessment of

630   childhood psychopathology: a critical review, theoretical framework, and

631   recommendations for further study. *Psychological Bulletin*, *131*(4), 483–509.

632   https://doi.org/10.1037/0033-2909.131.4.483

633   De Fruyt, F., & De Clercq, B. (2014). Antecedents of personality disorder in childhood and

634   adolescence: Toward an integrative developmental model. *Annual Review of Clinical*

635   *Psychology, 10*, 449-476.

636 Edershile, E. A., & Wright, A. G. C. (2021). Fluctuations in grandiose and vulnerable

637   narcissistic states: A momentary perspective. *Journal of Personality and Social*

638   *Psychology, 120*(5), 1386–1414. https://doi.org/10.1037/pspp0000370

639 Esterberg, M. L., Goulding, S. M., & Walker, E. F. (2010). Cluster A personality disorders:

640   schizotypal, schizoid and paranoid personality disorders in childhood and

641   adolescence. *Journal of Psychopathology and Behavioral Assessment*, *32*(4), 515-528.

642 Fossati, A., & Somma, A. (2021). The assessment of personality pathology in adolescence

643   from the perspective of the alternative DSM-5 Model for personality disorder. *Current*

644   *Opinion in Psychology, 37*, 39-43.

645 Franssens, R., Giletta, M., Vanwoerden, S., & De Clercq, B. (2022). Bullying perpetration

646   and victimization as social mechanisms in the development of borderline personality

647   traits during adolescence: a longitudinal study. Psychopathology, 1-7.

648 Franssens, R., Van Raemdonck, L., Abrahams, L., Verbeke, L., & De Clercq, B. (2022,

649   February 23). Capturing Within-Person Variability of Borderline Traits in Youth from

650   A Developmentally Sensitive Situational Judgement Perspective.

651   https://doi.org/10.31234/osf.io/jubp7

652 Griffith, J. M., Clark, H. M., Haraden, D. A., Young, J. F., & Hankin, B. L. (2021). Affective

653   development from middle childhood to late adolescence: Trajectories of mean-level

654   change in negative and positive affect. Journal of Youth and Adolescence, 50(8),

655   1550–1563.

656 Guyer, A.E., Silk, J.S., & Nelson, E.E. (2016). The Neurobiology of the emotional

657   adolescent: From the inside out. *Neuroscience and Biobehavioral Reviews*, *70*, 74-85.

658   https://doi.org/10.1016/j.neubiorev.2016.07.037

659 Hankin, B. L., Mermelstein, R., & Roesch, L. (2007). Sex differences in adolescent

660   depression: Stress exposure and reactivity models. *Child Development, 78*(1), 279-

661   295.

662   Hisler, G.C., Krizan, Z., DeHart, T., Wright, A.G.C. (2020). Neuroticism as the intensity,

663   reactivity, and variability in day-to-day affect. *Journal of Research in Personality*, 87,

664   103964.

665   Hopwood, C. J., Wright, A. G., & Bleidorn, W. (2022). Person–environment transactions

666   differentiate personality and psychopathology. *Nature Reviews Psychology*, 1(1), 55-

667   63.

668   Hopwood, C.J., Wright, A.G.C., Ansell, E.B., & Pincus, A.L. (2013). The interpersonal core

669   of personality pathology. *Journal of Personality Disorders*, 27(3), 271-295.

670   Kaurin, A., King, K. M., & Wright, A. G. (in press). Studying Personality Pathology with

671   Ecological Momentary Assessment: Harmonizing Theory and Method. *Personality*

672   *Disorders: Theory, Research, and Treatment.*

673   Kaurin, A., Sauerberger, K. S., & Funder, D. C. (2018). Associations between informant

674   ratings of personality disorder traits, self-reports of personality, and directly observed

675   behavior. *Journal of Personality*, *86*(6), 1078–1101.

676   https://doi.org/10.1111/jopy.12376

677   Kaurin, A., Sequeira, S. L., Ladouceur, C. D., McKone, K. M., Rosen, D., Jones, N., Wright,

678   A. G. C., Silk, J. S. (*in press*). Modeling Sensitivity to Social Threat in Adolescent

679   Girls: A Psychoneurometric Approach. PsyArXiv.

680   Kerr, S., Penner, F., & Sharp, C. (2021). Interpersonal problems in parents and adolescent

681   borderline personality disorder features. *Journal of Personality Disorders,*

682   *35*(Supplement B), 74-93.

683   Knafo, A., & Jaffee, S. R. (2013). Gene–environment correlation in developmental

684   psychopathology. *Development and Psychopathology*, 25(1), 1-6.

685   Kraemer, H. C., Measelle, J. R., Ablow, J. C., Essex, M. J., Boyce, W. T., & Kupfer, D. J.

686   (2003). A new approach to integrating data from multiple informants in psychiatric

687   assessment and research: mixing and matching contexts and perspectives. *The*

688   *American Journal of Psychiatry*, *160*(9), 1566–1577.

689   https://doi.org/10.1176/appi.ajp.160.9.1566

690   Krueger, R. F., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2012). Initial

691   construction of a maladaptive personality trait model and inventory for DSM-5.

692   *Psychological Medicine*, *42*(9), 1879-1890.

693   Laurenssen, E. M. P., Hutsebaut, J., Feenstra, D. J., Van Busschbach, J. J., & Luyten, P.

694   (2013). Diagnosis of personality disorders in adolescents: a study among

695   psychologists. *Child and Adolescent Psychiatry and Mental Health*, *7*(1), 1-4.

696   Masten, C. L., Eisenberger, N. I., Borofsky, L. A., Pfeifer, J. H., McNealy, K., Mazziotta, J.

697   C., & Dapretto, M. (2009). Neural correlates of social exclusion during adolescence:

698   understanding the distress of peer rejection. *Social Cognitive and Affective*

699   *Neuroscience*, *4*(2), 143–157. https://doi.org/10.1093/scan/nsp007

700   Miskewicz, K., Fleeson, W., Arnold, E. M., Law, M. K., Mneimne, M., & Furr, R. M. (2015).

701   A contingency-oriented approach to understanding borderline personality disorder:

702   Situational triggers and symptoms. *Journal of Personality Disorders*, *29*(4), 486–

703   502. https://doi.org/10.1521/pedi.2015.29.4.486

704   Muthén, L.K. and Muthén, B.O. (2019). Mplus User's Guide (2021). Eighth Edition. Los

705   Angeles, CA: Muthén & Muthén

706   Nelson, E. E., Leibenluft, E., McClure, E. B., & Pine, D. S. (2005). The social re-orientation

707   of adolescence: a neuroscience perspective on the process and its relation to

708   psychopathology. *Psychological Medicine*, *35*(2), 163-174.

709   Oltmanns, J. R., & Oltmanns, T. F. (2021). Self–other agreement on ratings of personality

710   disorder symptoms and traits: Three meta-analyses. In T. D. Letzring and J. S. Spain

711   (Eds.), *The handbook of accurate personality judgment: Theory and empirical*

712   *findings.* Oxford University Press.

713   http://dx.doi.org/10.1093/oxfordhb/9780190912529.013.19

714   Ren, B., Balkind, E. G., Pastro, B., Israel, E. S., Pizzagalli, D. A., Rahimi-Eichi, H., ... &

715   Webb, C. (2022). Predicting states of elevated negative affect in adolescents from

716   smartphone sensors: A novel personalized machine learning approach. *Psychological*

717   *Medicine*. https://doi.org/10.1017/S0033291722002161

718   Ringwald, W.R., Pilkonis, P.A., & Wright, A.G.C. (2022). Filling gaps in the nomological

719   networks for dominance and affiliation by examining self-informant agreement on

720   momentary interpersonal behavior. *Manuscript submitted for*

721   *publication.* https://osf.io/u5nyx/

722   Ringwald, W. R., & Wright, A. G. (2022, February 28). Overcoming the Confound of Means

723   and Variability for Measuring Everyday Emotion Dynamics Related to Neuroticism.

724   https://doi.org/10.31234/osf.io/nxbyd

725   Sadikaj, G., Wright, A.G.C., Dunkley, D., Zuroff, D. & Moskowitz, D.S. (2021). Multilevel

726   structural equation modeling for intensive longitudinal data: A practical guide for

727   personality researchers. In J.F. Rauthmann (Ed.) *Handbook of Personality Dynamics*

728   *and Processes* (pp. 856-887). Elsevier.

729   Sadikaj, G., Moskowitz, D. S., Russell, J. J., Zuroff, D. C. & Paris, J. (2013). Quarrelsome

730   behavior in borderline personality disorder: Influence of behavioral and affective

731   reactivity to perceptions of others. *Journal of Abnormal Psychology*, 122(1), 195–207.

732   https://doi.org/10.1037/a0030871

733   Scott, L. N., Stepp, S. D., Hallquist, M. N., Whalen, D. J., Wright, A. G., & Pilkonis, P. A.

734   (2015). Daily shame and hostile irritability in adolescent girls with borderline

735   personality disorder symptoms. *Personality Disorders: Theory, Research, and*

736   *Treatment*, 6(1), 53.

737   Selby, E. A., Kondratyuk, S., Lindqvist, J., Fehling, K., & Kranzler, A. (2021). Temporal

738   Bayesian Network modeling approach to evaluating the emotional cascade model of

739   borderline personality disorder. *Personality Disorders: Theory, Research, and*

740   *Treatment, 12*(1), 39.

741   Sequeira, S. L., Silk, J. S., Edershile, E. A., Jones, N. P., Hanson, J. L., Forbes, E. E., &

742   Ladouceur, C. D. (2021). From scanners to cell phones: neural and real-world

743   responses to social evaluation in adolescent girls. *Social Cognitive and Affective*

744   *Neuroscience, 16*(7), 657-669.

745   Sharp, C. (2020). Adolescent personality pathology and the Alternative Model for Personality

746   Disorders: Self development as nexus. *Psychopathology, 53*(3), 198-204.

747   Sharp, C., Vanwoerden, S., & Wall, K. (2018). Adolescence as a sensitive period for the

748   development of personality disorder. *Psychiatric Clinics, 41*(4), 669-683.

749   Sharp, C., & Wall, K. (2021). DSM-5 level of personality functioning: Refocusing personality

750   disorder on what it means to be human. *Annual Review of Clinical Psychology, 17*,

751   313-337.

752   Shiner, R., & Caspi, A. (2003). Personality differences in childhood and adolescence:

753   Measurement, development, and consequences. *Journal of Child Psychology and*

754   *Psychiatry, 44*(1), 2-32.

755   Shiner, R. L., & Masten, A. S. (2002). Transactional links between personality and adaptation

756   from childhood through adulthood. *Journal of Research in Personality, 36*(6), 580-

757   588.

758   Shiner, R. L., & Tackett, J. L. (2014). Personality disorders in children and adolescents. In E.

759   J. Mash & R. A. Barkley (Eds.), *Child Psychopathology* (pp. 848–896). The Guilford

760   Press.

761   Shiner, R. L. (2009). The development of personality disorders: Perspectives from normal

762   personality development in childhood and adolescence. *Development and*

763   *Psychopathology, 21*(3), 715-734.

764   Silk, J.S., Nelson, E., Dahl, R.E., Stroud, L., Lee, K.H, & Siegle, G.J. (2014). Increased

765   neural response to peer rejection associated with adolescent depression and pubertal

766   development. Social Cognitive and Affective Neuroscience, 9(11), 1798-1807.

767   https://doi.org/10.1093/scan/nst175

768 Silk, J. S., Sequeira, S. S., Jones, N. P., Lee, K. H., Dahl, R. E., Forbes, E. E., ... &

769   Ladouceur, C. D. (2022). Subgenual Anterior Cingulate Cortex Reactivity to Rejection

770   Vs. Acceptance Predicts Depressive Symptoms among Adolescents with an Anxiety

771   History. *Journal of Clinical Child & Adolescent Psychology*, 1-16.

772 Somma, A., Borroni, S., Kelley, S. E., Edens, J. F., & Fossati, A. (2018). Further evidence for

773   the validity of a response inconsistency scale for the Personality Inventory for DSM–5

774   in Italian community-dwelling adolescents, community-dwelling adults, and clinical

775   adults. *Psychological Assessment, 30*(7), 929.

776 Spaeth, M., Weichold, K., & Silbereisen, R. K. (2015). The development of leisure boredom

777   in early adolescence: Predictors and longitudinal associations with delinquency and

778   depression. *Developmental Psychology, 51*(10), 1380–1394.

779   https://doi.org/10.1037/a0039480

780 Speranza, M., Pham-Scottez, A., Revah-Levy, A., Barbe, R. P., Perez-Diaz, F., Birmaher, B.,

781   & Corcos, M. (2012). Factor structure of borderline personality disorder

782   symptomatology in adolescents. *Canadian Journal of Psychiatry. Revue Canadienne*

783   *de Psychiatrie, 57*(4), 230–237. https://doi.org/10.1177/070674371205700406

784 Tackett, J. L., Herzhoff, K., Reardon, K. W., De Clercq, B., & Sharp, C. (2014). The

785   externalizing spectrum in youth: Incorporating personality pathology. *Journal of*

786   *Adolescence*, 37(5), 659-668.

787 Tackett, J. L., Herzhoff, K., Reardon, K. W., Smack, A. J., & Kushner, S. C. (2013). The

788   relevance of informant discrepancies for the assessment of adolescent personality

789   pathology. *Clinical Psychology: Science and Practice*, 20(4), 378-392.

790 Tackett, J. L., Lahey, B. B., Van Hulle, C., Waldman, I., Krueger, R. F., & Rathouz, P. J.

791 (2013). Common genetic influences on negative emotionality and a general

792 psychopathology factor in childhood and adolescence. *Journal of abnormal*

793 *psychology*, *122*(4), 1142.

794 Vanwoerden, S., Byrd, A. L., Vine, V., Beeney, J. E., Scott, L. N., & Stepp, S. D. (2022).

795 Momentary borderline personality disorder symptoms in youth as a function of

796 parental invalidation and youth-perceived support. *Journal of Child Psychology and*

797 *Psychiatry*, *63*(2), 178-186.

798 Vanwoerden, S., Franssens, R., Sharp, C., & De Clercq, B. (2021). The development of

799 criterion a personality pathology: The relevance of childhood social functioning for

800 young adult daily self-functioning. *Child Psychiatry & Human Development*, 1-13.

801 Verbeke, L., De Caluwé, E., & De Clercq, B. (2017). A five-factor model of developmental

802 personality pathology precursors. *Personality Disorders: Theory, Research, and*

803 *Treatment*, *8*(2), 130–139.

804 Wertz, J., Caspi, A., Ambler, A., Arseneault, L., Belsky, D. W., Danese, A., Fisher, H. L.,

805 Matthews, T., Richmond-Rakerd, L. S., & Moffitt, T. E. (2020). Borderline symptoms

806 at age 12 signal risk for poor outcomes during the transition to adulthood: findings

807 from a genetically sensitive longitudinal cohort study. *Journal of the American*

808 *Academy of Child & Adolescent Psychiatry*, *59*(10), 1165-1177.

809 Widiger, T. A., De Clercq, B., & De Fruyt, F. (2009). Childhood antecedents of personality

810 disorder: An alternative perspective. *Development and Psychopathology*, *21*(3), 771–

811 791.

812 Winsper, C. (2021). Borderline personality disorder: course and outcomes across the lifespan.

813 *Current Opinion in Psychology*, *37*, 94-97.

814 Winsper, C., Wolke, D., Scott, J., Sharp, C., Thompson, A., & Marwaha, S. (2020).

815 Psychopathological outcomes of adolescent borderline personality disorder symptoms.

816 *Australian & New Zealand Journal of Psychiatry*, *54*(3), 308-317.

817   Winograd, G., Cohen, P., & Chen, H. (2008). Adolescent borderline symptoms in the

818   community: prognosis for functioning over 20 years. *Journal of Child Psychology and*

819   *Psychiatry, 49*(9), 933-941.

820   Wright, A. G. C., Hopwood, C. J., Skodol, A. E., & Morey, L. C. (2016). Longitudinal

821   validation of general and specific structural features of personality pathology. *Journal*

822   *of Abnormal Psychology, 125*(8), 1120–1134.

823   Wright, A. G. C., & Kaurin, A. (2020). Integrating structure and function in conceptualizing

824   and assessing pathological traits. *Psychopathology, 53*(3), 189-197.

825   Yalch, M. M., & Hopwood, C. J. (2016). Convergent, discriminant, and criterion validity of

826   DSM-5 traits. *Personality Disorders*, *7*(4), 394–404.

827   https://doi.org/10.1037/per0000165

828
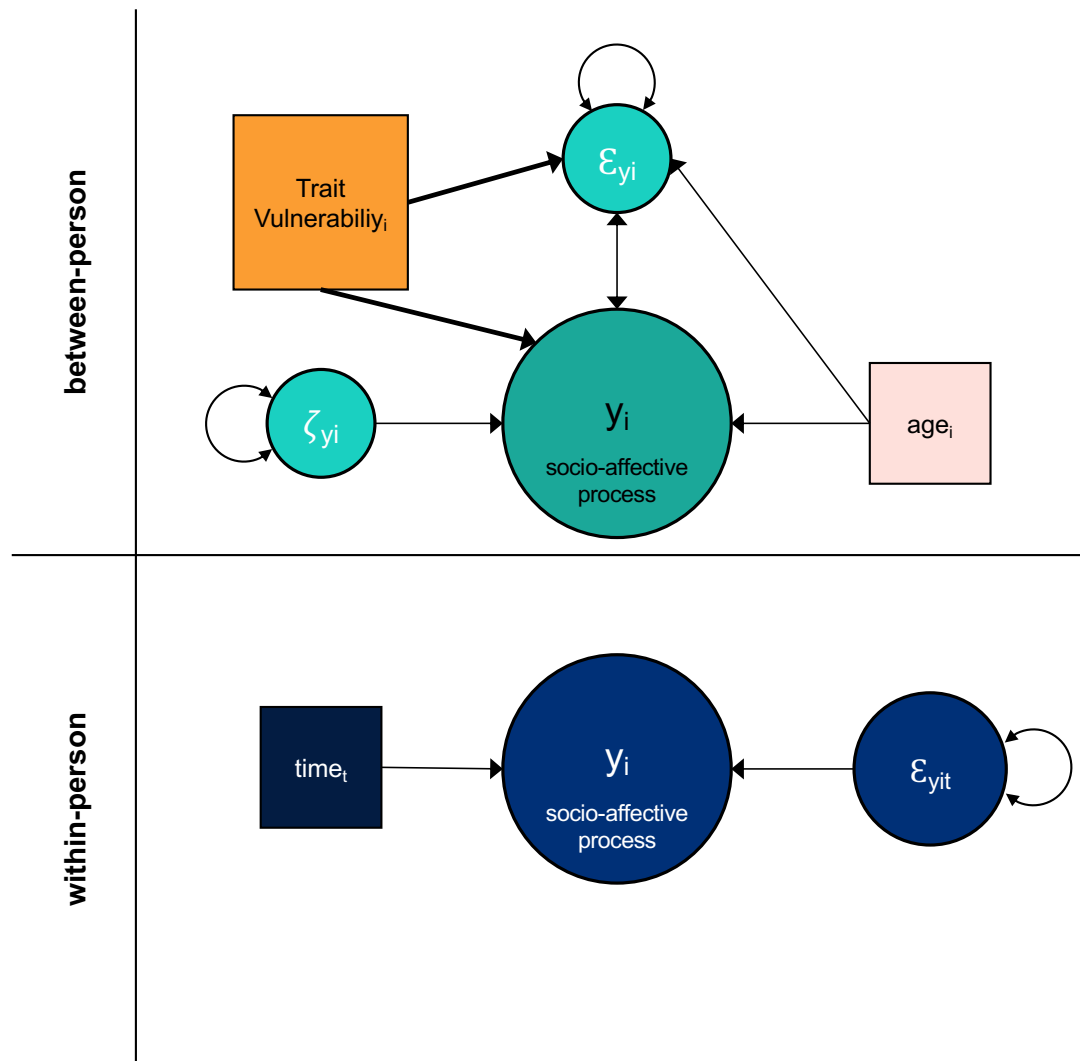
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830   **Figure 1.** Schematic depiction of the model used for all analyses. Single-headed arrows represent
831   regression paths, double-headed arrows represent variances. y represents all momentary outcome
832   variables. The two bolded paths indicate the associations of central interest summarized in Tables 2
833   and 3. ε_{yit} represents systematic within-person variance, and y_i is the estimate of an individual's
834   average. ζ_{yi} represents variance in y_i not explained by trait vulnerabilities.

Table 1

Key Standardized Coefficients from Multilevel Structural Equation Models Linking Adolescent-Reported Trait Vulnerabilities to Daily Socio-Affective Processes (Means y_i and Variances $\mathcal{E}_{yit}$)

	boredom	connectedness	disappointment	interpersonal tension	negative affect	social activities
	β [CI]	β [CI]	β [CI]	β [CI]	β [CI]	β [CI]
PSY (y_i)	.16 -[.02; .35]	-.02 [-.20; .18]	**.24 [.05; .43]**	.09 [-.14; .29]	**.27 [.10; .44]**	-.10 [-.29 .12]
NA (y_i)	.08 [-.08; .26]	.04 [-.16; .23]	**.33 [.15; .51]**	.19 [-.05; .39]	**.45 [.28; .60]**	.02 [-.17; .25]
DIS (y_i)	.07 [-.12; .26]	.07 [-.12; .29]	**.21 [.02; .41]**	**.33 [.06; .56]**	**.16 [-.01; .33]**	.01 [-.15; .21]
DET (y_i)	**.23 [.06; .41]**	-.15 [-.34; .05]	.12 [-.06; .32]	.09 [-.13; .30]	.16 [-.04; .33]	-.01 [-.22; .19]
ANT (y_i)	**.24 [.07; .41]**	-.04 [-.23; .19]	.01 [-.19; .19]	.08 [-.13 .28]	.10 [-.08; .28]	-.07 [-.28; .14]
Total (y_i)	**.23 [.06; .42]**	-.02 [-.20; .19]	**.28 [.09; .45]**	.21 [-.03; .40]	**.33 [.17; .49]**	-.07 [-.29; .11]
PSY ($\mathcal{E}_{yit}$)	**.18 [.03; .35]**	-.02 [-.19; .16]	**.19 . [02; .37]**	.06 -[.11; .24]	**.22 [.03; .39]**	**.22 [.06 .37]**
NA ($\mathcal{E}_{yit}$)	.06 [-.10; .24]	.04 [-.15; .21]	**.25 [.09; .41]**	.15 [-.02; .31]	.18 [-.01; .35]	.07 [-.09; .28]
DIS ($\mathcal{E}_{yit}$)	.08 [-.11; .26]	.06 [-.12; .22]	**.24 [.07; .40]**	**.19 [.00; .36]**	**.20 [.01; .37]**	-.12 [-.33; .08]
DET ($\mathcal{E}_{yit}$)	**.22 [.06; .40]**	.15 [-.03; .31]	.19 [-.15; .22]	-.01 [-.17; .18]	**.23 [.03; .39]**	.13 [-.06 .30]
ANT ($\mathcal{E}_{yit}$)	**.25 [.12; .43]**	-.13 [-.31 .05]	.12 [-.17; .20]	-.02 [-.18 .16]	.07 [-.13; .26]	.05 [.11 .27]
Total ($\mathcal{E}_{yit}$)	**.24 [.09; .41]**	.02 [-.15; .19]	**.21 [.05; .40]**	.11 [-.06; .28]	**.25 [.06; .42]**	.05 [-.11; .26]

Note. NA = negative affect; DET = detachment; ANT = antagonism; DIS = disinhibition; PSY = psychoticism; between-person (y_i) variance for adolescent i during assessment t. y represents all momentary outcome variables. $\mathcal{E}_{yit}$ represents paths predicting systematic within-person variance, and y_i represents paths predicting an individual's average of momentarily assessed variables.

841 **Table 2**

842 *Key Standardized Coefficients from Multilevel Structural Equation Models Linking Caregiver-Reported Trait Vulnerabilities to Daily*

843 *Socio-Affective Processes (Means y_i and Variances $\mathcal{E}_{yit}$)*

	boredom	connectedness	disappointment	interpersonal tension	negative affect	social activities
	β [CI]	β [CI]	β [CI]	β [CI]	β [CI]	β [CI]
PSY (y_i)	.13 [-.04; .31]	-.00 [-.23; .23]	**.24 [.03; .45]**	.20 [-.08; .48]	**.18 [.05; .36]**	.01 [-.26; .28]
NA (y_i)	.11 [-.08; .29]	-.13 [-.34; .10]	.08 [-.12; .28]	**.32 [.10; .54]**	.20 [-.00; .40]	.06 [-.15 .24]
DIS (y_i)	.07 [-.12; .26]	-.06 [-.27; .17]	.07 [-.12; .29]	.13 [-.11; .37]	**.21 [.00; .38]**	-.11 [-.30; .07]
DET (y_i)	**.23 [.06; .41]**	**-.33 [-.51;-.09]**	.13 [-.06; .38]	.20 [-.04; .47]	.14 [-.09; .33]	.07 [-.13 .25]
ANT (y_i)	.11 [-.10; .31]	-.13 [-.35; .10]	.11 [-.11; .30]	.18 [-.05; .46]	.07 [-.14; .25]	.01 [-.17 .20]
Total (y_i)	**.13 [-.06; .30]**	-.18 [-.40; .06]	.20 [-.02; .39]	.25 [-.03; .47]	**.21 [.01; .40]**	.03 [-.18 .22]
PSY ($\mathcal{E}_{yit}$)	.14 [-.04; .31]	.14 [-.05; .33]	.15 [-.05; .33]	.14 [-.06; .32]	**.26 [.06; .43]**	**.22 [.06; .37]**
NA ($\mathcal{E}_{yit}$)	.13 [-.05; .28]	.10 [-.10; .29]	.10 [-.08; .28]	**.23 [.05; .39]**	**.22 [.02; .39]**	.12 [-.10; .29]
DIS ($\mathcal{E}_{yit}$)	.08 [-.11; .26]	.17 [-.04; .35]	.05 [-.12; .25]	.13 [-.04; .29]	**.30 [.07; .46]**	.09 [-.11; .25]
DET ($\mathcal{E}_{yit}$)	**.22 [.06; .40]**	**.19 [.01; .36]**	**.27 [-.33; .89]**	**.18 [.01; .36]**	.16 [-.04; .34]	**.26 [.08; .41]**
ANT ($\mathcal{E}_{yit}$)	.13 [-.06; .32]	.14 [-.07; .33]	.12 [-.06; .31]	**.19 [.02; .36]**	**.26 [.07; .44]**	**.20 [.02; .36]**
Total ($\mathcal{E}_{yit}$)	**.14 [-.03; .29]**	**.20 [.00; .38]**	.15 [-.04; .32]	.22 [.02; .39]	**.32 [.13; .49]**	**.23 [.04; .38]**

844 *Note.* NA = negative affect; DET = detachment; ANT = antagonism; DIS = disinhibition; PSY = psychoticism; between-person (y_i) variance for

845 adolescent i during assessment t. y represents all momentary outcome variables. $\mathcal{E}_{yit}$ represents paths predicting systematic within-person variance, and

846 y_i represents paths predicting an individual's average of momentarily assessed variables.

Supplementary Table 1

Descriptive Statistics of Trait Constructs.

	adolescent-report (N=127)		caregiver-report (N=126)		Δ		agreement	
	M (SD), range	α	M (SD)	α	t	p	r	p
Psychoticism	0.80 (0.73), 0-3.0	.81	0.21 (0.4), 0-2.0	.72	**9.12**	<.001	**0.32**	<.001
Negative Affect	0.72 (0.64), 0-2.8	.76	0.51 (0.59), 0-2.4	.72	**3.09**	.002	**0.20**	.028
Disinhibition	0.56 (0.53), 0-2.6	.70	0.39 (0.53), 0-2.2	.82	**3.10**	.002	**0.38**	.001
Detachment	0.64 (0.45), 0-2.0	.40	0.45 (0.48), 0-2.2	.59	**3.47**	<.001	**0.21**	.021
Antagonism	0.37 (0.41), 0-2.0	.60	0.40 (0.52), 0-2.4	.74	-.60	.550	**0.20**	.026
Total Score	0.62 (0.41), 0-1.72	.87	0.39 (0.4), 0-2.2	.91	**5.17**	<.001	**0.30**	.001

Note. N=124 cases containing adolescent- and caregiver-reports, thus df=123 for paired samples t-Tests;

Supplementary Table 2

Descriptive statistics and correlations among momentarily assessed study variables at within- and between-person levels.

	1	2	3	4	5	6
(1) boredom		.00	**.26**	.02	.06	.01
(2) connectedness	.01		.00	**-.27**	-.11	.18
(3) disappointment	**.03**	.02		**.45**	**.32**	-.01
(4) interpersonal tension	-.01	-.05	**.22**		**.29**	-.16
(5) negative affect	**-.07**	-.01	**.15**	**.25**		.10
(6) social activity	-.00	**.08**	.02	-.02	**.07**	
M	2.74	61.81	3.26	8.71	21.44	5.43
SD	4.94	20.49	4.05	7.26	15.96	5.76
range	0-31	19.54-100	0-24	0-31.25	0.12-78.45	0-39.74

Note. $N_{between}$=117; N_{within}= 5024; values below diagonal represent within-person coefficients and values above diagonal represent between-person coefficients. Values in bold are those for which the credibility interval did not contain zero.